MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

The Applicants' Hearing Summary of the Issue Specific Hearing 1: Day 1







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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.
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.





Term	Meaning
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 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.





Term	Meaning
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 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.





Term	Meaning
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 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
СоТ	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
МТВМ	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
kHz	Kilohertz





Unit	Description
KJ	Kilojoules
km	Kilometres
km²	Kilometres squared
kV	Kilovolt
m	Metres
m ²	Metres squared
m^3	Metres cubed
nm	Nautical mile
μРа	micropascal





The Applicants' Hearing Summary of the Issue Specific Hearing Day 1

1.1 Introduction

1.1.1.1 This document presents a written summary of Morgan OWL and Morecambe OWL, (together, 'the Applicants') oral case at the Issue Specific Hearing 1 (ISH1) Day 1. ISH 1 Day 1 on Morgan and Morecambe Offshore Wind Farms Transmission Assets Development Consent Order (DCO) application took place on 30 April 2025 at Grand Hotel Blackpool, Front, North Promenade Sea, Blackpool FY1 2JQ.

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1.2 Hearing Summary ISH1 Day 1

Table 1.1: Hearing summary ISH1 Day 1

ID	Agenda Item	Notes
1	Welcome introductions and arrangements for the hearing	
2	Item 2- Purpose of the hearing	
3(a)	Item 3- Relevant policy to include: a) Policy context for decision making	 In relation to the determination route to be taken by the SoS for this application, the Applicants confirmed that the SoS should determine the Application in accordance with s104 of the Planning Act 2008. The Applicants said that whilst there was a lack of certainty at the time of Application for projects brought into the Planning Act by virtue of section 35 of the Planning Act 2008 as to whether they have the benefit of the National Policy Statements (NPSs) with a placeholder on that at paragraphs 3.4.1.8 - 3.4.1.12 of the Planning Statement (APP-223). The position is now clear in NPS EN-1 that for this type of project, the NPS applies as the primary policy and therefore, this application should be determined in accordance with s104 of the Planning Act 2008. [Post Hearing Action Note: the Applicants have updated the Planning Statement (J28/F02) in response to hearing action point ISH1_1.] The Applicants also noted the consultation for updated NPSs was published last week. The ExA confirmed that they do not believe whether the application is determined under s104 or s105 of
		the Planning Act 2008 will make a material difference to the decision and appreciated this is a technical topic area.
3(b)	b) Any updates to relevant policy and guidance	3) The Applicants confirmed that they are aware of various updates to policy that may be of relevance to the application. The Applicants stated that these do not change the general requirements of the policy or the Project's compliance. [Post Hearing Action Note: The Applicants will update the Planning Statement for Deadline 2 (hearing action point ISH1_2).
		4) With regards to an overarching energy policy update, the Labour Government issued the Clean Power 2030 Action Plan in December 2024. The Applicants will submit this into Examination (hearing action point ISH1_3). [Post Hearing Action Note: see (S_D1_5.1).]
		 This sets out the Labour Government's commitment to clean power, reinforces the need for offshore wind generation. The Applicants explained this is why the Transmission Assets are being brought





ID	Agenda Item	Notes
		forward, to deliver the energy generated from Morgan Offshore Wind: Generation Assets and Morecambo Offshore Windfarm: Generation Assets.
		- As mentioned, the revised draft National Policy Statements were issued for consultation on 24 April 2025. These are revised drafts of EN-1, EN-3 and EN-5. The changes proposed do not affect the application in any material way. They reinforce the messaging in the Clean Power 2030 Action Plan by bringing this within National Policy and reinforce the very strong support for offshore wind power and therefore the Transmission Assets needed to deliver that new renewable capacity. The Applicants will provide a commentary on the draft NPS changes, noting that the consultation is 6 weeks and there will be a period following this where those policies are reissued [Post Hearing Action Note: this will be covered in hearing action point ISH1_2]. As noted above, the Applicants consider the revised drafts strengthen policy support for the Projects.
		 The Applicants noted paragraph 1.6.3 of the updated EN-1 considers transitional arrangements for projects already in examination should be determined in accordance with the 2023 suite of NPS. This being said, the updated NPSs can be considered and are an important document for the ExA to be award of.
		- The ExA confirmed this was a helpful response.
		 The Applicant continued that there has been an update to the National Planning Policy Framework (NPPF), however the Applicants submitted that the NPPF changes are not material, especially given the NPS is the primary policy for the SoS to determine the application.
		5) The Applicants confirmed in light of updates from Fylde Borough Council that they will keep an eye on the progress of their local plan and the Lancashire Local Plan and will update the ExA of any changes that are relevant to the Application as applicable. The Applicants noted they expect a submission from Fylde Borough Council in their Local impact Report on the recent decision of Greenfields (IOW) Ltd, R (On the Application Of) v Isle of Wight Council & Anor [2025] EWCA Civ 488.
		6) The ExA requested an update on local plan policies from the local authorities not present at the hearing, which will be provided by Fylde Borough Council (hearing action point ISH1_4).
3(c)	c) Applicants' policy trackers	7) In response to the ExA's question about the Applicants' approach to policy trackers and frequency of updates for all relevant trackers, the Applicants confirmed that the trackers (APP-234-236) were designed to help the ExA follow the various policies relevant to the Application. In terms of updates, the Applicants





ID	Agenda Item	Notes	
			confirmed they will ensure before close of Examination, that all policy trackers are updated so that the ExA has all the information they need to make a recommendation (hearing action point ISH1_5).
4(a)	Item 4- Site selection and alternatives to include:	8)	The ExA invited the Applicants to set out the policy and the legal common law basis on how alternatives should be considered in an NSIP project application.
	a) Applicants' overview of the site selection process	9)	The Applicants submitted that the key elements to draw out from the legislative and policy basis for considering alternatives are the requirements of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. These regulations do not require assessment of alternatives but requires an Environmental Statement to set out any alternatives that have been considered and why any choice has been made. There is therefore no requirement to fully consider complete alternatives to the project, only to report on those that have been considered. The Applicants noted that alternatives are also relevant for the compulsory acquisition tests and that this will be covered in Compulsory Acquisition Hearing 1. As for the policy set out under the National Policy Statements, the provisions in relation to consideration of alternatives effectively reflect the requirements in the EIA regulations. The Applicants cited paragraph 4.3.9 of NPS EN-1:
			"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."
			The Applicants submitted there is therefore no general requirement to consider alternatives or consider whether the site chosen represents the best option. Absent any legal requirement to consider alternatives, for example for Compulsory Acquisition or a habitats derogation case (which the Applicants consider is not required for the Project), the consideration of alternatives is one to report on in EIA context.
		10)	The Applicants noted the ExA's request to consider the common law position in the following cases on alternatives and will be providing an update at Deadline 1: (on the application of Save Stonehenge World Heritage Site Ltd) v Secretary of State for Transport in 2025 and R (on the application of Langley Park School) v Bromley LBC in 2009. [Post Hearing Action Note: the Applicants have provided their





ID	Agenda Item	Notes
		commentary on this at Deadline 1 as part of their response to hearing action point ISH1_6 (see S_D1_5.2).]
		11) In response to a request from the ExA for a general overview of the Applicants' approach to consideration of site selection the Applicants explained that the starting point for both projects was the outcome of the Leasing Round 4 instigated by the Crown Estate in September 2019, which covered 4 potential lease areas. As part of the tender, EnBW and bp were offered preferred bidder status over the Morgan Array Area, and Flotation and Cobra were awarded the area for lease over the Morecambe array area. These areas form the base of the offshore wind farm areas which are subject to separate generation assets development consent applications.
		12) Subsequently The Department for Energy Security and Net Zero launched the Offshore Transmission Network Review (OTNR) in 2020 with a view to publishing the holistic network design (HND). This was a new approach- as for previous offshore wind leasing rounds developers brought forward applications for separate radial connections, as was prevalent on the east coast in particular. The HND was devised as an avenue for transmission connections to be delivered in the most appropriate way and where applicable, a coordinated way. The Applicants submitted this is key to their development. The HND sought to consider the cost, deliverability, operability and environmental and community impacts. It looked at each of those on an equal footing.
		13) The Applicants noted that in July 2022 the UK Government published a report (the HND) for the approach to be taken for connecting 50GW of wind to the electricity network. Both Morgan and Morecambe were scoped into this process. The report concluded that the connection option with the most optimal design on balance was for both offshore windfarms to make connection at Penwortham. As part of this report, the HND recommended the Applicants work collaboratively including promotion of an aligned onshore and offshore cable corridor on the basis this would minimise the impact of the cables on the environment and the local community. The projects were engaged in the HND process and agreed with its findings [Post hearing note: see S_D1_5.2 for further detail]. This is endorsed by the NPS and aligns with paragraphs 2.8.34 -2.8.43 of NPS EN-3.
		14) The Applicants submitted that the identification of the arrays, and of Penwortham as the point of interconnection, were the key drivers for the site selection process. Effectively this created the two end points that the Applicants sought to connect through their site selection process.
		15) The Applicants submitted that the site selection process was fundamentally an iterative constraints driven process fed by statutory and non-statutory consultation. The Applicants submitted that all feedback received was considered- noting that they could not take all of these into account to refine the proposals.





ID	Agenda Item	Notes
		The Applicants worked to avoid and mitigate potential impacts at the outset as part of compliance with the mitigation hierarchy.
		16) The Applicants explained that they set up multidisciplinary teams which included a number of experts. The Applicants set up an evidence plan process which is standard for developments of this nature. As part of this, the Applicants set up expert working groups- these groups identified relevant topic areas and provided a forum for stakeholders to discuss information and be provided with updates throughout the process. The Applicants set out the overarching principles sitting across the project as:
		- Alignment of onshore and offshore infrastructure
		 Identification of the shortest and most direct route as preference – this reduces the overall footprint of the Transmission Assets and cost – this being a reduced cost to the consumer and minimises the transmission losses on the circuit
		- Minimising interruptions to ecological features
		- Provision of necessary space to accommodate the design envelope
		17) The Applicants set out that the site selection can be split into 4 main stages:
		1- Identification of point of connection
		2- Identification of areas of search
		3- Siting and design of the Transmission Assets for PEIR
		4- Final siting for detailed application for DCO application
		The Applicants submitted that the overarching principles are used as a guide and on top of that the Applicants adopted a Black Red Amber Green (BRAG) constraints approach.
		18) In response to the ExAs' request that the Applicants explain their choice of the BRAG methodology and any limitations that might arise from its use, the Applicants explained that BRAG is used on a range of projects of this nature. The approach enabled the Applicants to create buffers based on that BRAG rating and use that to physically map a route to infrastructure whilst navigating constraints. The Applicants gave the example of placing a 30m buffer around a woodland, and navigating around that constraint and in doing so mitigate secondary impacts that might be encountered. The Applicants submitted that there are





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		always going to be limitations to the methodology used- this is in the form of the amount of data that you can put into the process, but the Applicants confirmed that the data that was used has been used on other schemes of this nature - the Applicants' approach is not novel in that sense. The Applicants identified there is a nuance to the methodology in that it is a qualitative approach, for example, if the route is required to cross a SSSI at some point, it may not be possible to avoid it, even if it might typically be a black constraint.
		19) In response to the ExA's request for an explanation as to how different ratings have been evaluated, the Applicants confirmed the ratings were provided by specialists acting in accordance with best practice. The Applicants explained that at each stage, there was a process of data gathering, which might include third party data sets, and site-specific surveys. The Applicants submitted this also considered feedback from the local community and stakeholders, for example the councils and EWGs, which reinforces the reason these groups were set up, as the Applicants wanted to integrate this feedback into the site selection process.
		20) In response to the ExAs' question about what qualitative assessments were undertaken in order to conclude on the BRAG rating, for example the rating of green belt as amber, the Applicants set out that the judgment differs across the varying constraints and topics being discussed, for example environmental or socio-economic impacts.
		21) [Post Hearing Note : In response to the ExA's request for an example of how the Applicants took consultation responses into account in the qualitative assessment for BRAG ratings, the Applicants have provided this in response to hearing action point ISH1_7 , which also covers an explanation of the choice of rating for green belt (see the Applicants' response to Hearing Action Points due at Deadline 1 (S_D1_5)).]
		22) The Applicants continued to explain their approach to site selection by moving to the choices surrounding the onshore export area- temporary areas, temporary compounds, temporary and permanent accesses, two onshore substations within which the electric infrastructure will be located and the temporary and permanent areas that go alongside that, be that mitigation or permanent access. The Applicants noted that the offshore substation platforms were removed after the statutory consultation stage.
		23) In response to a request for an explanation as to why the Applicants removed the offshore substation platforms and booster stations, the Applicants explained that the use of a booster station is related to the length of the offshore cables. Booster stations act to minimise the loss of electricity. The Applicants explained that comments received in response to the options presented at statutory consultation including an aversion to routing via Liverpool Bay SPA or alternatively close to existing oil and gas





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		platforms, led the Applicants to review the survey data and need for booster station search areas. The Applicants subsequently determined that they could accommodate the length of the offshore cables without needing to boost that energy supply and therefore, there was no need for the booster stations. 24) Continuing with the response to the initial request of an overview of the approach the Applicants took to site selection, and specifically the consultation engagement undertaken, the Applicants noted that they
		spoke to a range of stakeholders on siting and design, and this was done in parallel to the consideration of the BRAG process and wider environmental constraints discussed above. The Applicants explained that the scoping report was submitted to PINS in October 2022 on the wider scoping boundary, setting out the Applicants' proposed methodology and intent to undertake environmental assessments. The Applicants subsequently carried out two non-statutory consultations, from 2 November to 13 December 2022 and 18 April to 4 June 2023. The Applicants held a range of events from formal events to pop up events around the region including Isle of Man to give local residents an introduction to the project and provide an opportunity for members of the public to ask questions. The non statutory consultations were aligned with the consultations for the generation assets, in recognition of the potential complexity and understanding of the separation of the DCOs and to allow for coordination between Morgan and Morecambe preparing their single application. The Applicants set out that they carried out two statutory consultations, the first being the section 42 consultation on the Preliminary Environmental Information Report, held 12 October 2023 to 23 November 2023. As a result of this, a number of changes were made to the route, which resulted in a further targeted consultation which took place in February 2024. This included engagement of planning authorities, highway authorities and SNCBs. The EWGs were used as forums to discuss updates and receive feedback.
		25) Whilst acknowledging that the above overview explanation is quite detailed, the Applicants submitted that they feel it is important for the ExA and others engaging with the Application to understand the process that has been followed, as there has been a lot of criticism about the site selection process. It is therefore important the Applicants explain what they have done, who has been involved, and the opportunities there have been to influence the Applicants' decision and how decisions were made to arrive at the project as submitted.
		26) The ExA confirmed this information is useful for everyone to hear.
4(b)	b) Grid connection	27) In response to the query as to whether it is the Applicants' choice to connect into Penwortham noting the HNDR which sets this out as the preferred network option, the Applicants shared a figure on screen from the HND summary report. The Applicants submitted that this figure shows the outcome of the HND process, being either the recommended solution of both Morgan and Morecambe connecting into Penwortham or the singular solution of Morgan connecting to Penwortham and Morecambe connecting to





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		Middleton. [Post Hearing Action Note- the Applicants have submitted the July 2022 summary report into the Examination and extracted the key points from this relating to the Examination (hearing action point ISH1_8) (see S_D1_5.2).]
		28) The Applicants continued to explain that the report looked at a range of projects in the east Irish sea. The Applicants think there is a real benefit in this process, which was in response to the criticisms of the uncoordinated projects on the East coast and that this is endorsed by paragraphs 2.13.1 through to 2.13.4 of NPS EN-5.
		29) The Applicants explained that there was never a connection offer identified by National Grid Electricity System Operator (NGESO) for these projects at Stanah.
		30) The Applicants set out that the HND did however consider the option of the Stanah substation. In the House of Commons on 17 December 2024, Michael Shanks MP noted that the Electricity System Operator (now NESO) identified that Stanah would require an extension to be able to accommodate the project due to limited space, and that access would be generally challenging due to the residential surroundings and environmental constraints around Morecambe Bay. The statement goes on to note that in contrast, the connection at Penwortham has a more accessible footprint, fewer constraints, and better electrical connectivity to the wider network. It is noted that the need for an extension of Penwortham was identified as part of the HND and was a known factor in reaching the decision to connect at that point. [Post Hearing Action Note: The Applicants have submitted the Parliamentary Statement and subsequent written statement and written question to the Examination in their response to hearing action point ISH1_9 (see S_D1_5.2)]
		31) In response to a query whether the Applicants could provide any further documentation behind this statement, the Applicants submitted this is a matter for NESO. The Applicants submitted that the point of connection is ultimately a matter for NESO, as they identify where there is capacity within their network and offer connection based on that. It is for National Grid to assess and balance the network to ensure they can make connections to a number of parties. It is important to bear in mind paragraphs 2.2.1 and 2.2.2 onwards at NPS EN-5, which acknowledge the degree to which applicants have control over the point of connection. The Applicants cited these paragraphs, noting this is directed to the Secretary of State in terms of their decision making:
		'2.2.1 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 applicant.'





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		2.2.2 Siting is determined by:
		• the location of new generating stations or other infrastructure requiring connection to the network, and/or
		• system capacity and resilience requirements determined by the Electricity System Operator.'
		32) The Applicants submitted that bullet point 1 of paragraph 2.2.2 in this application would be the agreement for lease as offered by the Crown Estate and discussed above, and bullet point 2 of the same would be the point which National Grid offer the Applicants as a point of connection, whilst balancing the network with other organisations that need to connect into the grid. The Applicants emphasised that this is not a decision applicants are party to. Therefore, the initiation and terminating point is not substantially within the control of the applicant. The Applicants highlighted they do not want to set expectations in this examination that the Applicants are able to provide information on the network connection assessments process carried out by both National Grid Electricity Transmission (NGET) and National Grid Electricity System Operator (NGESO) now National Energy System Operator (NESO). The Applicants submitted that the ExA and Secretary of State must rely on the work National Grid does and cannot expect National Grid to provide or release information.
		33) The Applicants explained that the information put into the relevant representation response was an attempt by the Applicants to include some information in public domain but the questions here are for National Grid and NESO. PINS noted they may address questions in writing to them.
		34) In response to the ExA's questions as to 1) whether there are other options available, noting there is some doubt within the HND report itself on the appropriateness of landfall and the route to Penwortham and 2) whether the use of airport land was reasonably established before the final route was chosen, the Applicants explained that HND was not in itself a connection offer, but a strategic review of connection points. The Applicants then set out that separately, National Grid has the role of offering connection offers to future projects. Due to its high-level nature, it was not for the HND report to force any project to connect into any particular location, but it did recognise that landfall as ultimately chosen by the Applicants, was possible. Whilst not straightforward, the HND recognised this as an option. The Applicants submitted that separately they looked at how they could route to Penwortham in the best way. The Applicants explained that once you review the constraints along the coast, there is one option that is available, which is the landfall to the south of Blackpool at Lytham St Annes.
		35) In response to the ExA's question as to whether a connection to the National Grid at Middleton was considered, Morecambe OWL confirmed that this was not done by Morecambe OWL during site





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		selection, but that the work surrounding the potential for connection into Middleton was carried out by NESO. Morecambe OWL considered the outcome of that and decided the best path forwards was the recommended solution of an aligned cable route.
		36) The Applicants confirmed that they had not considered Mooir Vannin during the site selection process as Mooir Vannin generation assets will lie within Isle of Man waters and the project came forward after the HND report and subsequent site selection by the Applicants. The Applicants further noted there is uncertainty when the documentation for the transmission element will be available. Therefore, the landfall search area of Mooir Vannin was not a consideration of the Applicants in determining their own landfall search area. Further, the Applicants cannot comment on the route to be chosen by Mooir Vannin, further noting it is not comparable to the Transmission Assets in size.
		37) The Applicants submitted that much of the decision of site selection at landfall comes back to the guiding principles that were identified and applied. For landfall, the Applicants needed to find an area that could accommodate 6 cables coming onshore and then choose the most direct route from there to minimise interactions with communities, avoid key environmental features and populated areas where possible. The Applicants displayed Figure 4.10 from APP-032, which shows the wider area and existing infrastructure and designations around Blackpool and Morecambe Bay. The Applicants submitted that the main reason for starting South of Blackpool is that north of Morecambe Bay there is a high number of designations, before reaching more populated areas. The Applicants explained that Morecambe Bay is considered ecologically sensitive as there are 5 principal rivers that meet in the Estuary. This forms the largest area of continuous intertidal mudflat and sand flats in the UK. This is covered by a special area of conservation for the habitats that support the special protection area for birds. There is also the Ramsar site, which is an international wetland site. The seabed on the southern end is protected as a MCZ and there are numerous SSSI. The Applicants therefore made the decision to exclude Morecambe Bay from their site selection at landfall to avoid these sensitive features in line with the guiding principles, noting there were better options to the south which were closer to both the wind turbine arrays and Penwortham. Just below Morecambe Bay is the densely populated area of Blackpool, and the Applicants considered the best place to start when looking at landfall was therefore to south of Blackpool. The Applicants continued to explain that heading further south from Blackpool along the coastline there are smaller populated centres with gaps between these. The Applicants' search did not go further than Formby as the route would start to move towards Liverpool, which similarly has high population density and
		38) In response to the ExA's question whether the environmental constraints highlighted in the Applicants' landfall selection are of lesser importance than those in Morecambe Bay, the Applicants confirmed that Morecambe Bay is a huge embayment with five rivers feeding into it, whereas the River Ribble





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		designation is one river, not five. Further, the way the River Ribble designation extends out covering the mouth of the river has enabled a route to be chosen which minimises interaction, with the Applicants crossing it where those designations are at their narrowest.
		39) The Applicants explained that their response to suggestions the Applicants could route up the River Ribble, this is touched on in APP-031 and in responses to relevant representations PDA-005 at sections 2.31.220-2.31.224. The Applicants submitted that landfall within the mouth of the River Ribble would involve a much more extensive interaction with designated features- including mud flats and salt marshes at the mouth of the river. The Applicants noted the River Ribble does have a SPA, a SSSI, a Ramsar site and an MCZ. Bringing the cables ashore further south towards the mouth of the rive would result in greater interaction with the main concentration of those designated sites. The disturbance to those designated features would be over a greater area. With regards to the feasibility of bringing the cables up the river, the Applicants explained that the River Ribble estuary has a large tidal range and occasional tidal bore (which is where an incoming tide forms a wave that travels up the river). Those are challenging engineering conditions to bring cables ashore and ensure a safe working area. The river channel itself is no longer dredged, so there is a 2-4 m thick sand and silt layer on the riverbed and shallow water depths which makes bringing a large and heavy cable vessel into the river unfeasible. Further along the river, there are flood defences which are quite high compared to surrounding landscape. To do works up the river, the Applicants would need to breach this either through trenchless technique under the river or through the defences themselves which is technically challenging to do from within the river itself.
		40) In response to the ExA's query as to whether the Applicants considered a grid connection point in Bodelwyddan in North Wales, the Applicants submitted that this was not an offer from National Grid and was not considered. Further, in response to a point raised by Mr Walker, the Applicants confirmed that it is not a choice for an applicant as to where the point of connection is and the projects have sought to avoid issues experienced on the east coast where multiple projects with individual radial connections were brought forward with a lack of strategic planning and coordination associated with these projects.
		41) The Applicants confirmed that the outcome of HND was for Morgan to connect at Penwortham and for Morecambe to either coordinate with Morgan to do the same, or connect at Middleton. The Applicants, seeking to align with the approach put forward by government, decided to work together. The Applicants submitted that they have worked together in an unprecedented way to deliver a single application with one set of documents and a single examination between two different developers.
		42) In responding to a question from the ExA about how the offshore route sought to avoid sensitive areas and the crossing of the dunes, the Applicants shared Figure 4.6 from APP-032 and explained that to determine the offshore search area, the Applicants had to find areas that could accommodate the 6





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		cables, whilst considering environmental constraints, other marine users and existing infrastructure. The Applicants indicated on the figure how offshore designations cover the majority of the coastline and the Applicants sought to minimise interactions with these. The Applicants explained how the figure shows the initial offshore search area. The northern boundary was defined by looking to avoid the Morecambe Bay designations, the shell flats feature of the Shell Flat and Lune Deep SAC (indicated by blue horizontal lines on the figure) and the Walney and Copeland MCZ. The route considered existing oil and gas platforms, and the Applicants highlighted that Liverpool Bay SPA covers the whole west coast as shown on the figure. The Applicants also highlighted that the Fylde MCZ is centred between where turbines for the generation assets would be located and where landfall is making avoidance difficult.
		43) Turning to the southern boundary of the search area on the figure, the Applicants explained how they sought to avoid interactions with the designations at the mouth of the River Ribble as highlighted previously and the aggregate area to the south (shown in brown on Figure 4.6 of APP-031). The Applicants also considered the potential to route the export cables around the telecoms cables. Due to the extent of Liverpool Bay SPA the Applicants considered they would be unable to avoid this. On that balance of being able to avoid the shell flats portion of the Shell Flat and Lune Deep SPA to north and minimise impact with River Ribble designations at the mouth of the river, the Applicants further concluded they would be unable to completely avoid the Fylde MCZ. The Applicants submitted that this approach aligns with the mitigation hierarchy. The Applicants then further considered the routes to cross at narrowest point of the Fyle MCZ and Ribble designations whilst routing around existing infrastructure.
		44) In response to the ExA's question as to whether it was possible to avoid the dunes, the Applicants noted that paragraph 2.9.25 of NPS EN-5 the NPS does acknowledge how difficult it is to find areas to bring things onshore for the UK as a whole. You have a pattern here, as with much of the UK coastline, that where an area is not designated, it is likely to be densely populated. The Applicants therefore need to determine the best option, whilst looking to balance these considerations of the environment and community. The Applicants determined that they could use engineering solutions to minimise impacts on the sand dunes. The Applicants further highlighted that paragraph 2.13.14 of NPS EN-5 highlights there are likely going to be fewer landing sites available when making coordinated applications.
		45) In response to submissions made by Mr Walker on the cable route option put forward by various interested parties at Stanah substation, the Applicants reiterated that a connection at Stanah had never been offered to the Applicants. Therefore, it is not considered to be a reasonable alternative. In response to Mr Walker's suggestion that the projects could connect into Penwortham via Stanah by upgrading electrical lines, the Applicants noted that this would require a significant section of 400kv cabling. The Applicants noted that whilst they cannot speak for National Grid, it would likely need to be a new overhead line, rather than upgrading an existing line, as it would need to be able to transmit almost 2GW





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		of capacity. The Applicants submitted that even if you assumed you could have a substation at Stanah, the Applicants would still need to get that connection to Penwortham, either by overhead lines or underground lines, both of which are costly options due to the route length.
		46) The Applicants confirmed they will provide a note which covers how the Secretary of State should consider Stanah as a material alternative. [Post Hearing Note: This is covered within the note provided in response to hearing action point ISH1_ 6 (see S_D1_5.2)].
		47) Further to submissions made by Fylde Borough Council on the suitability of the Applicants' route, the Applicants said it would be helpful for Fylde to identify in written submissions where these points have been raised previously through their involvement in EWGs or statutory consultation for example when site and route selection was discussed prior to submission of the application.
4(c)	c) Cable route	48) This item was not covered during ISH1.
4(d)	d) Substations	49) The Applicants confirmed they will provide a note explaining the 8km substation search area as shown on Figure 4.2 of Annex 4.3 (AS-028). [Post Hearing Action Note: This is presented in the response to hearing action point ISH1_10 (see the Applicants' response to Hearing Action Points due at Deadline 1 (S_D1_5))].
		50) The Applicants noted that the legend associated with this figure does not include green belt within the constraints of the area. The greenbelt was considered within the BRAG associated with the onshore substations, but was not visualised in the constraints mapping. Green belt was considered by virtue of the fact that of the 4 zones identified in the constraints mapping exercise, 3 were almost entirely within the green belt and green belt is also partly in zone 2. The Applicants noted this is detailed in Table 4.7 of AS-028.
		51) In response to the query about how green belt was considered in determining the search area for the onshore substations, the Applicants noted this builds on the ExA's query as to the choice of an 8km radius for the search area. Whilst the Applicants began with a 5km radius, this was extended to 8km due to a lack of available land parcels within 5km. Locating the onshore substations further away from Penwortham reduces electrical efficiency- would require larger substations, which is the reasoning behind that radius choice. When the surrounding physical constraints and environmental constraints are taken into account, the Applicants were left with zones that are primarily sited within the green belt, as shown in





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		Figure 4.7 of AS-028. The narrative above that figure explains why green belt was more or less unavoidable in terms of greenbelt land- captured within the amber scoring under the planning policy and future development potential category. The Applicants confirmed the response is the same when it comes to the heat mapping exercise leading to 4 zones, which does not explicitly include green belt as a constraint.
		52) The Applicants confirmed they will provide a clarification concerning their response to Fylde Council's Relevant Representation (RR-0705), concerning a sequential test relating to land which is not Green Belt has been undertaken to aid the site selection process. [Post Hearing Action Note: This is covered in the Applicants' response to hearing action point ISH1_11 (see the Applicants' response to Hearing Action Points due at Deadline 1 (S_D1_5))].
		53) Submissions were made by Mr Walker and Lancashire County Council regarding the site selection for the onshore substations, including the choice for separate sites. The Applicants confirmed they would respond further on these points in their response to hearing action point ISH1_12. [Post Hearing Action Note: see the Applicants' response to Hearing Action Points due at Deadline 1 (S_D1_5))]. a
		54) The Applicants reiterated that this is an unprecedented approach by the Applicants in working together on the site selection process and the outcome is reflective of that. Throughout, there has been coordination and alignment; the zonal approach intended to do that specifically and to find available land. The Applicants submitted it is important to find the best location for each onshore substation in isolation, rather than force co-location and proximity. This is important as it could be the case that only one project comes forward and only one onshore substation is built. For example, each onshore substation being effectively located ensures the Applicants can site the landscape mitigation most effectively for that onshore substation. The Applicants confirmed that they did consider the options of separately siting versus co-location immediately adjacent, though the decision on sites was made in accordance with the guiding principles.
Item 5- S	scope of the proposed developm	nent
a) (Overview of the proposed develo	opment, to include the applicants' brief explanation of the following:
5(a)(i)	i. Offshore cable works	55) The Applicants first set out context as to how they worked together in an unprecedented way, through openly and transparently collecting background and survey data, undertaking the assessments and in





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		putting together the Application. It would usually be impossible to share information and work together in this way. The Applicants aligned on the approach to mitigation where relevant, including how they will secure delivery of that, in such a way that facilitates the delivery of one or both projects. The Applicants noted there were comments at Open Floor Hearing 1 criticising the Applicants' inability to commit to concurrent construction; however, the Applicants explained this is because the two companies may not reach key milestones in terms of the delivery of their projects at the same time. They may be awarded CfD in different allocation rounds, and whilst they cannot commit to concurrent construction, this does not mean they cannot or will not be able to do so; it would, however, have been inaccurate and misleading to commit to concurrent construction, hence the Applicants have assessed the different construction scenarios. This has ensured the Applicants have assessed the worst case for the purposes of EIA. In taking this approach, the Applicants have avoided the situation on the East coast, where offshore wind farms were proposed and granted single radial connections, with little or no coordination required. Therefore there was no overall sense of how the Round 3 grid connections would be delivered. This project has sought to coordinate the design of the infrastructure, consultation and engagement; the proposed works are driven by principles of coordination- this is evident in how the project parameters align and where they diverge this is clearly set out. There has been strategic planning and the Applicants submitted that the ExA should not lose sight of these benefits which may not be obvious.
		 56) In order to explain how the sea bed is prepared, the Applicants brought up sheet 1 of the Work Plans – Onshore and Offshore (AS-014) on screen. The Applicants explained that for offshore cable installation works, there will be further geophysical technical surveys to inform the design and site preparation to prepare the offshore export cable corridor for the cables to be installed. This will include use of low order UXO clearance. This could also include bolder clearance, removal of disused cables, sandwave clearance, and right before laying the cables, a prelay grapnel run to remove any final obstacles. 57) The Applicants explained there are three cable routes leaving the Morgan array area; this is because the offshore cables need to run from the Offshore Substation Platforms and the final location of those is subject to further survey and detailed design. Retaining flexibility enables the Morgan project to take the most direct route and manage constraints around routing cables.
		58) The Applicants explained that pre-construction surveys would take place, and based on the results of those, the route would be plotted to avoid the obstacles identified. Where these cannot be removed or avoided, the Applicants would look to undertake site preparation works.
		59) In response to questions around how safety would be managed during the pre-construction phase, the Applicants confirmed there would be informal safety zones around vessels to reduce the risk of collision. The Applicants explained that they would issue a notice to mariners (as secured via the deemed marine





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		licences) for works during the pre-construction phase and would have a communication plan which goes out in advance of any survey vessel undertaking a survey. These would take place in a discrete area, so there would not be a number of vessels at once. The Applicants confirmed that the seabed would not be restricted. The vessels would be taking surveys whilst the surrounding area would be open to other sea users.
		60) In response to the ExA's question about the extent of potential disruption in the pre-construction phase, the Applicants highlighted there would be no active construction works going on during this time and no need to fence off the seabed, so there would be no impact on the safety of other vessels.
		61) The Applicants explained that the construction operation of bringing the offshore elements of the transmission assets onshore would be 21 months for the 4 Morgan offshore export cables and 9 months for the 2 Morecambe offshore export cables. These timescales include the site preparation and installation works and this is set out in Table 3.4 of the Project Description chapter (AS-024).
		62) In response to the ExAs query about where the cables from the generation asset applications (i.e. the offshore substation platforms) end, and the cables for the transmission assets start, the Applicants clarified that the export cables for this application will start from the offshore substation platforms within the respective array areas. The Applicants explained the reason the order limits for each of the generation assets overlap with the transmission assets is because detailed design has not yet been carried out for the generation assets and therefore the location of the offshore substation platforms is not yet known. When the projects are delivered, they will be delivered holistically and the respective draft Development Consent Orders (for Morgan Generation and Morecambe Generation) have been aligned to enable this.
5(a)(ii)	ii. Landfall works	63) The Applicants were asked to provide an indication of the approximation of the dimensions of cofferdams, trenchless crossing compounds and work link boxes, their accesses and the restrictions to be placed on the beach during construction. In response, the Applicants first set out that references to landfall cover between Work Nos. 4A4B to 10A10B (Mean Low Water Springs (MLWS) to the Transition Joint Bays (TJBs). The Applicants explained 5AB covers the beach from Mean High Water Springs. The Applicants have committed to a 100 metre offset from the sand dunes. The Applicants will use trenchless techniques to go under Work Nos 6AB, 8AB and 9AB. For construction there are several beach construction compounds proposed. Compound 1- Work No 38AB, which is located at the North Beach





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		car park, is a welfare facility, noting that during construction access to this is pedestrian access only (Work No. 42A42B).
		 64) In response to the ExA's query about how much of the carpark will be taken, and where the facilities would be placed, the Applicants confirmed the design of Work No. 38AB has been designed in consultation with Fylde Borough Council. The Applicants confirmed that Compound 1 is not the full extent of North Beach car park, as the surrounding Work No. 19AB only provides access into the construction compound. [Post hearing action Note: The Applicants' response to hearing action point ISH1_13 covers how many car parking spaces will remain available whilst the construction compound is in place (see S_D1_5.3).] 65) The Applicants went on to explain that the compound will be used during cable pull-in works and will be in situ for up to 36 weeks within a 36 month period in a concurrent construction scenario and 36 weeks within a 66 month period in a sequential construction scenario. The Applicants confirmed that this is secured through the works plans themselves as they show the only area that the facilities can be placed is at Work No. 38AB.
		66) The Applicants confirmed that cofferdams may be needed at exit pit locations, which will be confirmed subject to detailed design. The Applicants set out the dimensions of each cofferdam per cable is 75 metres squared.
		67) The Applicants explained that the larger area for the order limits at 3AB allows for vessel positioning and for the Applicants to use the Starr Gate slipway at the far north to launch boats to support cable pull in.
		68) The Applicants confirmed that they are not making any changes to the access point at Starr Gate and will be using it within its existing usage- to launch small vessels. The Applicants explained that the access point on the beach at 19AB will allow access to Work No. 4AB by plant that is potentially too large to utilise the Work No. 7AB access track. This is therefore to manage some of the constraints around this. The Applicants confirmed this wouldn't include closing the slipway, instead, minor management in the short term to manage health and safety for however long it takes to move the vessel or plant.
		69) As for access to the Starr Gate depot, the Applicants confirm they have a meeting set up with the RNLI and it is not their intention to restrict that access in any way. When the Applicants are actively launching / recovering vessels or moving plant, the Applicants would be clear of the slipway with no restrictions on its usage or access.
		70) In response to queries raised about the location of the exit pits at landfall, the Applicants referred the ExA to Commitment 44 which ensures the minimum offset from the sand dunes of 100 metres. The Applicants





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		confirmed that any exit pits will occur beyond that. The Applicants explained that there will be a path available along the beach and it is only when actively crossing into working areas that the Applicants would manage access. Someone might have to wait a few minutes to allow plant to cross, but it is not the Applicants' intention to close the beach.
		71) When asked about the exact exit pit and cofferdam locations, the Applicants confirmed that these would be subject to detailed design and referred the ExA to AS-048 which contains a section on access at landfall during construction. [Post Hearing Action Note: The Applicants have provided an indicative plan setting out a) the position of exit pits at landfall; b) the indicative positions and heights of cofferdams; and c) an indicative layout of the beach works including proposed crossing points and restrictions on public access in responding to hearing action point ISH1_14 (see S_D1_5.3)]
		72) In response to comments from Blackpool Borough Council around Starr Gate, the Applicants agreed to provide a note on the progression of their discussions on this topic for Deadline 1 (hearing action point ISH1_15) [Post Hearing Action Note: see the Applicants' response to Hearing Action Points due at Deadline 1 (S_D1_5)).]
		73) In response to comments from Blackpool Borough Council around various internet transmission lines around Starr Gate, the Applicants confirmed that the protective provisions in Part 2 of Schedule 10 to the draft DCO (AS-004) would manage these interactions and that the Applicants are aware of those telecoms operators.
5(a)(iii)	iii. Approach to onshore cable works areas	74) In response to a request for details as to the indicative locations of the HDD pits, compounds and joint boxes within the work areas along the cable route, the Applicants first clarified those areas where a commitment to trenchless works has been made are already identified on the crossing schedule and the entry and exit pits could be located anywhere within that work area. The Applicants would not be able to confirm further details at this stage, as these would be subject to detailed design. The Applicants explained that entry and exit pits are typically only shown on the works plans where these fall outside of the cable corridor, however, this is not the case in this application. As for link boxes, the Applicants confirmed that these are quite small and their location is entirely dependent on detailed cable design, specification and cable lengths themselves- which is a matter for detailed design and procurement.
		75) The Applicants explained the width of the onshore export cable corridor from landfall to the onshore substation sites has a 100 metre working width, which comprises 62 metres for Morgan and 38 metres for Morecambe to reflect the maximum cable parameters of 4 and 2 cable circuits respectively. This is detailed in AS-024. The Applicants continued by setting out the temporary construction working width for the 400kv corridor from the onshore substations to Penwortham is 76 metres, being 38 metres per





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		project. The permanent width is then reduced to 50 metres, with 25 metres per project for the 400kV grid connection cable corridor The Applicants submitted that this extra width during construction is required for preparing cable trenches, haul roads, temporary fences, security, designated storage areas and for storage of subsoil and topsoil.
		76) The Applicants explained the reason for use of a split corridor is linked to the Applicants' need to be able to construct independently. If only one project were to go ahead, the current approach to the cable route means there is no risk of oversizing, which in turn minimises disturbance to landowners and limits the projects to the areas of land they require for the cable route. The Applicants explained how the works plans adopted a centreline approach, though this is not located in the centre of the route, but instead separates the corridor in accordance with the maximum design parameters set out above. The Applicants submitted that this provides certainty over the scale and extent of the land take and works areas.
		77) In response to a query whether the route around the care home would be via trenchless techniques, and whether there would be any impacts on the nursing home [Post hearing note: the full name of the care home as it was referred to during the hearings is: Century Healthcare Care Home], the Applicants referred the ExA to the earlier submissions setting out how the offshore export cables join to the onshore cables via TJBs at Work No. 10AB. The Applicants explained there will be a single continuous drill per cable which goes underneath the railway, the dunes, the road, the golf course and exits on the beach at Work No. 5AB and 4AB. The Applicants explained the care home is not within the order limits, and given the use of trenchless techniques, they are not anticipating any impact on the care home as a result of this. The Applicants confirmed they are confident that they will not need to route through the care home.
		78) When asked which side of the care home the Applicants would use as part of their route, the Applicants confirmed this is all part of detailed design. The Applicants confirmed either project could choose either route, as either side could accommodate up to 6 cables. The Applicants explained the determining factor of choice for each project's cable corridor would be the location of the drills as they arrive from the TJBs (Work No. 10AB) and also by the ability to meet the cables as they arrive from the offshore cable route. The Applicants need to ensure the cables land on an appropriate place on the beach. It is once the Applicants know their trenchless duct alignment, that they would decide to begin the cable pull-in from the TJB.
		79) The Applicants confirmed they will come back in writing with regards to the approximate time scales for the cable pull in (hearing action point ISH_16). [Post hearing Action Note: see S_D1_5.3).]





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		80) In response to a query from Lancashire County Council as to whether the Applicants anticipate needing to close any roads, and if so, how they will protect the highways and utilities, the Applicants confirmed there is a commitment [Post Hearing Note: this is CoT02 from the Commitments Register (AS-030)] from the Applicants to carry out trenchless crossing of all roads save for Leach Lane, which avoids impacts to the road surface and the need for road closures.
5(a)(iv)	iv. Works at St Annes Golf Club	81) The Applicants highlighted that the works at St Annes Golf Club are incorporated within the trenchless techniques discussed above under Work No. 8AB and the only other Work No. relevant here is the pedestrian construction access coming to the cable corridor from the south to monitor that trenchless technique (42AB). The Applicants confirmed there would not be any restriction on the use of the golf club while works are taking place.
5(a)(v)	v. Works at Blackpool Airport	 82) The Applicants set out that the onshore cable corridor begins at Work No. 10AB moving eastward. The Applicants submitted that to minimise impacts, they have retained flexibility to input cables through Blackpool Airport. The Applicants explained that from the transition joint bays (TJBs), the onshore export cable corridor splits into a north east direction at 11AB, while the other part continues to the south east within Blackpool airport 12AB and traverses across Leach Lane into Blackpool Road Recreation Ground (these works are comprised of Work Nos. 51AB, 52AB, 15AB, 53AB and 54AB). The two parts of the cable corridor rejoin at Work No. 13AB. The Applicants confirmed that there is a maximum of 4 cable circuits in either corridor, and a maximum of 6 in total as secured under the parameters in the draft DCO (AS-004). 83) The Applicants confirmed that there is flexibility in the draft DCO (AS-004) as to whether the works at the airport are via trenchless techniques or open cut, however, discussions are being had with Blackpool Airport as to how these works are undertaken, which are going well. The draft DCO was submitted with that flexibility and the Applicants will update the ExA during examination on where those discussions get to as needed, including how those works will be undertaken, recognising the operational side of the airport and ensuring it can continue in safe operation. 84) In response to the ExA's query as to how the permanent maintenance access would operate, the Applicants explained there are two operational accesses identified for the works at Blackpool Airport. One at Leach Lane and one to the north. 85) DWF LLP on behalf of their client Blackpool Airport, supported the statements made by the Applicants and, whilst reserving their position, confirmed that the airport and the Applicants will enter into a commercial agreement to address matters in relation to the airport.
5(a)(vi)	vi. Works at Blackpool Road Recreation Ground	 86) The Applicants set out that they have retained optionality for use of trenchless techniques or open cut at Work No 52AB and into 51AB, however, from Work No 15AB, there are no surface works and there will be one trenchless drill which will resurface at Work No. 53AB before entering a new trenchless section into Blackpool Airport, crossing The Hamlet using trenchless techniques (Work No. 54AB). 87) When asked about the impact on the recreation ground during construction, the Applicants confirmed that the fencing surrounding Work No. 15AB would be in place for two months within a total duration of five





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		months. This is secured under Commitment 123 and Requirement 8 of Schedules 2A and 2B of the draft DCO (AS-004). Further, the Applicants noted they have been in conversations with St Annes Football Club and Fylde Borough Council on the impact and appropriate mitigation in this area. [Post hearing Action Note: the Applicants have provided a note as to the likely time duration and the extent of the impacts on the Blackpool Road recreation ground in their response to hearing action point ISH1_18 (see S_D1_5.4] 88) Fylde Borough Council acknowledged the Applicants have been engaging with the Council on this. They queried whether the Applicants should have been engaging with Sport England. 89) The Applicants noted they welcome thoughts from Sport England, but submitted that Sport England are not a statutory consultee for the purposes of this application as they are not listed in Schedule 1 of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009. The Applicants recognised the concerns raised and noted they are in ongoing discussion with the Council and the football club to minimise those impacts as far as possible. 90) In response to a query about why the recreation ground is to be fenced during trenchless works, but the golf course is not, the Applicants submitted that they took a dynamic risk approach, noting that Blackpool Road Recreation Ground usage is more localised by residents in the area when compared to the golf course. The access required at the golf course can be more limited and will involve pedestrian access by
5(a)(vii)	vii. Proposed substations	91) The ExA requested an overview on the technology proposed for each onshore substation, whether a decision had been made on the use of technology, a justification for the areas of each and why the Applicants had not chosen to combine into a single shared substation. 92) The Applicants submitted that as there are two separate onshore substations, Morgan OWL would speak to the choices made for the Morgan Transmission Assets and Morecambe OWL would speak to the choices made for the Morgan onshore substation will contain the electrical equipment components to transform the power supplied from the offshore windfarm to 400kv (as required by UK grid code for supply to the National Grid). The Morgan onshore substation will house the auxiliary equipment and facilities for maintenance and control. The onshore substation platform (being Work No. 21A) contains electrical equipment, cables, lightning protection, as is outlined in section 3.15.7 of the Project Description (AS-024). The structure is likely to comprise steel frames, external sheet cladding materials, some of which is detailed in the outline design principles (APP-209). Morgan OWL noted the principles in this document will inform the detailed design of both the Morgan and the Morecambe onshore substation. This is secured by Requirement 4 in Schedules 2A and 2B of the draft DCO (AS-004). 94) To reduce the size of the Morgan onshore substation footprint, Morgan OWL has committed to a gas installation switchgear (GIS) design, primarily in response to s42 consultation feedback received from Fylde Borough Council that the footprint is too large. As part of a commitment to move the onshore substation to the east to avoid residential properties, an early design change was to use a bespoke





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		shape. This reduced the original design for the substation footprint from 95,000 to 80,000 square metres. This reduction was possible due to the ability to rearrange equipment and through the commitment to GIS. Morgan OWL were in a position to do this due to early supply chain engagement. 95) As the Morgan onshore substation is GIS, most of the equipment is housed in one building, with some smaller buildings to house equipment and control rooms. A temporary construction compound is required (Work No. 22A) to provide welfare facilities, parking for staff, temporary works and drainage associated with those. Morgan OWL highlighted how Work No. 39A crosses this compound, which is for the undergrounding of a 6kv overhead line. Doing so will ensure that construction and operational traffic will have unimpeded access from the temporary compound to the onshore substation platform. Those discussions are progressing with the undertaker Electricity North West (ENW). 96) Permanent and temporary access is illustrated by Work No. 23A and 24A, respectively. These are taken to the north of the onshore substation site, utilising the A583. The new access (Work 23A) is required to provide safe operational access to the onshore substation and enable delivery of Abnormal Indivisible Loads (AlLs), being the large transformers. The land identified also includes visibility splays and temporary working areas (Work No 18A) either side to establish that access. The design of this access is set out in the outline Highway Access Management Plan (AS-052) and secured by Requirement 10 in Schedule 2A of the draft DCO (AS-004). 97) The onshore substation area is sited to the west of Newton with Scales and Dow Brook to avoid the area of separation associated with the green belt by Newton with Scales. Work Nos. 20A, 21A and 49A include replacement and additional landscaping required to mitigate the integrity of the onshore substation. Management of the landscaping and mitigation including tree planting, enhanced hedgerows, and creation of wat
		Management of the landscaping and mitigation including tree planting, enhanced hedgerows, and creation of water attenuation features such as ponds is there to ensure the integrity of the planting long term screening effect is maintained for the onshore substation. The outline design for those is the outline landscape management plan (AS-050), secured by Requirement 6 of the draft DCO (A the outline ecological management plan (APP-212), secured by Requirement 12 and the outline dimanagement plan (APP-215), secured by Requirement 20. 98) The Applicants flagged a typographical error on sheet 12 of AS-015 where Work No. 25 should hat Work No. 17A. The Applicants noted they would update the works plans at an appropriate deadline ExA later acknowledged this was a minor amend. 99) In response to the ExA's query around the size of the substations, Morgan OWL noted that the refrom 95,000 to 80,000 square meters isn't explicitly set out in the annex on Site Selection (AS-028 worth noting the land take at this Work No. illustrates the commitment to bespoke mitigation required order to enable the move of the onshore substation from the west to the east. 100) In response to a query whether the order limits reflect the use of GIS, Morgan OWL explain





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		substation itself. The exact placement of the substation is dependent on the entry of the cables from Work No. 17A into Work No. 21A crossing the public right of way (Work No.34A)
		 The Applicants expanded further on why they have not chosen to use a single substation. The primary driver is siting the substation most appropriately. This is affected by the constraints identified, and the subsequently available land parcels within the zone identified as part of the site selection process. The placement of the onshore substations is such that if only one project came forward, it is in its best location, and it makes sense in the landscape, notwithstanding that, the Applicants were unable to identify a land parcel large enough to accommodate both substations immediately adjacent to one another. In response to the ExAs question as to whether the footprint of the onshore substations could have been reduced by sharing a substation, the Applicants submitted that the requirement to be electrically separate means sharing infrastructure is not appropriate. The Applicants need to be able to operate independently and so there is no opportunity to share this electrical infrastructure. The Applicants submitted that they did consider sharing operational accesses, but received comments post s42 consultation that Lower Lane was not appropriate for construction and operational reasons. The projects therefore have separate accesses and that means there is not a proliferation of construction traffic effects falling onto one particular highway link. The Applicants submitted this is therefore an appropriate conclusion.
		 In response to the ExA's question as to why the Applicants have not produced a physical layout, the Applicants referred the ExA to Volume 3 Figures, Part 6 of 7 (APP-136) which contains rendered images of onshore substations. Morecambe OWL responded to the same initial questions from the ExA regarding the Morecambe onshore substation. They set out that Work No. 17B is the onshore export cable works as they enter the onshore substation and move into Work No. 21B which is the main permanent substation area. That is encompassed by an area of environmental mitigation which is Work No. 20B. The substation permanent area for construction purposes is 22B. Works 24B is the link for access between the temporary compounds. The construction access, 23B, would be from the A584, this is to facilitate construction of the substation itself. Morecambe OWL set out there is also a permanent operational access off lower lane, but this is not for construction, it is only for light goods vehicles undertaking routine inspection of the substation which will be unmanned. Morecambe OWL went on to set out that south of the substation Work No. 25B is where the 400kV grid connection cable corridor exits the substation. This is a broad area as the project will not be able to pinpoint the exact area the 400kV connections would come out of the substation until detailed design stage. Morecambe OWL highlighted that the project will be crossing Dow Brook through Commitment 02 by trenchless technique. As the cable route moves towards the East, the project aimed to join up again with the Morgan 400kV grid connection cable corridor as quickly as





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	possible, noting there is a need for additional space there to facilitate a trenchless crossing (which explains the need for extra width of the corridor at this stage). 105) In responding to the query about technology choices, Morecambe OWL explained that the project has not yet decided on Air Insulated Switchgear (AIS) or GIS, as this will be done at detailed design phase. Morecambe OWL submitted that this will be accompanied by a detailed analysis with the supply chain including equipment availability and whole life costing. As the project moves through this detailed design stage, they will be able to commit to a technology, landscaping and design principles would subsequently be developed further as part of the discharge of DCO requirements, post consent 106) Morecambe OWL set out that following the s42 consultation process, the project reduced the maximum building height of the substation down to 13m. This is reflected in visualisations in Volume 3 Figures, Part 6 of 7 (APP-136). Morecambe OWL confirmed that whether AIS or GIS are selected, the height of the Morecambe onshore substation would not go above that 13m. 107) In response to the ExA's question whether the Applicants looked at the design of the substations in terms of environmental mitigation and landscaping holistically across both projects, the Applicants submitted that the zonal approach taken during the joint site selection exercise, meant that both onshore substations are sited within the same landscape area-so both projects adhere to the same outline design principles, which translates into the outline Landscape Management Plan (AS-050). They have therefore been viewed holistically, with the exception of bespoke planting, notwithstanding the onshore substations still need to be able to stand alone, rather than being a cumulative landscape mitigation plan. The Applicants confirmed that even with the possibility of using different technologies, the outline design principles (APP-209) require the onshore substations to fit within the landscape





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		The Applicants explained the rods would always be higher than the onshore substation buildings, in order to provide lightning protection. Morecambe OWL confirmed the same principle would apply, whether the Morecambe onshore substation is built AIS or GIS. [Post Hearing Action Note: the Applicants have confirmed this in writing in response to hearing action point ISH1_21 (see the Applicants' response to Hearing Action Points due at Deadline 1 (S_D1_5)).] 111) The LALC FAC EWG also raised a query as to the maximum parameters of the onshore substations of other offshore wind projects. The Applicants submitted caution should be taken when comparing this application to the parameters of built projects, including those which are DC, whereas this project will be AC, and noting the different ownership structures of the promoters. The Applicants further submitted that the comparison being drawn out are with the permanent onshore substation platform footprint, with Morgan onshore substation being 8 hectares, and Morecambe 3 hectares. The Applicants submitted these areas are much in line with what was applied for by the projects. [Post Hearing Action Note: the Applicants have provided a more detailed note on this in response to hearing action point ISH1_20 (see S_D1_5.5)]. 112) In response to a clarificatory question from BAE Systems, the Applicants confirmed that Requirement 5(a) of the draft DCO should specify the height of the onshore substation buildings as above finished ground level and the Applicants will be correcting this in the next version of the draft DCO and ensure the draft DCO and Project Description (AS-024) parameters align. 113) In response to the ExA's question around the strategy adopted to site the construction compounds, the Applicants submitted that this is associated with the available transport links. The strategy is to use motorways or accesses via motorways using the hierarchy of A road, B roads and then minor roads. The construction compounds are sited in line with that, notwithstanding the
5(a)(viii)	viii. River Ribble crossing	114) When asked to explain the works at the River Ribble crossing, the Applicants explained that these works contain Work Nos. 26AB, 27ABB, 28AB, 29AB, 30AB and 31AB. The Applicants explained the river will be crossed using trenchless techniques and, there are a number of trenchless options available to the Applicants, the choice of which will depend on the direction of tunnelling from the entry or exit pits at 26AB on the northern side, and 30AB and 31AB on the south side. 115) The Applicants explained the decision on which technique to use would be based on ground investigation and surveys to inform detailed design. The Applicants gave examples, as to how the ground investigation would influence this decision, with direct pipe being a more effective technique for dealing with cobbles than HDD. [Other factors to consider with various technologies include whether a stable borehole can be maintained during the drilling operation or whether it needs to be stabilised by inserting indirect pipes or steel sleeves. Additionally, the approach angle to underlying bedrock is important, as the





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		drill can be deflected depending on what installation technology is used and the depth and accessibility of the bedrock. Further GI campaigns will ensure these factors are fully characterised, allowing the most technical feasible trenchless solution to be selected. 116) In response to a query about what depth the trenchless crossing would be and what is facilitating that depth, the Applicants explained that the cables would be at a minimum depth to where stable geology is present for the use of trenchless technology, ensuring protection from bentonite breakout The actual depths will come from detailed design once the ground investigation works are complete and chosen trenchless technique identified. 117) When asked a further clarificatory question about the indicative maximum depth for differing trenchless techniques, being 6 metres for direct pipe and 45 metres for microtunnelling, the Applicants explained that this is confirmed in Table 3.32 and Table 3.33 of AS-024 which provide an indicative minimum drill depth of 6 metres (post hearing note: 7 metres was inadvertently stated during the hearing; this has been corrected to 6) and an indicative maximum drill depth of 45 metres. The Applicants submitted that the differences are determined by the type of trenchless technology used. For example, the microtunnel has entry and exit shafts, where the depth is more subtle, whereas direct pipe is more of a HDD type technology, with a sharper turn at the entry and exit locations from the main drill depth. 118) In response to a query around any impacts on the Guild wheel cycle route, the Applicants confirmed there is a construction access to the north of the River Ribble crossing. Mitigation measures are outlined in the outline Public Rights of Way Plan (AS-020) to manage this interaction. [Post Hearing Note: the Applicants have committed to providing an update in the outline Construction Traffic Management Plan (APP-211) regarding management of construction traffic to use the Guild Wheel cycle route safely. The u
5(a)(ix)	ix. Connection to existing Penwortham substation	In providing an explanation of the works, the Applicants set out how the 400kV connection corridor diverges with 2 cable circuits connecting at the eastern side and 2 cable circuits connecting at the western side of Penwortham. The Applicants submitted this is due to the anticipated locations of the connection bays at the National Grid- Penwortham (Work No. 33AB). The Applicants explained that either project can install their cables in either corridor. The Applicants also drew the ExA's attention to the widening of the cable corridor at Work No.37AB, which is to provide flexibility to connect into the project's allocated bays as part of detailed design and to take account of a high pressure gas pipeline on the western side of the gas corridor (which can be seen on the Onshore Crossing Schedule Part 2 of 2 (APP-027) with references MGMC_GCC_UT_1805 and MGMC_GCC_TCC_UT_1926). The Applicants confirmed they do not envisage any issues with this, noting the temporary construction compound is above ground.





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		120) The Applicants continued with their explanation of the works, identifying the temporary working area (Work No.48AB) which facilitates the 400kV grid connection corridor at Penwortham. The Applicants explained that Work No. 18AB will be used to facilitate construction compounds for each project. During detailed design and in light of NGET's potential proposals to extend their substation, these will be microsited within the area. 121) In response to a query as to the cable installation techniques, the Applicants confirmed that they have retained the option to use open cut and trenchless techniques. Interactions where the Applicants have committed to trenchless techniques to cross utilities are identified by the Onshore Crossing Schedule Part 2 of 2 (APP-027). Where this has not been committed to, the decision for trenchless or trenched techniques will be made at detailed design stage based on environmental considerations and terrain levels. 122) In response to queries by the ExA as to whether there is a connection agreement with National Grid, the Applicants confirmed that the position is as noted on NGET's TEC register. This should also contain details around a connection date from which the Applicants can connect into Penwortham. [Post Hearing Action Note: The Applicants' confirmed this position in their response to hearing action point ISH1_19 (see S_D1_5.2)]. 123) The Applicants confirmed the access to the compound south of the substation will be accessed by Work No. 19A19B. 124) After the ExA noted this was a busy junction, the Applicants confirmed this would be managed as a 'left in' and 'left out junction'. 125) In response to a query from Louise Staples from the NFU, the Applicants confirmed there are no overhead lines as part of the project. The Applicants also emphasised NGET will determine which side of the substation each project will connect into. These things can be subject to change, so the Applicants have not sought to commit to entry into one side. The Applicants noted, however, that Re