MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Green Belt Technical Note

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

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

Units

Unit	Description
%	Percentage
dB	Decibels
Kg	Kilogram
kHz	Kilohertz

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

1 Green Belt Technical Note

1.1 Introduction

1.1.1.1 As a long standing national and local policy designation, the Applicants recognise the importance of proper consideration being given to the Transmission Assets' interaction with the Green Belt.

1.1.1.2 This is reflected in the Examining Authority's identification of Green Belt as a principal issue in Appendix C of the Rule 6 Letter (PD-006), *"including issues relating to: Whether any aspects of the proposals represent inappropriate development in the Green Belt, the effect on openness, and whether the harm by reason of inappropriateness, and any other harm, would be clearly outweighed by other considerations to amount to the very special circumstances required to justify the proposed development."*

1.1.1.3 Following a review of responses submitted at Deadline 1 and Deadline 2, including matters raised in Local Impact Reports submitted by Fylde Borough Council (REP1-078), Lancashire County Council (REP1-085) and South Ribble Borough Council (REP1-227) and Examining Authority Questions (PD-008), this report draws together the Applicants' case on Green Belt and provides additional clarification on:

- site selection and alternatives
- design (in relation to Green Belt)
- the nature of any harm arising as a result of the proposals on the function and performance of the Green Belt in relation to its fundamental aim and purposes
- the very special circumstances

1.1.1.4 To address these points, the report is set out in the following order:

- **Policy Review –** outlines the national and local policy relevant to Green Belt and the relevant tests to be applied to the determination of the Transmission Assets application. The review also outlines the policy basis for the Critical National Priority (CNP) Infrastructure designation.
- **Context –** an overview of how and where the proposed Transmission Assets and associated works will interact with land covered by Green Belt policy and where Green Belt is addressed within the application and examination submission documents.
- **Site Selection and Technical Justification –** this section outlines the site selection process and assessment methodology to demonstrate that consideration of the corridor for the Transmission Assets was robust; provides an overview of the technical and constraints justification of the area of search for the substations; why two separate substations are required; provides an explanation as to how Green Belt formed part of the site selection/ refinement

process (with particular reference to the substations); and makes clear that the assets could not reasonably have avoided Green Belt.

- **Design –** this section describes how the design of the Transmission Assets has sought to reduce harm by virtue of inappropriateness and any other harm.
- **Analysis of harm resulting from the Transmission Assets –** this section considers the potential harm to the Green Belt that may result from inappropriate development and any other harm in relation to the fundamental aim and relevant purposes of the Green Belt. As part of this, the report examines the existing and anticipated post development performance of the affected areas of Green Belt in relation to the fundamental aim and relevant purposes. It describes and demonstrates how the mitigation hierarchy has been applied to avoid, minimise and then mitigate any harm which may be caused to the Green Belt as far as practicable.
- **Very Special Circumstances –** this section sets out the very special circumstances (VSC) which exist (including addressing the reference made by Lancashire CC in their LIR (para 7.16 in REP1-085) to the suggestion that the lack of available sites outside of the GB/other GB locations which would have less impact, such as the land adjacent to Penwortham substation) and outlines the weight of any harm caused to the Green Belt by inappropriate development against the VSC.
- **Conclusion –** the report concludes that the Transmission Assets will result in limited overall harm in the local Green Belt area by virtue of the Green Belt being sufficiently robust to retain function and purpose; that 'any other harm' is limited based on judgements relating to visual impact (including reference to visual openness) and landscape character change; and that adequate design measures mitigate the effects where reasonably practicable; and that the VSC outweigh any harms arising. The section confirms that notwithstanding the fact that there are clear and robust very special circumstances that substantially outweigh the harm to the Green Belt, the Transmission Assets comprise Critical National Priority Infrastructure (and the qualifying mitigation hierarchy has been appropriately applied) and as such the Green Belt tests are met.

1.2 Policy Review

1.2.1.1 The Transmission Assets fall to be determined under section 104 of the Planning Act 2008, as set out in paragraphs 3.4.1.8 to 3.4.1.12 of the Planning Statement (REP1-032). Section 104 applies where a National Policy Statement (NPS) has effect in relation to development of the description to which the application relates. In this case, NPS EN-1 prescribes that *'EN-1, in conjunction with any relevant technology specific NPS, will be the primary policy for Secretary of State decision making on projects in the field of energy for which a direction has been given under section 35'*. As the Transmission Assets are a project in the

field of energy for which a direction has been given under section 35 (see paragraph 3.4.1.10 of REP1-032), and given that EN-1 prescribes that it (in conjunction with EN-3 and EN-5 as the relevant technology specific NPSs), is the primary policy for such projects, there is a National Policy Statement which has effect in relation to the Transmission Assets.

1.2.1.2 Whilst the relevant NPSs provide the primary decision-making framework, the Secretary of State may also consider other 'important and relevant' matters, such as the National Planning Policy Framework (NPPF), National Planning Practice Guidance (NPPG) and relevant Development Plan documents or other documents in the Local Development Framework in making their determination (NPS EN-1, paragraph 4.1.12). For this application, the relevant development plan documents include: the Blackpool Local Plan, Part 1: Core Strategy (2012 – 2027) (Adopted January 2016), Fylde Local Plan to 2032 (incorporating Partial Review) (Adopted December 2021) and the South Ribble Local Plan (adopted July 2015). These are discussed below in more detail.

1.2.1.3 Where there is conflict within policy, the NPS must prevail (NPS EN-1, paragraph 4.1.15).

1.2.2 NPS EN-1

1.2.2.1 NPS EN-1 states that Green Belts, as defined in local authority development plans in England, are situated around certain cities and large built-up areas. The *'fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and permanence'* (paragraph 5.11.2).

1.2.2.2 Paragraph 5.11.20 confirms the *'general presumption against inappropriate development'* within Green Belts and that *'such development should not be approved except in very special circumstances'.*

1.2.2.3 Paragraph 5.11.36 advises that energy infrastructure projects may comprise inappropriate development, which is, *'by definition harmful to the Green Belt'.* The NPS refers to the NPPF for the definition of *'inappropriate development'.*

1.2.2.4 Paragraph 5.11.37 confirms that *'very special circumstances are not defined in national planning policy as it is for the individual decision maker to assess each case on its merits and give circumstances their due weight. However, when considering any planning application affecting Green Belt land, the Secretary of State should ensure that substantial weight is given to any harm to the Green Belt when considering any application for such development, while taking account, in relation to renewable and linear infrastructure, of the extent to which its physical characteristics are such that it has limited or no impact on the fundamental purposes of Green Belt designation. Very special circumstances may include the wider environmental benefits associated*

with increased production of energy from renewables and other low carbon sources'.

1.2.2.5 The amendments proposed to NPS EN-1 in the 2025 draft, do not change NPS policy in relation to Green Belt.

1.2.3 NPS EN-3

1.2.3.1 With regard to Green Belts, paragraph 3.8.70 acknowledges that *'Although offshore wind farms themselves will not have a direct impact on green belts, it is possible that some elements of these projects may be proposed on green belt land, such as electricity network infrastructure, and comprise inappropriate development which may impact on the openness of the green belt'.*

1.2.3.2 For guidance in relation to development within the Green Belt, paragraph 3.8.71 refers applicants to Section 5.11 of EN-1 as set out above.

1.2.4 NPPF

1.2.4.1 Government policy in relation to Green Belt is primarily set out in the NPPF, most recently updated in February 2025.

1.2.4.2 Much of the policy relating to Green Belt including its fundamental set out in the NPPF has already been incorporated into NPS EN-1 as outlined above. However, paragraph 143 of the NPPF additionally, advises that the Green Belt serves five purposes:

a. to check the unrestricted sprawl of large built-up areas;
b. to prevent neighbouring towns merging into one another;
c. to assist in safeguarding the countryside from encroachment;
d. to preserve the setting and special character of historic towns; and
e. to assist in urban regeneration, by encouraging the recycling of derelict and other urban land

1.2.4.3 It is considered that only purposes a) and c) are relevant to the proposed Transmission Assets; with purpose c) of assisting in safeguarding the countryside from encroachment being of primary consideration, and a) to check the unrestricted sprawl of large built-up areas, secondary. The second purpose, b) 'to prevent neighbouring towns merging together' relates to settlements larger than villages where there are permanent works and is therefore not of relevance to this application and the local Green Belt policy area. Paragraphs d) and e) are also considered not to be of relevance to this application.

1.2.4.4 Paragraph 153 of the NPPF stipulates that *'Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances'*. It goes on to state that, such ''*'Very special circumstances' will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations'.*

1.2.4.5 Paragraphs 154 and 155 of the NPPF provide a number of specific exceptions where development in the Green Belt will not be considered to be inappropriate, a number of which are subject to the caveat that such development should *'preserve its openness and do not conflict with the purposes of including land within it'* (see paragraphs 5.24.1.4 to 5.24.1.6 of the Planning Statement (REP1-032).

1.2.4.6 Paragraph 160 recognises that *'When located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development'* and that in such cases developers will need to demonstrate very special circumstances if projects are to proceed. This has been highlighted in several of the LIRs (REP1-078, REP1-227); however, it should be noted that paragraph 160 goes on to confirm that *'Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources'* (acknowledged in LCC's Local Impact Report, REP1-085).

1.2.5 Relevant Development Plans

Blackpool Local Plan, Part 1: Core Strategy (2012 – 2027) (Adopted January 2016)

1.2.5.1 Blackpool's Core Strategy advises that the Borough has two areas of Green Belt, that which comprises the lands between Blackpool and Carleton on the north-east edge of town and that comprising the land between Blackpool and St Annes on the southern edge of the town (Paragraph 2.29). It is this second area of land which is relevant to the Transmission Assets.

1.2.5.2 Blackpool's intensely built-up urban area provides limited open space, particularly within the inner areas (paragraph 2.37). The urban development limits of the town are defined by the designated Green Belt and Countryside Areas, and these open, undeveloped areas carry important landscape, nature conservation, environmental and amenity value. The Green Belt plays an important role in safeguarding the countryside from encroachment, providing important physical separation between Blackpool and the adjoining authorities of Fylde and Wyre and in assisting in urban regeneration (paragraphs 2.25, 2.30, 2.37 and 5.95).

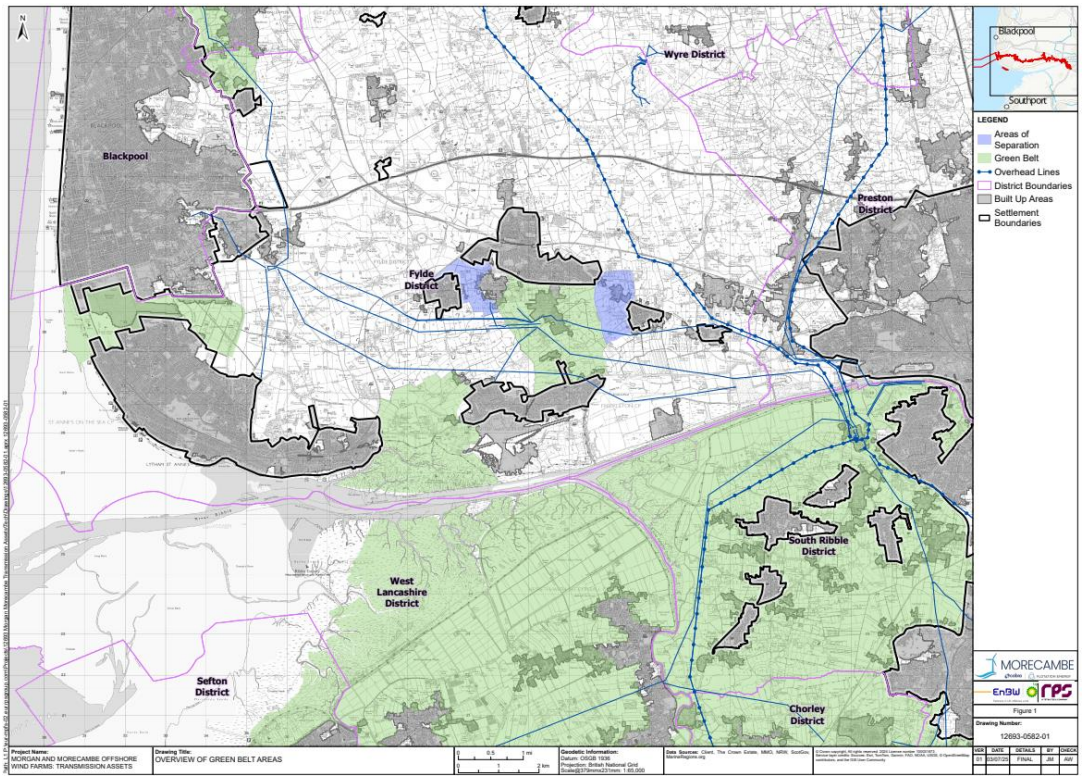
1.2.5.3 The Core Strategy therefore advises that *'any development in these areas will need to be managed in a positive way to balance the need for new development with environmental and climate change issues*' (paragraph 2.37). To this end, Policy CS6 advises that the *'High quality and well-connected networks of green infrastructure in Blackpool will be achieved by: a) Protecting existing green infrastructure networks and existing areas of Green* Belt' and advises that the Council will apply national policy to protect the openness and character of Green Belt to retain local distinctiveness.

Fylde Local Plan to 2032 (incorporating Partial Review) (Adopted December 2021)

1.2.5.4 Similarly to Blackpool, all land beyond the settlement boundaries in Fylde is protected by Green Belt, Areas of Separation or Countryside policy areas. There is a hierarchy to these designations, with the greatest level of protection offered to the Green Belt, followed by Areas of Separation and then Countryside (paragraph 7.4).

1.2.5.5 There are four tracts of Green Belt within Fylde which are in proximity to the Transmission Assets, three of which have relevance to the Transmission Assets: these are, the area between St Annes and Squires Gate, between Lytham and Warton and between Kirkham and Freckleton (paragraph 7.6) (see Figure 1).

Figure 1 – Overview of Green Belt Areas



1.2.5.6 Policy GD2 of the Fylde Local Plan to 2032 stipulates that national policy for development in the Green Belt (namely the NPPF 2025) will be applied, and paragraph 7.7 goes on to note *that 'Inappropriate development in the Green Belt should not be approved unless there are very special circumstances which justify an exception. The Framework [NPPF 2025] sets out the types of development that are considered to be exceptions to inappropriate development and those forms of development that are not inappropriate provided they preserve the openness of, and do not conflict with the purposes of including land within, the Green Belt'.*

1.2.5.7 Policy ENV3 (Protecting Existing Open Space) sets out the positive community benefits the Green Belt can provide in terms of landscape, amenity and open space (paragraph 7.8).

1.2.5.8 The tract of Green Belt between St Annes and Squires Gate incorporates the Blackpool Airport and the Enterprise Zone. Whilst the Blackpool Business Park and Squires Gate Retail Park have been developed on disposed airport land, the majority of the residual airport land is designated as Green Belt in order to retain the separation between Blackpool and St Annes (paragraphs 11.40 and 11.42). Strategic Policy T3 stipulates that this will be safeguarded from non-aviation related uses, which do not constitute permitted development, unless there are overriding operational requirements that constitute very special circumstances and which justifies development in the Green Belt (paragraph 11.40, see also paragraph 13.3.2 of REP1-078).

1.2.5.9 In addition to the Green Belt, policy GD3 also defines Areas of Separation. Areas of Separation have a similar aim and function to Green Belt, in that they seek to maintain the openness of areas outside the Green Belt, however, they differ in so far as they also play an additional role in seeking to preserve the character, identity and distinctiveness of individual settlements by restricting inappropriate development that may result in the coalescence of two distinct and separate settlements. Areas of Separation tend to be of a significantly smaller scale and are located between settlements boundaries that are relatively close and at risk of merging (paragraph 7.9). This is a local level designation and does not carry the same weight or level of protection as nationally designated Green Belt.

1.2.5.10 Policy GD3 states that in Areas of Separation *'Development will be assessed in terms of its impact upon the Area(s) of Separation, including any harm to the to the effectiveness of the gap between the settlements and, in particular, the degree to which the development proposed would compromise the function of the Area(s) of Separation in protecting the identity and distinctiveness of settlements'* and provides a list of development types which would be permissible in these areas.

1.2.5.11 The Applicants consider that development must be within the boundaries of Areas of Separation to be reasonably considered to have an effect on it as in the case of Green Belt, to be *'inappropriate development that would cause the coalescence of two distinct and separate settlements'* (paragraph 7.10 of the Fylde Local Plan to 2032) and cause harm to the designation. Areas of Separation do not have settings or zones of influence, and as advised in paragraph 5.24.1.1 of the Planning Statement (REP1-032), although close to the 'Areas of Separation' designation contained within Fylde Local Plan to 2032, no element of the Transmission Assets would cross or affect this designation. Whilst the Order Limits boundary proposed as part of statutory consultation on the Preliminary Environmental Information Report (PEIR) did enter into the Kirkham and Newton Area of Separation, subsequent changes to the scheme design following the consultation feedback, have now removed this area from the Transmission Assets Order Limits.

1.2.5.12 Strategic Policy CL3 (Renewable and Low Carbon Energy Generation – excluding onshore wind turbines) acknowledges that *'Renewable and low carbon energy development potential… is significant within Fylde.*

Opportunities for renewable and low carbon development… should be maximised, while ensuring that adverse impacts are addressed satisfactorily; including cumulative landscape and visual impacts'. Policy CL3 goes on to note that *'Renewable and low carbon energy proposals within the Green Belt will need to demonstrate very special circumstances where elements of any proposed renewable energy project comprises inappropriate development'*. However, importantly, this policy also states that *'Applicants will not be required to justify the overall need for renewable and low carbon energy development, either in a national, regional or local context'.*

South Ribble Local Plan (adopted July 2015)

1.2.5.13 Within the South Ribble Local Plan, the supporting text to Policy G1 (at paragraph 10.21) acknowledges that *'The main Green Belt objectives are to ensure the control of development in certain areas. Green Belts are mostly designated on open land in rural areas to protect it from development, maintain the openness and character of the area and restrict urban sprawl. There is a general presumption against inappropriate development in the Green Belt'.*

1.2.5.14 Paragraph 10.22 advises that *'Within the Green Belt, planning permission will only be given for development that is compatible by maintaining its fundamental open nature'.*

1.2.5.15 Paragraph 10.23 states that *'Inappropriate development in the Green Belt is that which adversely affects the openness of the land. Planning applications for an inappropriate development would not be in accordance with the objectives of this policy. It will be for the applicant to demonstrate that very special circumstances exist which clearly outweigh the harm that would be caused to the openness of the Green Belt'.*

1.2.5.16 With regard to the construction of new buildings, Policy G1 notes that 'As set out in the NPPF, planning permission will not be given for the construction of new buildings unless there are very special circumstances'. Paragraph 10.25 elaborates on this, stating that *'The construction of new buildings in the Green Belt is strictly limited. Such proposals will be considered on their merits having regard to the requirements of the NPPF and Policy G1'.*

1.2.5.17 In accordance with the NPPF, the development strategy for South Ribble seeks to ensure *'that Green Belt boundaries will not need altering at the end of the Plan period'* and to do this, seeks to safeguard land between the urban areas and the Green Belt to meet the borough's longer term development needs (paragraph 10.34 and Policy G3).

1.2.7 The Policy Tests

1.2.7.1 As discussed above, only purposes a) 'to check the unrestricted sprawl of large built-up areas' and c) 'to assist in safeguarding the countryside from encroachment' of paragraph 143 of the NPPF are considered to be of relevance to the Transmission Assets.

1.2.7.2 The onshore substations required for the Transmission Assets do not satisfy any of the exceptions set out in paragraphs 154 and 155 of the NPPF and are therefore considered to comprise inappropriate development which is, by definition, harmful to Green Belt and not compliant with the policies of the relevant Local Plans set out above. Consequently, very special circumstances must be established to justify development.

1.2.7.3 The Government has committed to fully decarbonising the power system by 2035, subject to security of supply, to underpin its 2050 net zero ambitions (paragraph 4.2.1 of NPS EN-1). It has therefore concluded that there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure (paragraph 4.2.4 of NPS EN-1). Paragraph 4.2.14 of NPS EN-1 confirms that where the Secretary of State is satisfied that an application meets the requirements of the NPS, applying the mitigation hierarchy and any other legal and regulatory requirements, 'the CNP presumptions set out below apply'. As signposted in paragraphs 3.4.4.6 to 3.4.4.23 and 4.2.1.6 of the Planning Statement (REP1-032), the Applicants consider the Transmission Assets are of the type of works to be considered CNP infrastructure and that the requirements set out in NPS EN-1 have been met, and as such the Transmission Assets benefit from the policy support provided to CNP infrastructure.

1.2.7.4 The CNP presumptions are set out in paragraphs 4.2.16 and 4.2.17 of NPS EN-1 and include the presumption that CNP infrastructure is to be treated as if it has met any tests which are set out within the NPSs, or any other planning policy which requires clear outweighing of harm, exceptionality or very special circumstances. This includes development within the Green Belt where the applicant demonstrates that the mitigation hierarchy requirements of EN-1 and the relevant technology specific NPSs have been applied, as well as any other legal and regulatory requirements (NPS EN-1, paragraphs 4.2.10 to 4.2.12).

1.2.7.5 Consequently, the starting point for determination of CNP infrastructure, is that the Applicants demonstrate how the mitigation hierarchy (NPS EN-1, Paragraph 4.2.10) has been applied to avoid, minimise and then mitigate harm and then meet the test of very special circumstances required to justify development by the recognised need for new low carbon infrastructure.

1.2.7.6 Nevertheless, whilst this approach (as confirmed at paragraph 4.2.17 of NPS EN-1), is correct for the Transmission Assets, robust very special circumstances do exist to justify any harm which may occur to the Green Belt by reason of inappropriate development. The need for and benefits of the Transmission Assets are set out in in the submission documents in Section 6 of the Planning Statement (REP1-032) and in

Sections 1.4 and 1.5 of the Statement of Reasons (REP1-012), however, for clarity they are confirmed in Section 1.7 below.

1.3 Context

1.3.1 Description of how and where the Transmission Assets will pass through areas of Green Belt

1.3.1.1 The purpose of the Transmission Assets subject to this DCO, is to connect the Morgan Offshore Wind Project: Generation Assets and Morecambe Offshore Windfarm: Generation Assets (referred to collectively as the 'Generation Assets') to the National Grid at its Penwortham Substation in Lancashire (paragraph 1.1.1.1 of the Planning Statement, APP-233/REP1-032). Due to the location in which the Transmission Assets make landfall and the requirement to connect into the National Grid Penwortham Substation, elements of the Transmission Assets pass through four areas of Green Belt. Figure 5.1 of the Planning Statement (REP1-032) illustrates how the Order Limits of the DCO interact with the Green Belt designation.

1.3.1.2 In order to demonstrate how the mitigation hierarchy has been applied, the site selection process addresses the approach taken to avoid harm to the Green Belt and any other harm and the design process demonstrates how the Applicants sought to minimise and mitigate any harm to the Green Belt and any other harm through micro siting and site/ substation design. These processes are examined in Sections 1.3 and 1.4 of this report and demonstrate that Green Belt could not have been avoided in the location of the cable route and onshore substations.

1.3.1.3 The Transmission Assets Order Limits (Figure 3.1, see Volume 1: Figures) represents the area within which all components of the Transmission Assets will be located, including areas required temporarily for construction and areas where permanent infrastructure will be located (AS-028, paragraph 4.1.2.2). The Order Limits will accommodate the following components:

- Onshore export cable corridors
- Onshore substations
- 400kV grid connection cable corridors
- Environmental mitigation only area(s)
- Biodiversity benefit only area(s)
- Areas required temporarily for construction, and
- Areas where permanent infrastructure will be located (including accesses).

1.3.1.4 With the exception of the two proposed substations within the Green Belt between Kirkham and Freckleton and the proposed landscape planting and temporary working compounds (which will be fully reinstated upon completion of the works), the Transmission Assets

have been designed to be installed underground to avoid and minimise landscape and visual harm and will not result in harm to the Green Belt. It is acknowledged that harm to the Green Belt will occur during the construction phase, principally as a result of the temporary working compounds, but the Applicants contend that should not be a determining consideration for the application given its relatively short duration and full reversibility (see Appeal Decision APP/M0655/W/18/3209412 (Higher Oak Farm, Higher Lane, Lymm, WA13 0RG), paragraphs 11-15). It is acknowledged that harm will occur to the Green Belt as a result of the permanent works - the substations - and that in accordance with policy significant weight should be attached to that harm. The explanatory text below provides further detail on these matters.

1.3.2 Description of the transmission cable corridor

1.3.2.1 The initial sections of the onshore export cable corridors will make landfall between Blackpool and Lytham St Annes and the rationale for this is provided in Section 4.6 and 4.7 of ES Chapter 4 (AS-026) and Annex 4.1: Selection and refinement of cable landfall (APP-031) (discussed in Section 1.4 below).

1.3.2.2 The Order Limits cable corridor extends east beneath Blackpool Airport to the B5410. The land between St Annes and Squires Gate, incorporating Blackpool Airport, is designated as Green Belt under Policy GD2 of the Fylde Borough Council Local Plan to 2023 (December 2021). The Transmission Assets affecting the Green Belt in this section will comprise the temporary construction compounds required to install the below ground export cables. No permanent above ground assets are proposed in this section of the Green Belt.

1.3.2.3 As the cable corridor extends east, the Order Limits skirt the northern edge of the tract of Green Belt between Lytham and Warton. In this location, the Transmission Assets will comprise below ground cables and the works corridor will not enter the Green Belt in this location. As such, there will be no harm to this area of Green Belt and it is discussed no further below.

1.3.2.4 The cable corridor continues to extend east to enter the tract of Green Belt between Kirkham and Freckleton to the east of Hall Cross. To the east of HMP Kirkham, the Order works area extends north and south to accommodate the area required to construct and operate the two substations. To this point, the cabling works will be laid below ground level (see section 3.15.3 of the Project Description (REP2-008) for further details on cable installation). The substations, associated landscape works and temporary working compounds will be above ground level (see section 3.15.7 of REP2-008).

1.3.2.5 The cable corridor continues to extend east and then south through land designated as Green Belt under Policy G1 of the South Ribble Local Plan (July 2015), to the south of the River Ribble, where the 400kV grid connection cable corridor will be laid to connect into the existing Penwortham Substation. This section of the cable corridor, up

to the Penwortham substation, will be below ground level. Connection to the National Grid substation will likely include the installation of above ground infrastructure (as described in paragraph 3.16.1.3 of REP2-008) and temporary construction compounds (see paragraph 3.16.1.5).

1.3.3 Sources of information and assessment on the Green Belt within the DCO submission

1.3.3.1 Green Belt is addressed in the following submission documents:

- Environmental Statement (ES):
  - Volume 1, Chapter 2: Policy and Legislation Context (APP-023)
  - Volume 1, Chapter 4: Site Selection and Consideration of Alternatives (AS-026)
  - Volume 1, Annex 4.3: Selection and Refinement of the Onshore Infrastructure (AS-028)
  - Volume 1, Annex 5.3: Commitments Register (AS-030)
  - Volume 3, Chapter 6: Land Use and Recreation (APP-104)
  - Volume 3, Annex 2.3: Flood Risk Assessment (AS-040, AS-042, AS-044)
  - Volume 3, Annex 10.1: Landscape and visual resources local planning policy context (APP-124)
  - Volume 3, Chapter 11: Aviation and radar (AS-130)
  - Volume 4, Chapter 2: Socio-economics (APP-141)
- Planning Statement (APP-233), especially sections 5.24, 6, 6.2, and 6.4
- National Policy Statement Tracker (APP-231)
- National Planning Policy Framework Tracker (APP-234)
- Local Planning Policy Tracker (APP-236)
- Consultation Report (APP-170)
- Draft Development Consent Order (AS-004)
- Commitments Register (AS-030)

1.4 Site Selection and technical justification

1.4.1.1 As detailed in the DCO submission (and in the Environmental Statement, see Section 4.5 of ES Volume 1, Chapter 4: Site selection and consideration of alternatives (AS-026) and Annex 4.3: Selection and Refinement of Onshore Infrastructure (AS-026)), the Applicants have undertaken a thorough site selection process and design development process for the Transmission Assets in order to identify the most suitable locations and configuration for the various elements of the Transmission Assets.

1.4.1.2 The site selection and design process was undertaken by a multi-disciplinary team which included engineers, planners, land advisors, legal and EIA/topic consultants (paragraph 4.5.2.2 of AS-026); and has taken into account environmental, physical, technical, commercial and social considerations and opportunities, as well as addressing engineering complexities and requirements with the aim of identifying routes and sites which are environmentally acceptable, deliverable and consent-able, whilst also enabling the benefits in the long term of lowest energy costs to be passed on to the consumer (paragraphs 4.5.1.1 and 4.5.1.2 of AS-026).]

1.4.2 Green Belt Observations – Local Impact Reports (LIRs)

1.4.2.1 It is noted that the Local Impact Reports, principally from Fylde Borough Council (REP1-078), South Ribble Borough Council (REP1-227) and Lancashire County Council (REP1-085), each share a common observation as to whether the Transmission Assets could have avoided the Green Belt; particularly with regard to the siting of the two substations between Kirkham and Newton with Scales, and challenged the extent to which Green Belt was factored into the site selection and refinement process.

1.4.2.2 Ongoing SOCG preparation discussions held with Lancashire County Council (18/06/2025) and Fylde Borough Council (30/06/2025) indicate that the main element of concern regarding the site selection and refinement process relates to the siting of the two substations between Kirkham and Newton with Scales and the extent to which the Green Belt was considered and how it was weighted against competing constraints.

1.4.2.3 These observations are addressed below by reference to:

- The site selection process and assessment methodology to demonstrate that consideration for the corridor for the TA was robust and meets project requirements;
- A technical justification for area of search for the substations;
- A constraints justification for area of search for the substations;
- Explaining how potential sites for the substations were refined and how Green Belt formed part of the site selection and refinement process, particularly with regard to weighting against competing constraints;
- Demonstrating how it was not feasible for the Transmission Assets corridor to avoid the Green Belt and in particular, why it has not been possible to site the two substations outside the Green Belt, and
- By making clear that the assets have been sited as sensitively as practicable and could not have reasonably avoided the Green Belt.

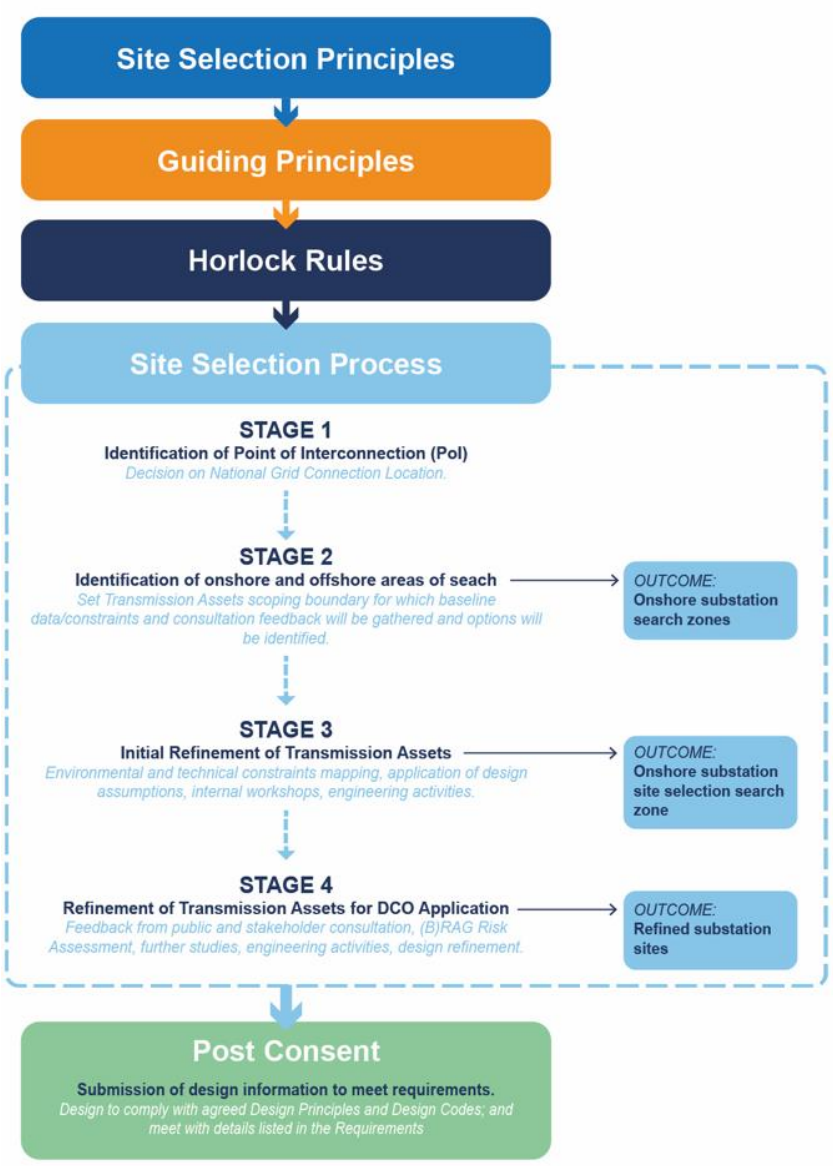
1.4.3 Site Selection and Refinement Process

1.4.3.1 The site selection and refinement process is detailed in Section 4.5 of Chapter 4 of the ES (AS-026) and corresponding Annex 4.3 (AS-028).

1.4.3.2 The Applicants followed a structured and iterative approach from inception to submission to ensure the most appropriate and efficient solution was identified with consideration to a range of environmental, physical, technical, commercial and social considerations and opportunities, as well as engineering complexities. In all routing and siting decisions, an overall perspective was maintained of the appropriate relative weight to be given to constraints and the context of other elements of the Transmission Assets as a whole (paragraph 4.5.1.1 of AS-026).

1.4.3.3 For clarity, Figure 2 below has been prepared to provide a clear overview of the site selection process described in the DCO submission (as it relates to the site selection process for the substations) (see also Diagram 4.1: Site Selection Process overview in AS-026), and a summary of each stage and demonstration of how Green Belt was considered as part of the environmental constraint analysis at each stage described in the DCO submission, is provided below.

Figure 2 – Design Process Diagram (including Site Selection Process for Substations)



Selection Principles

1.4.3.4 Alongside published policies and guidance (which included Green Belt Policy and guidance set out in the NPPF and NPS EN-1 and EN-3) (see sections 4.2 and 4.3 of AS-026), the Applicants developed a set of Site Selection Principles at the outset which were followed as far as possible throughout the site selection process (these are set out in paragraphs 4.5.2.1 to 4.5.2.4 of Chapter 4 of the AS-026).

1.4.3.5 These were drawn from the experience of the Applicants and the technical expertise of the multi-disciplinary team, and comprise the following:

- Alignment of the offshore, landfall and onshore infrastructure for the Morgan Offshore Wind Project and Morecambe Offshore Windfarm where possible;

- Shortest route preference to reduce impacts by minimising footprint for the Transmission Assets offshore and onshore cable corridors as well as considering cost (hence ultimately reducing the cost of energy to the consumer) and minimising transmission losses;
- Minimising impacts to environmental features and social receptors, where possible; and
- The necessary space to accommodate the design envelope.

Guiding Principles for Onshore Infrastructure

1.4.3.6 Alongside the existing legislative, policy and guidance framework (set out above) detailed in ES Chapter 4 (AS-026), a series of overarching principles and engineering assumptions for infrastructure (including environmental, physical, technical, commercial and social considerations and opportunities) informed the decisions made at each stage. These are set out in the corresponding annexes to ES Chapter 4, but the onshore infrastructure selection and refinement process was led by the following Guiding Principles which are set out in Section 4.3 of AS-028:

- Cable routes should be as straight and as direct as practicable.
- Substations should be sited in proximity to each other.
- Directly avoid international, European and national designations, where practicable.
- Avoid areas of woodland.
- Avoid direct impact to residential properties.
- Minimise routing through challenging ground conditions (e.g. potentially contaminated land and wetlands).
- Minimise the number and length of complex crossings, where practicable (e.g. railways and pipelines) and cross the asset as close to 90 degrees as possible.

1.4.3.7 Each stage of the process involved gathering desktop and survey data and feedback from stakeholders and the public to define and assess the Transmission Assets onshore infrastructure options. Internal workshops were then held to collate and review the data and feedback to reach cross-discipline decisions about refining the site and design options at each stage (paragraph 4.5.2.4, AS-026 and paragraph 4.5.1.2 of AS-028).

Horlock Rules

1.4.3.8 Alongside these site selection principles, the Applicants also applied the Horlock Rules to the site selection process (see section 4.3.2 of AS-028)[1].

1.4.3.9 The Horlock Rules, which are embodied in NPS EN-5 (paragraphs 2.9.18 and 2.9.19) are a set of guidelines to assist those responsible for siting and designing substations to mitigate the environmental effects of such developments (see section 4.3.1 of AS-028). Although created in 2003, they are still referred to and used by National Grid (and endorsed in ministerial decisions and at public inquiry) when undertaking planning studies for new infrastructure, although they must now be considered alongside the relevant policy set out in NPS(s), Development Plan documents, local planning policies and other sources.

1.4.3.10 The principles embedded in the Horlock Rules are relevant to the Transmission Assets and Table 4.3 in Annex 4.3 sets out the relevant Horlock Rules overarching guidelines and provides detail on how these have been considered by the Applicants (see Appendix A).

Consideration of Alternatives and Design Commitments

1.4.3.11 Chapter 4 of the ES (AS-026) and the corresponding annexes, describe the reasonable spatial and geographical alternatives that have been considered for the Transmission Assets and present a comparison between different options. Strategic-level project design alternatives were also considered as part of the site selection and project design decision-making process.

1.4.3.12 The strategic consideration of alternatives which fed directly into the site selection process and resulted in design commitments, is summarised in Table 4.10 (AS-026).

Site Selection Process

1.4.3.13 The site selection process followed a four-stage structured and iterative process to ensure the most appropriate and efficient solution was identified with consideration of environmental, social and technical constraints, and as noted, feedback received from consultation with stakeholders and the public was incorporated to further refine the siting and design of the landfall infrastructure and design envelope in each stage (AS-026, paragraph 4.5.4.2).

1.4.3.14 The four stages are described and linked to the associated documents in Table 4.1 of AS-028:

- Stage 1 – Identification of Point of Interconnection (PoI)
- Stage 2 – Identification of areas of search

1 The Horlock Rules are available at:
https://www.nationalgrid.com/sites/default/files/documents/13796The%20Horlock%20Rules.pdf

- Stage 3 – Refinement of the siting and design of the Transmission Assets for PEIR
- Stage 4 – Refinement of the siting and design of the Transmission Assets for DCO application

1.4.3.15 The site selection details relating to the onshore cable corridors and the onshore substations are discussed in separate sections in Annex 4.3 (AS-028). For site selection information regarding the onshore cable corridors, refer to Section 4.6 of Annex 4.3. For site selection information regarding the onshore substations, refer to Section 4.5 of Annex 4.3. The areas concerned with these stages are shown in Figure 4.1 of Annex 4.3.

Technical Justification – Landfall

1.4.3.16 As detailed in Section 4.6 of AS-026, the Pathway to 2030 Holistic Network Design (published in July 2022) set out the Government's approach to connecting 50GW of offshore wind to the UK electricity network (National Grid ESO, 2022). The output of this process concluded that the preferred connection option representing the most optimal design (economic, efficient and coordinated) considering all criteria (i.e. technical, cost, environmental and deliverability) was for the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm to work collaboratively to consent the connection of their respective wind farms to the National Grid at Penwortham in Lancashire (see section 4.5.1 of AS-028).

1.4.3.17 The Landfall Area of Search (Stage 2a) was identified based on the location of the Generation Assets and the Penwortham Substation and extended from the south of Blackpool to Formby, incorporating approximately 50km of coastline. Six potential landfall zones were identified (as listed in paragraph 4.7.1.1 of AS-028, and Figure 4.3 of APP-041).

1.4.3.18 These landfall zones were refined (Stage 3a – see section 4.7.2 of AS-026) through the application of the site selection principles (as above) and a Red Amber Green (RAG) constraints analysis (see Section 4.7.2, AS-026 and Section 4.4.2 of Annex 4.1 (APP-031). Of the six potential coastal landfall locations, the five locations south of the River Ribble were discounted; primarily due to high potential to constrain development with longer, less direct and less economic and electrically efficient cable routes required to reach Penwortham Substation, ecological designations extending further inland along the coast and with shallow subsea water depths of less than 10 m extending for longer distances seaward from the intertidal infrastructure area (see paragraph 4.7.2.2 of AS-026).

1.4.3.19 Landfall constraints included greater potential to interact with populated areas, Special Category Land (e.g., Royal Air Force/Ministry of Defence land), infrastructure crossings, main rivers and non-statutory nature designations, and therefore landfall locations south of the River Ribble were considered less feasible, compared with the location at Lytham St Annes (see Figure 4.4: River Ribble Estuary Constraints, APP-031).

The RAG appraisal for Lytham St Annes resulted in no 'high' (Red) potential constraints and was therefore the only feasible option for landfall taken forward at Scoping and to PIER (paragraph 4.7.2.3 of AS-026).

1.4.3.20 Refinement of the Lytham St Annes landfall option for DCO submission (Stage 4a – see section 4.7.3 of AS-026) focused on revisions to the Order Limits at the landfall location and refinement of the cable installation techniques to minimise disturbance and disruption to the public, as well as to flora and fauna. The revised landfall is shown on Figure 4.5 of APP-031).

1.4.3.21 FBC in their Comments on Written Representations (REP2-057), raised concerns as to the reason that Green Belt was not included as a BRAG assessment criterion for the cabling. Given the presence of other significant and absolute constraints affecting the other five landfall locations (as discussed above) and St Annes being the only feasible landfall option, and the need to avoid disruption to the public and flora/ fauna within the designated sites, it was unavoidable for the onshore export cable connection to Penwortham to extend through the area of Green Belt between St Annes and Blackpool to secure the connection from landfall to Penwortham and this is clearly evident from Figure 1 (above) and Figure 3 (Figure 4.4 of APP-031) below.

1.4.3.22 The Applicants recognise the importance of Green Belt policy, however, as there were no alternative options which could have avoided Green Belt, and as it does not represent an absolute constraint in terms of policy consideration it was not included as constraint in the BRAG assessment for the cabling route.

Figure 3 – River Ribble Estuary Constraints (Figure 4.4 of APP-031)

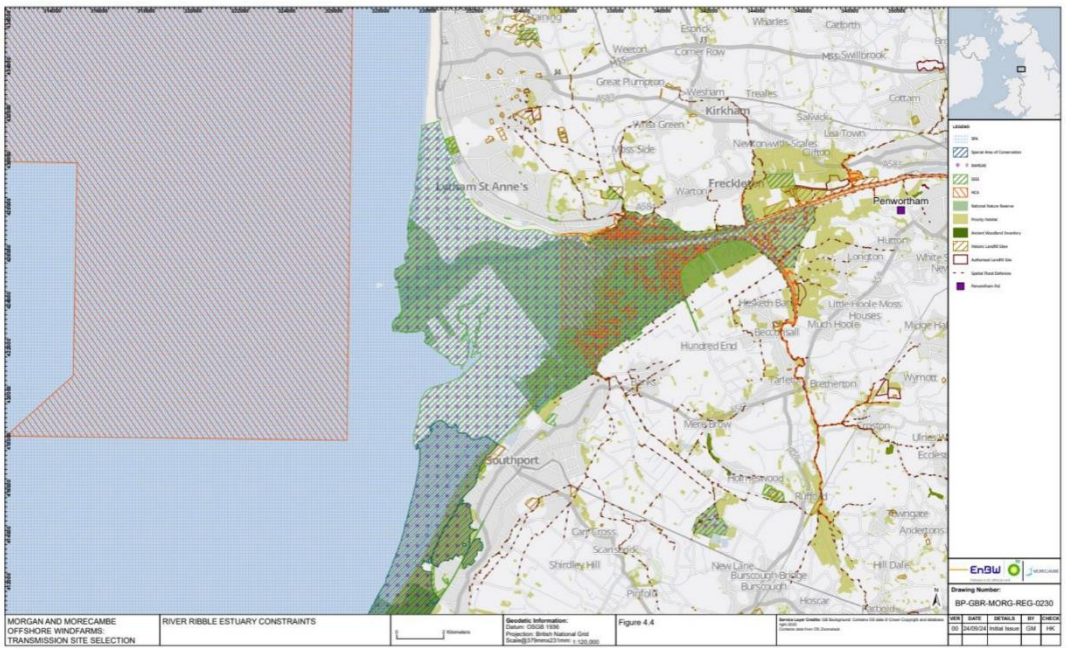


Figure 4.4: River Ribble Estuary Constraints

Technical Justification – Substation locations

1.4.3.23 The technical justification for the siting of the substations, and consideration of alternatives, is set out in Section 4.9 of AS-026 and Section 4.5 of Annex 4.3 (AS-028).

1.4.3.24 The identification of Penwortham Substation as the Point of Interconnection to the National Grid (see above) formed the starting point for the substation site selection process (paragraph 4.5.1.1 of AS-028).

Number, Size and Design

1.4.3.25 Prior to commencing site selection, key infrastructure parameters for the substations and required areas were established. The Morgan Offshore Wind Project onshore substation defined an onshore substation platform footprint of 95,000m^2 within an overall permanent footprint (including landscape planting and drainage) of 125,000m^2. The Morecambe Offshore Windfarm onshore substation defined an onshore substation platform footprint of 29,700m^2 within an overall permanent footprint (including landscape planting and drainage) of 60,000m^2.

1.4.3.26 Firstly, as the offshore wind farms are electrically independent, two new onshore substations, one for each wind farm, are required.

1.4.3.27 In response to the Examining Authority's Written Question (Q1.2.3) (PD-008), the substations cannot be located within a single site for various reasons including:

- the limited availability of a site of sufficient size in within the search area to accommodate both substations due to the presence of multiple constraints (identified below)
- lack of operational benefits to be gained by siting the substations on a single site;
- potential risk for the construction activities of one substation to interfere with the operation of the other if delivery is phased;
- the overall scale of a combined substation facility would pose greater challenges with regard to mitigation and integration within the landscape.

1.4.3.28 However, to maintain an aligned approach to the onshore export cables and 400kV cables (and to minimise disruption to the environment, landscape and the public), the substations will be constructed in proximity to each other.

1.4.3.29 Siting the substations together also facilitates a number of benefits as set out in the Applicant's response to Examining Authority's Written Question Q13.1.10 (PD-008).

1.4.3.30 The identification of a zone of land of sufficient size to accommodate both substations was therefore a key consideration in identifying suitable substation sites. The infrastructure parameters for site selection are indicated in Table 4.6 in AS-026.

Constraints Justification:

Stage 2c – Identification of onshore substation search areas

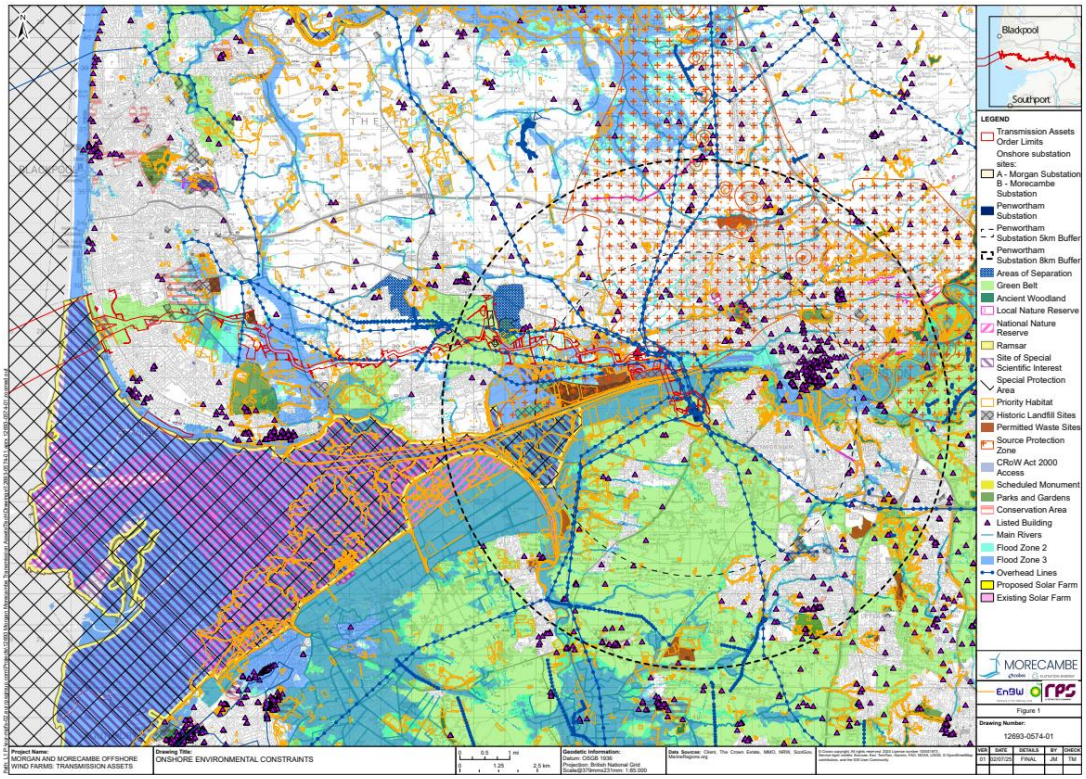
1.4.3.31 This stage of the site selection process is outlined in Sections 4.9.1 of AS-026 and 4.5.3 of AS-028.

1.4.3.32 The site identification process commenced with a 5km search zone drawn around the Penwortham Substation. Based on previous project experience and technical and commercial feasibility, this radius was used to minimise the length of the 400 kV grid connection cables that would link the new substations to the POI, minimise cable reactive power issues, mitigate transmission losses and to minimise adverse effects on economic efficiency. Mapping of environmental constraints inside the buffer identified such limited suitable areas which met the design parameters for the substations (due to the presence of flood zones, priority habitat and high-pressure gas mains) that suitable sites could not be identified and therefore the area of search was increased to 8km.

1.4.3.33 Figure 4.2 (AS-028) illustrates the 5km and 8km Areas of Search and constraints considered in Stage 2c. Following queries regarding the potential suitable areas for substations within these buffers and for clarity, the Applicants have prepared Figure 4 below. This includes the environmental constraints considered in Stage 2c but also illustrates how these relate to wider constraints (considered in later stages) which illustrates the true limitations of the areas available for consideration.

Figure 4 illustrates that there were no suitable alternative general locations.

Figure 4 – Onshore Environmental Constraints (5-8km)



1.4.3.34 Interested Parties have challenged why Green Belt was not included in the environmental constraints considered at Stage 2c to identify potentially suitable areas for the substations. As highlighted in the Applicants Response to Examining Authority's Written Questions (Q1.2.3), the environmental constraints considered in Stage 2c primarily included statutory ecologically designated sites and other designations in which installation of the substations could have resulted in unacceptable or unmitigable impacts on the environment or loss of irreplaceable habitats (eg. Ancient Woodland). It also took into consideration existing utilities infrastructure (such as overhead lines and high-pressure gas mains) which are protected by statutory undertakers and would have introduced significant technical complexity to the project (in relation to protected widths and easements etc). As such, whilst the Applicants recognise the importance of land covered by Green Belt policy, it did not represent an absolute constraint in terms of a policy consideration and was therefore not included at Stage 2c.

1.4.3.35 In accordance with the overarching guidelines set within NGET's Horlock Rules, in addition to environmental designations, built up commercial and residential areas were also excluded from the 8km search area which resulted in the Onshore Substations Search Area (Figure 4.3 in AS-026 and Figure 4.10 in APP-041).

Stage 3c – Refinement of onshore substation search areas for PIER

1.4.3.36 This stage of the site selection process is outlined in sections 4.9.3 of AS-026 and 4.5.4 of AS-026.

1.4.3.37 With the substation search area established, a heat mapping exercise was then undertaken based on environmental, social and technical constraints, to identify areas considered to be more or less suitable, for onshore substations (see paragraph 4.5.4.1, figures 4.4 and 4.5 of AS-028, and Figures 5 and 6 below). Again, this focused on absolute constraints including terrain/topography, presence of below ground utilities, flood zones, overhead lines, environmental designated site and protected areas, residential receptors and road networks (access) in accordance with the site selection principles and Horlock Rules.

Figure 5 – Substation Zone Heatmapping Sheet 1 (Figure 4.4 of AS-028)

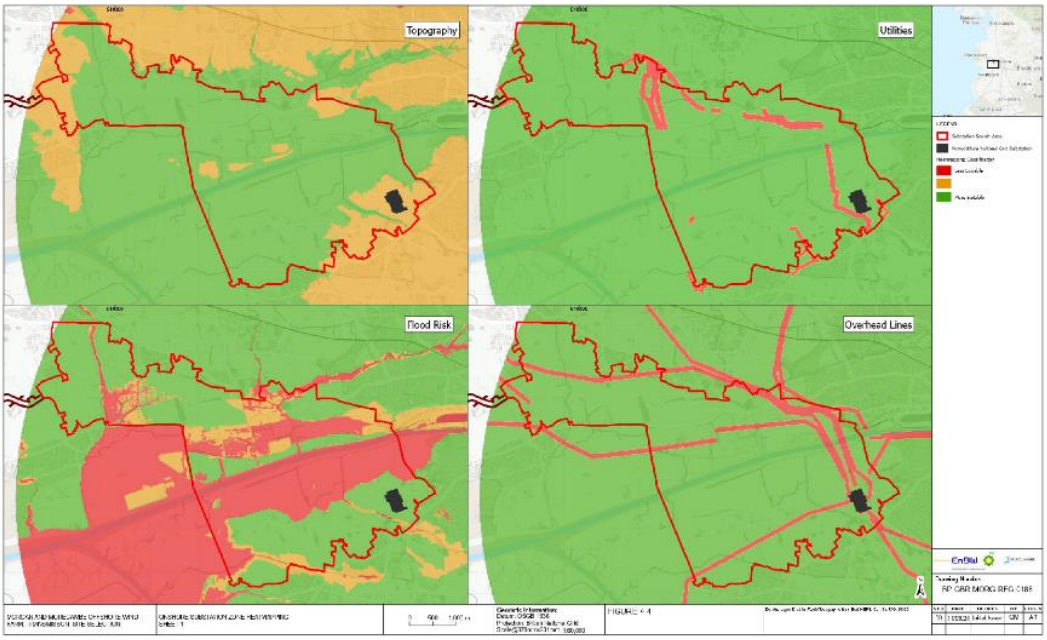


Figure 4.4: Substation Zone Heatmapping Sheet 1

Figure 6 - Substation Zone Heatmapping Sheet 2 (Figure 4.5 of AS-028)

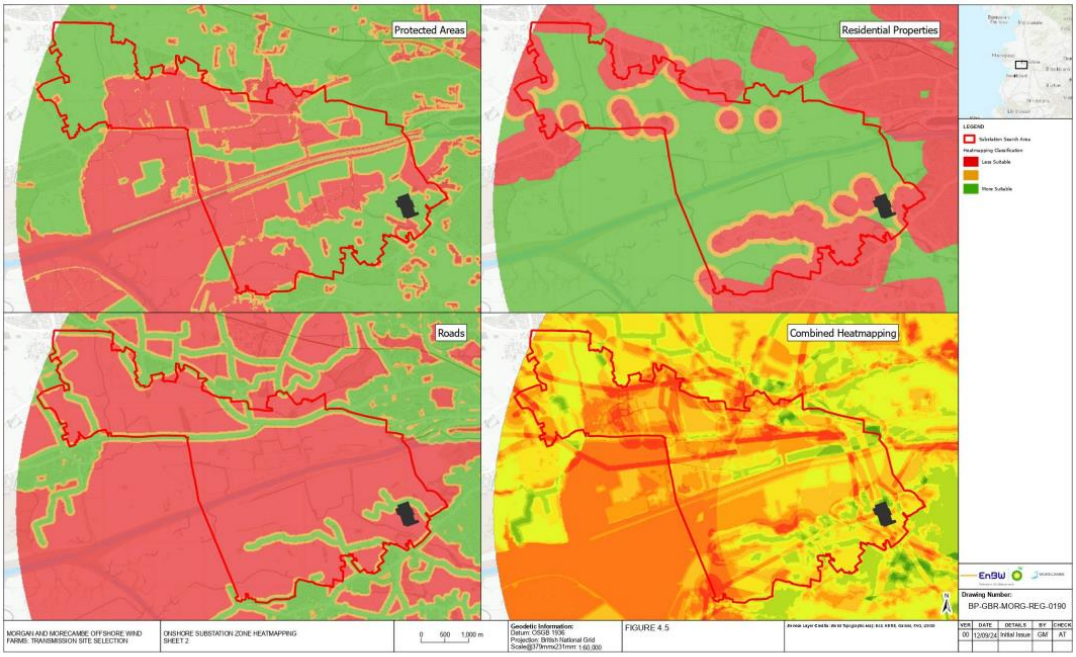


Figure 4.5: Substation Zone Heatmapping Sheet 2

1.4.3.38 The Onshore Substation Search Area was then refined into four zones based on key constraints, including flood risk, SSSIs and historic landfill and further defined based on existing geographic features such as field boundaries, water courses and roads (see paragraph 4.9.3.1 of AS-026 and paragraph 4.5.4.4 of AS-028).

1.4.3.39 The Applicants sought to site the substations in proximity to each other to avoid infrastructure proliferation and maintain a co-ordinated grid connection route as far as possible to the Point of Interconnection at Penwortham Substation (which was a recommendation of the Holistic Network Design process and is reflected in NPS policy in EN-5). Separate onshore substations (i.e not co-located in the same search zone) were considered likely cause a wider spread of development and impacts (including landscape and visual), lead to a potential need for cable crossings, potentially increase the number of landowners and farm holdings affected, and result in more widespread land use impacts or less efficient use of land (see REP2-057, 057.22). As such, sites of insufficient size to accommodate both substations were also excluded (see paragraph 4.5.4.5 and 4.5.4.6 of AS-028).

1.4.3.40 The four search zones are shown on Figures 4.6 and 4.7 of AS-028.

Figure 7 – Onshore substation site selection search zones with constraints (Figure 4.6 of AS-028)

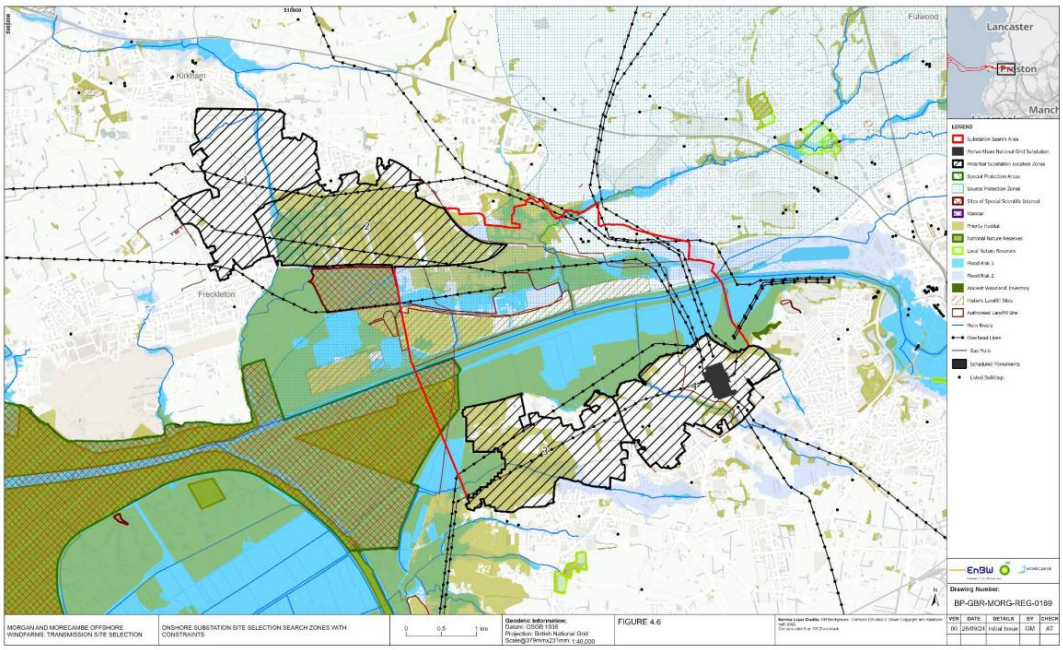


Figure 4.6: Onshore substation site selection search zones with constraints

1.4.3.41 A BRAG appraisal was then undertaken to analyse the suitability of each of the zones (see paragraphs 4.5.4.9 to 4.5.4.14 of AS-028).

1.4.3.42 The BRAG methodology is explained in Section 4.3.2 of AS-028. This methodology captures and classifies the main differentiating issues into four fundamental categories which enable a clear and direct comparison between areas. These categories are set out in Table 4.4 of AS-028 and are as follows:

- Black – potential showstopper of development
- Red – High potential to constrain development
- Amber – Intermediate potential to constrain development
- Green – Low potential to constrain development

1.4.3.43 The constraints considered within this appraisal included:

- Ground conditions (e.g. topography);
- Transport (highways sensitivity and access);
- Presence of utilities (cables, pipelines and overhead lines)
- Ecology and biodiversity;
- Flood Risk and water resources;
- Best and most versatile agricultural land; and
- Planning policy and development potential (including Green Belt and Areas of Separation).

1.4.3.44 As noted above, the Applicants recognise the importance of Green Belt policy however, as it does not represent an absolute constraint in terms of policy consideration, the BRAG Appraisal to assess the suitability of the four search zones in Stage 3c was determined the appropriate point in the site selection process in which to introduce this consideration.

1.4.3.45 Due to the high weighting of a Red classification, which was attributed to statutory ecologically designated sites, irreplaceable habitats and major utilities infrastructure which could be unacceptably/ unmitigatedly impacted by the proposed substations, or result in unreasonable technical complexities, it is considered appropriate that Green Belt was attributed an Amber rating in the BRAG appraisal. This does not underplay the importance of Green Belt but allows it to be appropriated weighted against other significant considerations.

1.4.3.46 The outcomes of the BRAG appraisal are illustrated in Table 4.7 of AS-028 and summarised in paragraph 4.5.4.13. Zone 1 was found to be the least constrained (with no Red and mostly Green ratings) and was therefore taken forward to statutory consultation at PIER.

1.4.3.47 Within Zone 1 (the location of which is shown in Figure 5 below), the 'available' land parcels were further refined by discounting areas with insufficient space to accommodate both substations and by again applying the Horlock Rules; discounting land in proximity of residential properties (150m buffer), watercourses (15m buffer) and nearby solar farm development (Bluefield Renewable Developments – Grange Farm Solar Farm) were considered in the analysis of land parcels (see paragraphs 4.5.4.15 to 4.5.4.17 of AS-028). For the avoidance of doubt, the 'availability' of land in this context relates to the suitability of sites to accommodate the substations in terms of size of area and presence of constraints, rather than ability to acquire the land.

1.4.3.48 The result of Stage 3c of the site selection exercise was the identification of one preferred substation location for the Morgan Offshore Wind Project: Transmission Assets, and two substation site options for the Morecambe Offshore Windfarm: Transmission Assets, illustrated on Figure 4.8 of AS-028. The Morgan substation location and Option 2 for the Morecambe substation are located in Green Belt. Option 1 for the Morecambe substation, although not in Green Belt, was located within the Area of Separation between Kirkham and Newton with Scales.

Figure 8 – Potential Substation sites in Zone 1 (Figure 4.8 of AS-028)

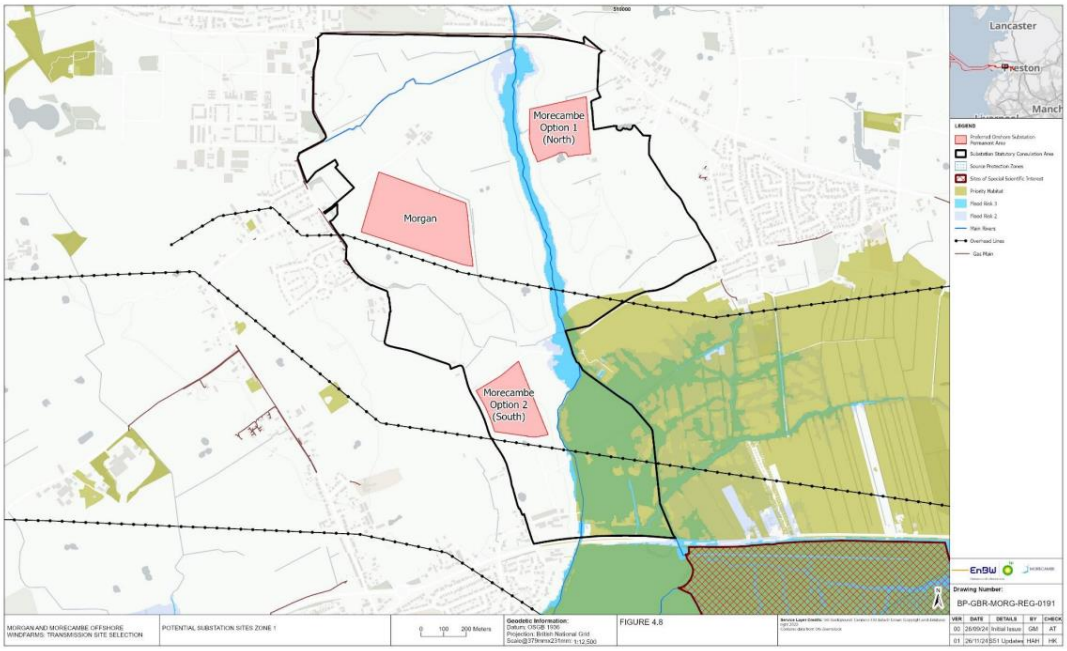


Figure 4.8: Potential substation sites zone 1

Stage 4c – Refinement of onshore substation search areas for DCO Application

1.4.3.49 This stage of the site selection process is outlined in Section 4.9.5 of AS-026 and Section 4.5.5 of AS-028.

1.4.3.50 As noted in paragraph 4.5.5.1, a key guideline of the Horlock Rules relates to design, and in this stage of the site selection process, the Applicants have sought to refine the siting of the substations in order to minimise and mitigate their impacts on environmental, landscape and visual and residential receptors as far as practicable.

1.4.3.51 Although a co-ordinated approach has been taken to site selection, the Applicants have also considered a situation where only one project may come forward. The Morgan site refinement process is outlined in paragraph 4.5.5.4 and Morecambe site selection and refinement process is outlined in paragraph 4.5.5.6. The consideration of the onshore substations together is further detailed in paragraph 4.5.5.14 (AS-026).

1.4.3.52 Formal consultation for PEIR, in which feedback from statutory stakeholders, landowners, nearby residents, and members of the public was received, led to the finalisation of the location and parameters of each substation (see paragraphs 4.5.5.4 to 4.5.5.9).

Morgan

1.4.3.53 In response to consultation feedback, Morgan relocated its substation site eastwards of its PEIR location. This relocation aimed to address

consultation feedback to increase the distance from nearby residential areas in Kirkham (to the south) and Hall Cross, while maintaining a buffer of over 150 metres from Newton with Scales and to reduce potential impacts on farmland following landowner feedback.

1.4.3.54 Additionally, the construction compound was moved to the north of the substation, allowing shared access from the A583 and avoiding the use of Lower Lane for construction and operational traffic. Additionally, to minimise disruption to the local PRoW network, the substation and compound were reconfigured and positioned to the east of the bridleway BW0505016. It was considered that the Morgan OWL offered greater opportunities for visual mitigation by using existing landscape features to support screening of the substation from nearby sensitive receptors. The new location resulted in the onshore substation footprint reducing from 95,000m2 to 80,000m2 in order to accommodate a newly generated site configuration, and the temporary land use reducing from 86,000m² to 70,000m², however the permanent site area increased from 125,000m² to 164,000m². The change in area reflected the need for earthworks to establish site levels, an elongated development platform, and the inclusion of land to support for environmental mitigation.

Morecambe

1.4.3.55 For Morecambe, whilst Option 2 (south) lies within Green Belt, Option 1 (north) lies within the Area of Separation between Kirkham and Newton with Scales. Formal consultation at PEIR was undertaken for both options and a greater number of responses indicated a preference for Option 2 (within the Green Belt) (paragraph 4.5.5.8 of AS-028) (although there wasnot a significant amount of these). Statutory consultees indicated no option preference.

1.4.3.56 As the number of responses was not significant, the consultation feedback was also considered alongside other factors including engineering considerations, which indicated that Option 2 would require a shorter export cable corridor length (1500m shorter) and a shorter 400kV grid connection corridor (1700m less) than Option 1 due to geographic location (paragraph 4.5.5.10).

1.4.3.57 In parallel to review of the consultation feedback and engineering considerations, a further BRAG appraisal was undertaken for the two Morecambe substation options (see paragraphs 4.5.5.11 to 4.5.5.13 and Table 4.10, AS-028) in order to support a structured approach to finalising site selection. This appraisal considered the same constraints as in Stage 3c, with the exception that proximity to residential receptors was introduced as a consideration to identify potential substation sites within Zone 1 that would be less constrained with regards to residential receptors in proximity to the substation. Landscape character was not used as a criterion as there was no difference with regard to maximum design scenario in landscape and visual terms between the two options. This Appraisal again concluded that Option 2 (within Green Belt) was the preferred option due to its proximity to fewer residential receptors, reduced number of sewer crossings, absence of HV OHL crossings,

and ability to utilise a separate access to that required by the Morgan substation.

1.4.3.58 Option 2 (south) (within the Green Belt) was therefore selected for the Morecambe substation based on the outcome of the BRAG appraisal with consideration of consultation responses received, engineering constraints and the onshore substation design principles.

Further refinements

1.4.3.59 In addition to refinement of the site selection process, further refinements were undertaken to minimise and mitigate the impacts of each substation in relation to micro-siting, ecological and landscape mitigation areas, access routing and maximum parameters for substation heights and footprints and compound requirements. These are outlined in paragraphs 4.5.5.18 to 4.5.5.21 for the Morgan Substation and paragraphs 4.5.5.28 to 4.5.5.27 for the Morecambe Substation.

1.5 Design

1.5.1.1 The site selection process outlined in section 1.4, forms an important element of design having regard to design process. Based on the guidance documents published by both the National Infrastructure Commission (NIC) and PINs (listed below), it is clear that design is as much about 'process' as 'outcome', and that each stage of a project – including demonstrating a clear site selection process – forms a key part of demonstrating good design has been delivered. Key NIC and PINs guidance documents are as follows:

- Nationally Significant Infrastructure Projects: Advice on Good Design (Planning Inspectorate, 23 October 2024)
- Advice on Preparing Applications for Linear Projects (PINS, 27 February 2025)[2]
- Design Principles for National Infrastructure (NIC)
- Project Level design principles (NIC, May 2024)

1.5.1.2 It is important to note that policy also recognises that the design of transmission infrastructure presents limitations in relation to securing good design outcomes and minimising impacts, as states in NPS EN-1 in paragraph 4.7.2:

1.5.1.3 *"Applying good design to energy projects should produce sustainable infrastructure sensitive to place, including impacts on heritage, efficient in the use of natural resources, including land-use, and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of energy infrastructure development will often*

[2] Noted that this Advice was published after the DCO was accepted for examination.

limit the extent to which it can contribute to the enhancement of the quality of the area."

1.5.1.4 Nevertheless, it is important that good design is sought. This section describes the approach taken to an ongoing design process to secure an appropriate design outcome, seeking to minimise and mitigate potential harm to the Green Belt, with reference to both landscape and visual openness, and landscape character considerations.

1.5.2 Design Process

1.5.2.1 The location of the two onshore substations has been developed through a structured and iterative design process that has drawn upon established principles of good design, as directed in relevant NPSs, and outlined by the Applicants in the outline Design Principles (oDP) document (APP-209). The design process has included the site selection process detailed above, including the identification of environmental and technical constraints and opportunities; and BRAG analysis.

1.5.2.2 Having identified the sites for each substation, a design framework for each substation has been established in the DCO comprising: parameters outlined in the DCO submission; Design Code outlined in the oDP (APP-209); indicative landscape strategy provided in the oLMP (AS-050); Commitments Register (REP2-010); and proposed DCO Requirements (REP2-004), which all frame the pre-consent design.

1.5.2.3 The design process will continue post consent to develop the design detail to support the discharge of Requirements, with clear governance to align with the agreed design controls established in the DCO submission. The framework accords with recognised practice and seeks to maximise landscape integration and minimise harm to the Green Belt (in relation to visual openness) and any other harms associated with landscape and visual effects.

1.5.2.4 The Applicants are progressing discussions with Fylde Borough Council and Lancashire County Council in relation to design governance and controls to support post consent design as part of the ongoing SOGC process.

1.5.2.5 Section 2.2 of the oDP (APP-209) outlines the key environmental and policy considerations that have informed the Applicants' design of each substation, summarising relevant environmental resources and assets that have been considered. Section 5.0 of the oDP (APP-209) describes how the design has evolved in response to consultation, environmental constraints, and the requirement for embedded mitigation.

1.5.3 Substation Design and Embedded Mitigation

1.5.3.1 The final location and indicative landscape strategy for each substation reflects a combination of environmental and technical siting considerations and an understanding of landscape and visual sensitivities. The indicative landscape strategy is described in outline Landscape Management Plan (oLMP) (AS-050) and supported by the

oDP's Design Codes, the Commitments Register and draft requirements. The proposed substation designs include embedded mitigation including:

- The use of existing landform and retained vegetation to provide screening and containment.
- The introduction of planting to reinforce existing enclosure and support long-term landscape integration and mitigate effects on visual amenity from nearby PRoW.

1.5.3.2 Ongoing design development will also include the following through compliance with the oDP and discharge of specific Requirements:

- Development of the substation layout to address visual and landscape effects as far as practicable given operational considerations; and
- Develop building envelope, fencing design and other details to support landscape integration

1.5.3.3 Neither substation will comprise a single building that extends to the full extents of the proposed parameters. Rather, they both will comprise a mix of buildings and electrical infrastructure in open fenced areas of varying heights, which is influenced by the selection of switchgear technology, either being an Air Insulated Switchgear (AIS) system or Gas Insulated Switchgear (GIS) system. Reference should be made to Volume 1, Chapter 3 Project description (AS-024), which provides further detail on the character of each system, supported by Landscape and Design Technical Note (S_D3_4), submitted at D3, which illustrates some examples these technologies.

1.5.3.4 In the case of the Morgan onshore substation, Morgan OWL has selected GIS technology. For Morecambe onshore substation, the promoter has yet to finalise the technology selected. The final design solution for both substations will be subject to further design refinement post consent and approval through post-consent requirements discharge by the local planning authority.

1.5.3.5 A supporting design process diagram, including site selection, is provided above in Section 1.4, which illustrates the design process pre- and post-consent.

1.5.4 Flexibility and the Rochdale Envelope

1.5.4.1 Given the scale and complexity of the proposed infrastructure, and in line with recognised practice for NSIPs, the design is being brought forward using the Rochdale Envelope approach (Advice Note Nine: Rochdale Envelope, Planning Inspectorate, 2018). This provides appropriate levels of flexibility expressed in project parameters to inform the environmental impact assessment (realistic worst-case scenario); and provides opportunities to accommodate a range of technical solutions and design development by the Applicants' principal contractor (yet to be appointed), in support of requirements discharge.

1.5.4.2 The design envelope has been carefully defined through parameters that control maximum heights, building footprints, and development extents, ensuring that the final design submitted for Requirements discharge lies within the range of impacts defined in the ES. This approach also ensures that the degree of harm on the Green Belt associated with either GIS or AIS technology selection, does not exceed what has been tested through the EIA process.

1.5.5 Design Governance and Post-Consent Control

1.5.5.1 To ensure that a high standard of design is delivered through to implementation, a robust governance framework is proposed for the discharge of post-consent requirements. This includes:

- The requirement for the submission and approval of detailed design under Requirement 7 of the dDCO.
- Application of the oDP (APP-209) and other outline management plans, such as the outline Landscape Management Plan (AS-050) (oLMP) and outline Ecology Management Plan (REP2-018), to guide design intent.
- Ongoing engagement with relevant planning authorities and statutory consultees during the examination and post-consent award, as part of the discharge of requirement process.

1.5.5.2 This governance structure is designed to provide transparency, enforceability, and assurance that good design will be delivered in practice.

1.5.6 Engagement and Statement of Common Ground

1.5.6.1 The Applicants are actively progressing Statements of Common Ground (SoCG) with relevant stakeholders, including Fylde Borough Council (FBC) and Lancashire County Council (LCC). As part of this process, additional design information will be shared, where possible, to assist in clarifying the design approach and outcomes and how embedded mitigation addresses the Green Belt considerations.

1.6 Analysis of Harm resulting from the Transmission Assets

1.6.1.1 Local Impact Reports and Relevant Representations (principally from Fylde Borough Council (FBC) (REP1-078), Lancashire County Council (LCC) (REP1-085) and South Ribble Borough Council (SRBC) (REP1-227) have made similar observations in respect of the siting of certain elements of the Transmission Assets and particularly the substations, within the Green Belt.

1.6.1.2 The issues relate principally to the harm and conflict resulting from the substations with the aim and purposes of the Green Belt policy.

1.6.1.3 As outlined above, the Applicants consider that the location of the Transmission Assets, and particularly the substations, within the Green Belt, has been robustly explained and justified through the site selection

process detailed in F1.4.3 ES Volume 1, Annex 4.3: Selection and Refinement of Onshore Infrastructure (AS-028).

1.6.1.4 This section of the report addresses the issues raised by SRBC, LCC and FBC, focussing on the following matters:

- Strategic nature of the Green Belt extents: An examination of the strategic nature of the Green Belt extent, with regard to each distinct area of Green Belt within the Transmission Assets Order Limits.
- Openness and Purposes: An examination of the fundamental aim and purposes of Green Belt to the extent that they are relevant to this Application, and consideration of the concept of 'openness'.
- Assessment of the current Green Belt performance: An Assessment of the current performance of each area of the Green Belt affected by the Transmission Assets against relevant function and purposes.
- Impacts and potential harm to the Green Belt: Assessment of the likely impacts and potential harms on the performance of the Green Belt post development, that may occur from inappropriate development and any other harms as a result of the Transmission Assets on the fundamental aim of the Green Belt (including visual and spatial openness) and relevant purposes.
- Demonstration of how the mitigation hierarchy has been applied to avoid, minimise and mitigate any harm caused to the Green Belt with reference to:
  - Cable corridor: including consideration of below ground cable installation, temporary nature and remediability of temporary working areas (including compounds) with reference to how these measures are secured with the DCO; and
  - Substations: including site selection through a defined process and a design process to minimise harm/impacts as far as reasonably practicable.

1.6.2 Strategic Extent of Green Belt

1.6.2.1 As set out in Section 1.2 above, the Transmission Assets will unavoidably pass through three distinct areas of Green Belt for the reasons set out in Section 1.4. These three areas are:

- The tract between Blackpool (Squires Gate) and Lytham St Annes incorporating Blackpool Airport (within the jurisdiction of Fylde Borough Council)
- The area of land between Kirkham, Freckleton and Newton with Scales (within the jurisdiction of Fylde Borough Council)
- The area to the south of the River Ribble up to Penwortham Substation (within the jurisdiction of South Ribble Borough Council)

1.6.2.2 For clarity, the extent of these three areas of Green Belt is illustrated on Figure 1 (above) and Figures 9-11 (below).

Fylde Borough Council

1.6.2.3 The first two areas of Green Belt fall within the jurisdiction of Fylde Borough Council. Local policy in relation to Green Belt is set out in Section 1.2 above.

1.6.2.4 Fylde Local Plan to 2032 (paragraph 7.4) notes that *'All land outside settlement boundaries in Fylde is within either the Green Belt or the Areas of Separation or the Countryside'*. The strategic intention for Green Belt to provide important physical separation between the developed areas of defined settlements and adjoining authorities is noted, and to this end the FBC Development Strategy (Chapter 5) advises that '*the development requirements of Fylde can be met on land outside the Green Belt'*. Strategic Objectives 1 and 2 of the Fylde Local Plan thus stipulate an intention to protect existing areas of Green Belt for their *'quality and openness'*. As is noted, land outside settlement boundaries in Fylde which is not covered by Green Belt policy, is either designated as Areas of Separation or Countryside, both of which support the functioning of Green Belt policy.

1.6.2.5 In addition to protecting the open and undeveloped nature of the areas between settlements, the *'positive community benefits'* provided by the Green Belt in terms of landscape, amenity and open space (paragraph 7.8) are also acknowledged in the Fylde (and Blackpool) Local Plan.

1.6.2.6 From a starting point any site within Zone 1 identified as a potential substation location in Stage 3c, impact either Green Belt or Areas of Separation.

South Ribble Borough Council

1.6.2.7 The third area of Green Belt lies within the jurisdiction of South Ribble Borough Council south of the River Ribble, forming part of a much larger policy area which extends over the majority of the Borough.

1.6.2.8 As acknowledged in Section 1.2, the main objective of the designation is to ensure control of development in certain areas, primarily open land in rural areas, to protect it from development, maintain the openness and character of the area and to restrict urban sprawl (paragraph 10.20). In this authority area, Green Belt provides a definitive boundary for most of the settlements and although there are a number of major developed employment sites within the designation, it seeks to control development to within their curtilage (Policy G1).

Openness and Purposes:

Openness

1.6.2.9 Paragraph 142 of the NPPF states that the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; and the essential characteristics of Green Belts are their openness and their permanence.

1.6.2.10 The concept of 'openness' is a combination of 'spatial' openness, where the scale, form and density of built development are the relevant factors; and 'visual' openness, where consideration is given to the role of topography, vegetation, buildings, linear features in maintaining or screening open views of the wider Green Belt.

1.6.2.11 Spatial openness is often taken to mean an absence of structures or activity, however, in *Turner v Secretary of State and East Dorset Council [2016] EWCA CIV 466*, Sales LJ said *'the concept of 'openness of the Green Belt' is not narrowly limited to a volumetric approach…The word 'openness' is open-textured and a number of factors are capable of being relevant when it comes to applying it to the particular facts of a specific case'*.

1.6.2.12 Openness does not, therefore, imply a freedom from any form of development but is considered to generally imply a general lack of built development.

1.6.2.13 The Supreme Court in *Samuel Smith Old Brewery (Tadcaster) and Others v North Yorkshire County Council [2020],annexed to this technical note (document reference S_D3_12.1),* UKSC followed this approach but went further, noting that *Turner* had not specified how visual effects may or may not be taken into account. The Supreme Court subsequently held that the consideration of the visual impacts of a development on openness *'…is a matter not of legal principle, but of planning judgement'* (paragraph 25) and that, whilst decision makers are not obliged by law to consider visual impacts, they may form a material consideration. To this end, it is considered that the presence of vegetation and landform are capable of providing visual enclosure to a development which can mitigate its impacts on spatial and visual openness; and by extension, reduce/ mitigate harm by inappropriateness and any other harm (in relation to landscape and visual effects), on the Green Belt through design.

Purposes

1.6.2.14 Whilst policy directs judgement on harm to openness to be directly related to consideration of inappropriateness, the concepts of 'spatial' and 'visual' openness are important matters in informing judgement on how the wider purposes are also affected.

1.6.2.15 Paragraph 143 sets out the five purposes served by Green Belts; and as discussed in Section 1.2, purposes a) and c) are considered relevant to this application: *'to check the unrestricted sprawl of large built up areas'* and in particular *'to safeguard the countryside from encroachment'*.

1.6.2.16 In relation to checking the unrestricted sprawl of large built-up areas, this involves a judgement on whether the addition of the development proposed may diminish the boundary between an urban and a rural area, and whether the addition of the development proposed will cause the built-up area to expand uncontrollably into areas which are not considered to be developed.

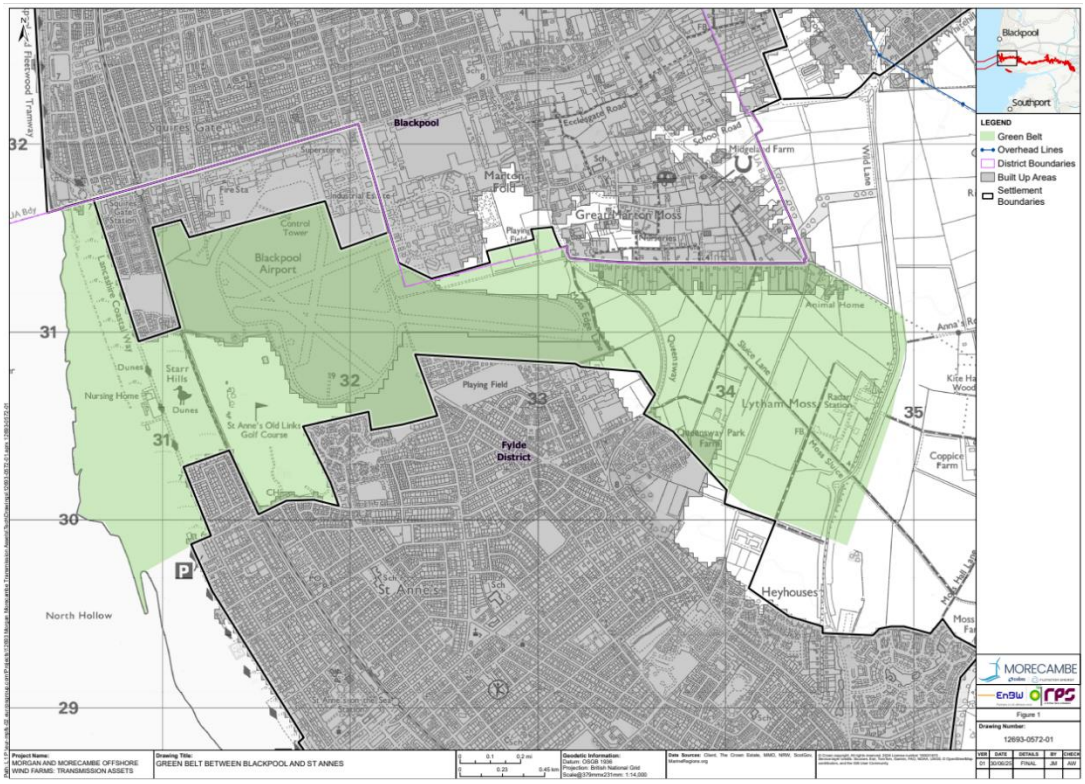
1.6.2.17 In the case of encroachment, this involves a judgement of the harm arising from the imposition of something to be considered essentially urban, onto that which is considered to not be urban or characterised as developed, namely countryside.

1.6.3 Current Performance of the Green Belt

Blackpool and St Annes

1.6.3.1 The Transmission Assets make landfall between Blackpool and St Annes. Despite the presence of Blackpool Airport and its associated buildings and infrastructure in the western half of this area, this area of Green Belt remains relatively open and performs a clear and important separating function between the settlements of Blackpool and St Annes and demarcates the authority boundary between Blackpool and Fylde. The eastern side of the Green Belt comprises open, undeveloped agricultural land which is characterised by spatial and visual openness.

Figure 9 – Green Belt between Blackpool and St Annes



Kirkham and Freckleton

1.6.3.2 In this area, the Green Belt designation extends to approximately 517ha and stretches approximately 2km east-west between the town of Kirkham and the village of Newton with Scales, and approximately 3km north-south between Kirkham and the village of Freckleton.

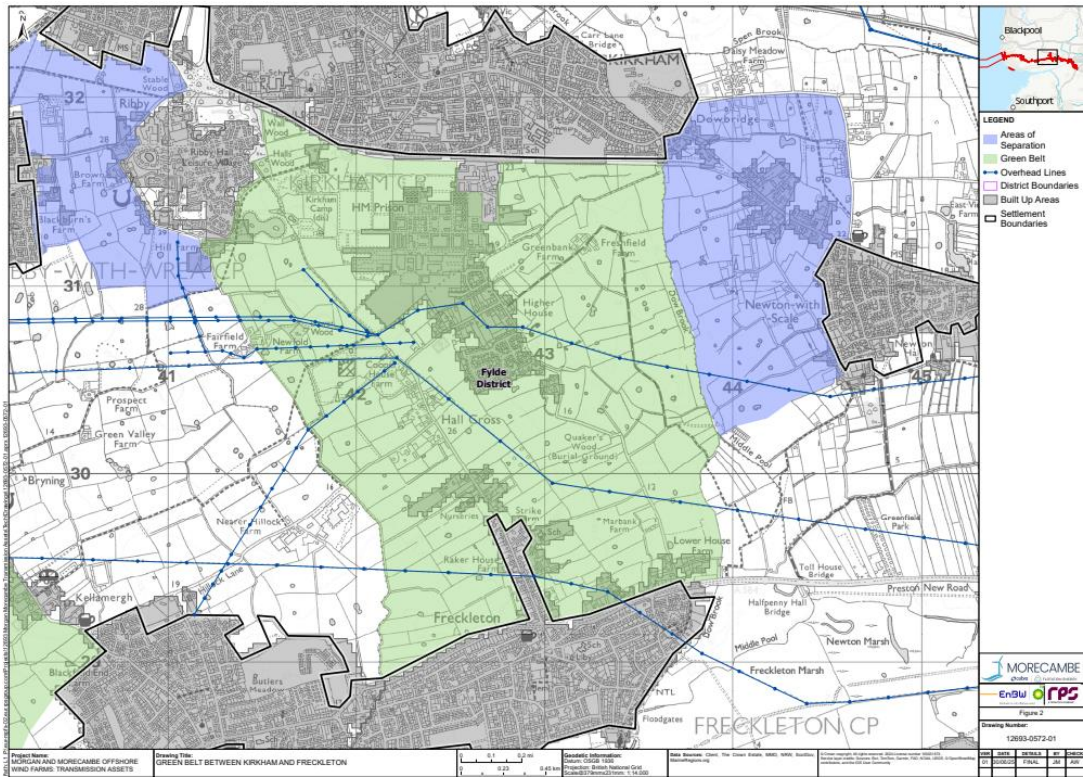
1.6.3.3 The southern part of the Green Belt policy area is characterised by greater openness with the north area, including areas of development

including HMP Kirkham and development to the south of Kirkham Road, being washed over by Green Belt policy.

1.6.3.4 The extent of land lying outside of the settlement boundary and between the settlement of Kirkham and Newton with Scales, is also covered by Areas of Separation policy which completes policy coverage of land between the settlements. Countryside policy areas extend to the west and east.

1.6.3.5 The presence of two corridors of large existing high voltage overhead electricity pylons is noted and is illustrated on (Figure 10) below.

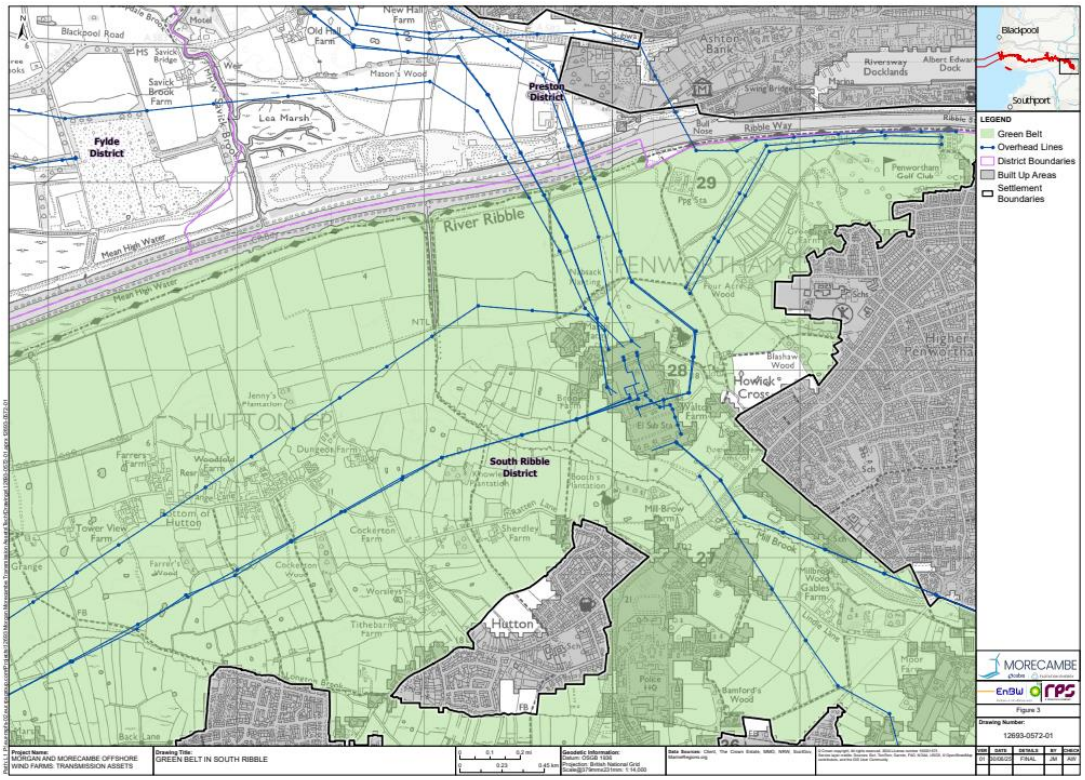
Figure 10 – Green Belt between Kirkham and Freckleton



River Ribble

1.6.3.6 The area of Green Belt south of the River Ribble is characterised by high degree of spatial openness with little significant built development and the Penwortham substation screened by woodland and topography but with the notable presence of a high number of large existing high voltage A-Frame pylons (as illustrated on Figure 11 below).

Figure 11 – Green Belt in South Ribble



1.6.4 Impacts and potential harms to the Green Belt

Impact to the Green Belt between Blackpool and St Annes

Harm by Inappropriate Development

1.6.4.1 The permanent works associated with the Transmission Assets in the area between Blackpool and St Annes comprise the installation of below ground export cables, which once installed, will be wholly below ground (i.e. no above ground infrastructure or acquisition of land). As set out in paragraph 5.24.1.6 of the Planning Statement (REP-032), the underground cabling is considered to constitute 'h) ii) engineering operations' for the purposes of NPPF (2025) paragraph 154 and is therefore not considered to be inappropriate development.

1.6.4.2 In order to lay the onshore export cables temporary working compounds will be required along the route (see Section 3.15.2 to 3.15.6 of REP2-008 for information on construction). The temporary compounds may include central offices, welfare facilities and stores, as well as acting as a staging post and secure storage for equipment and component deliveries, as well as for laydown and storage of materials and plant, and providing space for small temporary offices, security and parking for staff (paragraph 3.15.3.24). All construction compounds will be removed, and sites reinstated to their original condition once construction has been completed. The maximum design parameters for the temporary compounds are presented in Table 3.21 of the Project Description (REP2-008).

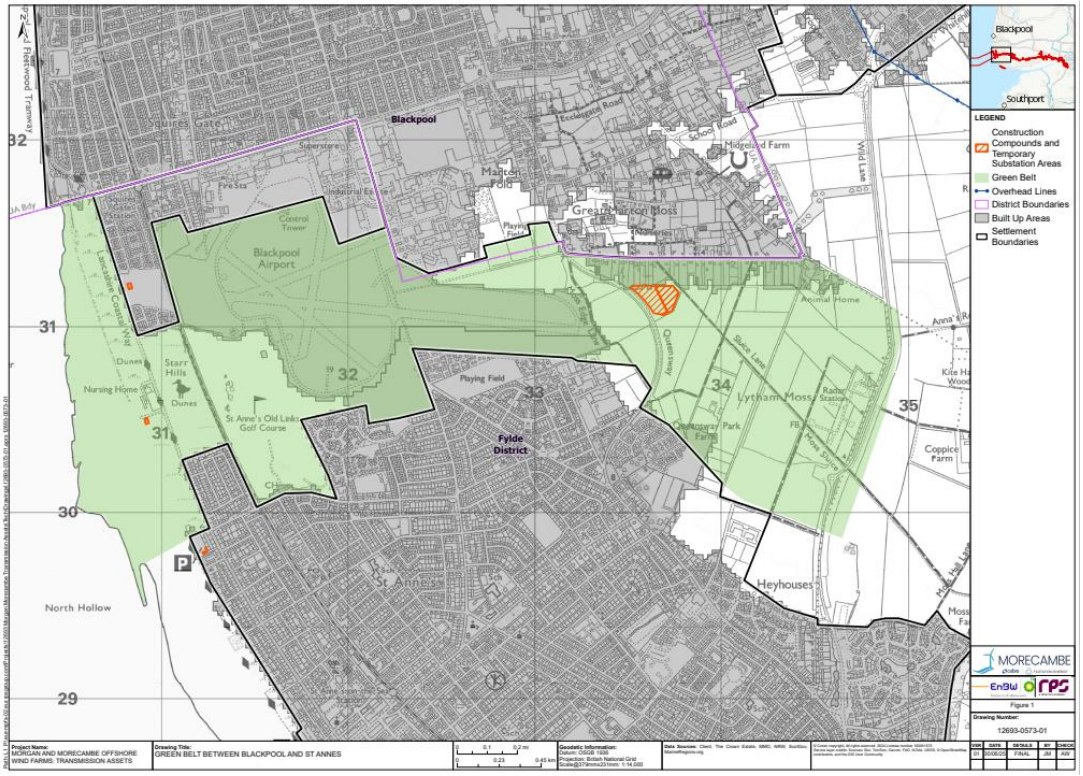
1.6.4.3 Temporary construction works are also considered to be 'engineering operations' for the purposes of paragraph 154 of the NPPF (see Yorkshire Green, 2023, paragraphs 3.9.3 to 3.9.48); however, the Applicants acknowledge that, in order to benefit from the exception under paragraph 154, development must also preserve the openness of the Green Belt and not conflict with its purposes.

1.6.4.4 Whilst the land used for the temporary compounds would eventually be reinstated, the scale (see Table 3.21 of REP2-008) and potential duration of the works are such that they may result in short term harm to the openness of the Green Belt, and represent some encroachment into the countryside contrary to purpose c) of paragraph 143 of the NPPF.

1.6.4.5 Once reinstated, the land will continue to perform as Green Belt and fulfil the objectives set out in Blackpool and Fylde's respective Local Plans (see Section 1.2 above); it will where relevant, continue to provide landscape, nature conservation and amenity value, it will continue to protect existing Green Infrastructure networks and it will continue to help protect the distinctiveness of the settlements it separates.

1.6.4.6 The significance of the harm to this part of the Green Belt as a result of the temporary construction compounds, is therefore considered to be mitigated by the transitory and fully reversible nature of the impacts. As no permanent harm will occur to the openness and purposes of the Green Belt in this location, the relatively short-term harm to be caused by the construction compounds should be given limited, if any, weight in the determination of the Application.

Figure 12 – Green Belt between Blackpool and St Annes - with compounds



Other Potential Harm

1.6.4.7 With regard to other harms which may be identified as relevant to the Transmission Assets, the Applicants consider landscape and visual impacts to be of principal relevance.

Landscape and Visual

1.6.4.8 The landscape and visual effects of the Transmission Assets can be considered 'other harm' within the context of Green Belt policy, as they can result in temporal and/or permanent changes to landscape character and the nature of the visual environment. For the Green Belt between Blackpool and St Annes, potential harm would arise from the construction of the landfall and export cables, in combination with the associated construction compounds.

1.6.4.9 Volume 3, Chapter 10 Landscape and visual (APP-123) assesses effects on landscape character and visual amenity during both construction and operational phases as part of the Landscape and Visual Impact Assessment (LVIA). This includes analysis of views available to receptors potentially affected by the components of the Transmission Assets, with consideration their experience to changes in these views and the overall visual environment.

1.6.4.10 Whilst it is acknowledged that there may be temporary impacts to the spatial and visual openness of the Green Belt in this location for the duration of the relevant construction period, once the land is reinstated,

there are not anticipated to be any permanent impacts to the character and visual amenity of this section of the Green Belt.

1.6.4.11 The LVIA concludes that significant and adverse impacts, both directly and indirectly, would arise on the prevailing landscape character – 19a Fylde Coast Dunes, as set out in Section 10.12.2. Likewise, the LVIA concludes that significant and adverse impacts would affect people using the beach for leisure and recreation; Blackpool Road Recreation Ground; and the Public Rights of Way Network (PRoW), specifically bridleways BW0502012 and BW0502013, as set out in section 10.12.6. These impacts would occur only during the construction phase. Once operational, the cables will be buried underground with only inspection covers visible at the joint bays and link boxes. The existing habitats and features affected by the construction of the onshore export cable corridor will be reinstated following completion with no significant landscape effects post-construction.

1.6.4.12 In its current “undeveloped state” – i.e. without the construction of the Transmission Assets – the area covered by the Order Limits is visually open, especially on the beach side of Blackpool Road and the Sand Dunes of Lytham St Annes SSSI. The character to the east of Blackpool Road is compromised to some extent, however, by the presence of Blackpool Airport and its associated infrastructure, which dominate the area’s character.

1.6.4.13 As described above, to lay the onshore export cables temporary working compounds and haul roads/ access points will be required, comprising various low level temporary buildings and storage facilities, typical of any construction compound. While reversible, the medium to long term duration of construction activities, in LVIA terms, within an open environment of sandy beach and dunes would be discordant the coastal location. Construction activities within and next to Blackpool Airport would be less intrusive.

1.6.4.14 The visual extent and appreciation of additional built development, although temporal, will be apparent for people using the beach for leisure and recreation; Blackpool Road Recreation Ground; and bridleways BW0502012 and BW0502013. These effects would be felt locally, rapidly reducing beyond the Order Limits.

Mitigation Hierarchy

1.6.4.15 As demonstrated in Chapter 4 and Annex 4.3 of the Environmental Statement (AS-026 and AS-028), there are no reasonable alternative routes for the landfall and onshore export cable corridor which would enable this section of the cabling for the Transmission Assets to avoid passing through this section of the Green Belt.

1.6.4.16 However, as no permanent above ground infrastructure is proposed along this section, the identified harms to the Green Belt in this section will be temporary for the duration of the construction phase of the development. Once the onshore export cables are laid, all land used for temporary construction activities (i.e. compounds) will be reinstated to

its original condition and land use which will ensure the fundamental aim and function of the Green Belt in this area is maintained.

Impact to Green Belt between Kirkham and Freckleton

Harm by Inappropriate Development

1.6.4.17 Within this area of the Green Belt, it is proposed to install both underground onshore export cables and 400kV grid connection cables and construct two substations.

1.6.4.18 The onshore export cables and 400kV grid connection cables are considered to comprise 'engineering operations' for the purposes of paragraph 154 and are therefore not considered to constitute inappropriate development in the sense of NPPF paragraph 153.

1.6.4.19 The associated temporary construction compounds required to facilitate the laying of these cables, are also considered to be 'engineering operations', but will be inappropriate due to the temporary harm they could cause to the openness of the Green Belt.

1.6.4.20 While it is acknowledged that there would be harm to the openness and relevant purposes of the Green Belt by reason of inappropriateness during construction, the significance of this harm would be mitigated by the temporary and transitory nature of the works. Once construction is complete, all compound areas will be fully reinstated and there will be no lasting harm to the openness or purposes of the Green Belt in these locations. As noted above at (paragraph 1.6.4.6), harm caused by the temporary construction compounds should be given very limited, if any, weight in the consideration of this Application.

1.6.4.21 With regard to the substations, the Applicants contend that parts of these would comprise 'engineering operations' but acknowledge that the exception in paragraph 154, only applies where the openness and purposes of the Green Belt will be preserved by the proposed development, and also that part of the substations would comprise buildings which would be inappropriate development.

~~1.6.4.22~~ It is acknowledged that the introduction of the substations would have an unavoidable impact on both the openness, and purposes of the Green Belt with the principal harm to purposes resulting from encroachment in the countryside contrary to paragraph 143 c) of the NPPF. Both substations therefore comprise inappropriate development for the purposes of paragraph 153 of the NPPF, which is by definition harmful to the Green Belt.

1.6.4.23 The harms that arise from the substations on this area of the Green Belt are considered to occur in two main phases: impacts arising during the construction phase and impacts arising during the operational phase. The level of harm to arise in each phase is considered in further detail below.

1.6.4.24 Details of the proposed substations and the maximum design parameters for each are set out section 3.15.7 and Table 3.26 of Volume 1, Chapter 3 Project Description (REP2-008). The substations

will involve built footprints, security fencing and various structures depending on whether they comprise Air Insulated Switchgear (AIS) or Gas Insulated Switchgear (GIS) systems. For an AIS option, the equipment is mostly accommodated in an 'open yard' style, whereas, for a GIS System, some of the equipment may be included in buildings, as described in section 1.4. As explained in section 1.4, for the Morecambe substation, the option for either AIS or GIS has been included in the design envelope with the selected technology yet to be determined by the promoter. In the case of the Morgan substation the promoter has selected GIS technology (paragraph 3.15.7.16, REP2-008). It should be noted that the site selection process and design process as outlined in sections 1.3 and 1.4 has sought to avoid, minimise and mitigate harm and other harms arising from the project including the substations. In addition, through the mitigation secured by the oLMP as proposed planting matures, the extent of harm to the two relevant purposes will reduce.

Construction

1.6.4.25 The construction phase of the substations will result in harm to this area of the Green Belt due to the presence of construction compounds, which will temporarily harm the openness of this part of the Green Belt and encroach into the countryside, contrary to paragraph 143 c) of the NPPF.

1.6.4.26 An overview of the key construction activities and maximum design parameters for the onshore substation construction is provided in paragraphs 3.15.7.27 to 3.15.7.32 and Table 3.27 of REP2-008.

1.6.4.27 The temporary construction compounds will be located within the onshore substation development areas and will provide offices, welfare facilities, soil and material storage, storage of plant and equipment and parking for construction staff (paragraph 3.15.7.28). A construction compound and laydown area will also be provided to facilitate the construction of the Morgan onshore substation construction access road and access bell-mouth from the A583 (Kirkham Bypass) (paragraph 3.15.7.29).

1.6.4.28 Construction of the onshore substations is expected to take up to 36 months for the Morgan substation (including site preparation activities and reinstatement) and up to 30 months for the Morecambe Offshore Windfarm onshore substation (including site preparation activities and reinstatement). As outlined by the Applicants' response to the Rule 9 letter – ES Assessment of Construction Scenarios (AS-070), under a concurrent construction scenario the total duration for construction of the onshore substations would be up to 36 months. In the sequential construction scenario, there would be two separate construction periods with a gap of up to 4 years between construction periods. If the two onshore substation construction periods were to follow one another immediately then the total construction duration would be up to 66 months.

1.6.4.29 During this period, it is acknowledged that the installation of the substations and the presence of the supporting construction

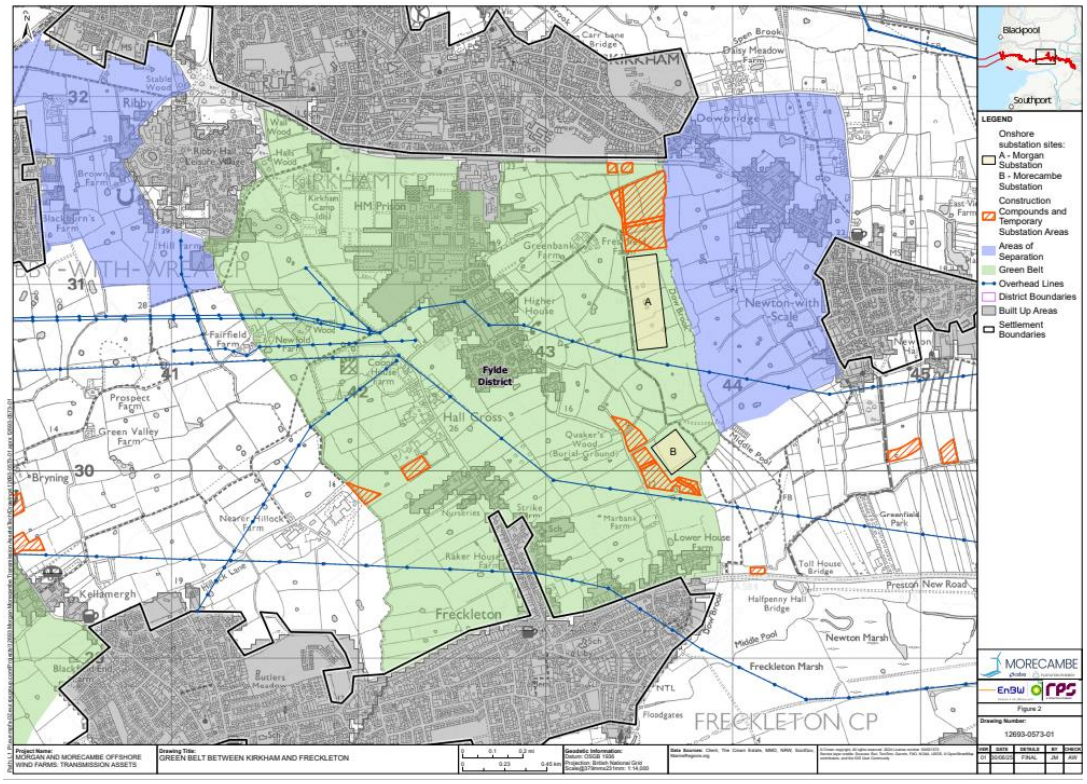
compounds (comprising the elements listed above) will temporarily harm the spatial and visual openness of the Green Belt and affect the performance of the Green Belt extending between the settlements of Kirkham and Freckleton in relation to purposes a) and c) of NPPF paragraph 143.

1.6.4.30 It is considered however, that the general performance of the Green Belt having regard to separation of settlements through the retention of openness will continue given its spatial extents. It is noted that the area of the Green Belt affected by the imposition of the substation construction compounds, represents approximately 2.74% of the total local area of Green Belt, extending to approximately 2km east-west and approximately 3km north-south.

1.6.4.31 It is not considered that there would be conflict with the other three purposes of the Green Belt as set out in paragraph 143.

1.6.4.32 The significance of the harm to this part of the Green Belt as a result of the temporary construction compounds and substation construction works, is considered to be mitigated by the transitory nature of the impacts. As no permanent harm will occur to the openness and purposes of the Green Belt in this location, the relatively short-term harm to be caused by the construction works should carry only little weight in the determination of the Application.

Figure 13 – Green Belt between Kirkham and Freckleton - with compounds and Substations



Operation

1.6.4.33 Once construction of the substations is complete, all temporary construction compounds will be removed and the affected areas of land reinstated to their original condition. These temporary facilities will therefore result in no lasting harm to the Green Belt.

1.6.4.34 With regard to the substations, it is acknowledged that harm will occur in relation to the fundamental aim of Green Belt to prevent urban sprawl by keeping land permanently open and relevant purposes of the Green Belt comprising: a) to check the unrestricted sprawl of large built-up areas: and c) to assist in safeguarding the countryside from encroachment and that this harm will persist over the longer term (see maximum design parameters in Table 3.26 of REP2-008).

1.6.4.35 The establishment of the substations will result in harm to the spatial and visual openness of the Green Belt. However, overall, it is considered that the Green Belt extending to approximately 2km east-west and approximately 3km north-south, will continue to perform in relation to its fundamental aim, namely, to separate settlements through retention of openness. This accords with the objectives set out in Fylde's local plan (see section 1.2 above), in relation to maintaining an effective gap between the nearby settlements.

1.6.4.36 In relation to the impact on performance of the two relevant Green Belt purposes: a) to check the unrestricted sprawl of large built-up areas;

and c) to assist in safeguarding the countryside from encroachment; the following are noted:

a) to check the unrestricted sprawl of large built-up areas

1.6.4.37 The substations are sufficiently distant from other structures and the boundaries of the settlements of Kirkham and Freckleton that they will not lead to any perception of unrestricted sprawl. A clear break in the built development of the settlements and the substations will be apparent due to the retention of open land between Kirkham to the north, Newton with Scales to the east and Freckleton to the south.

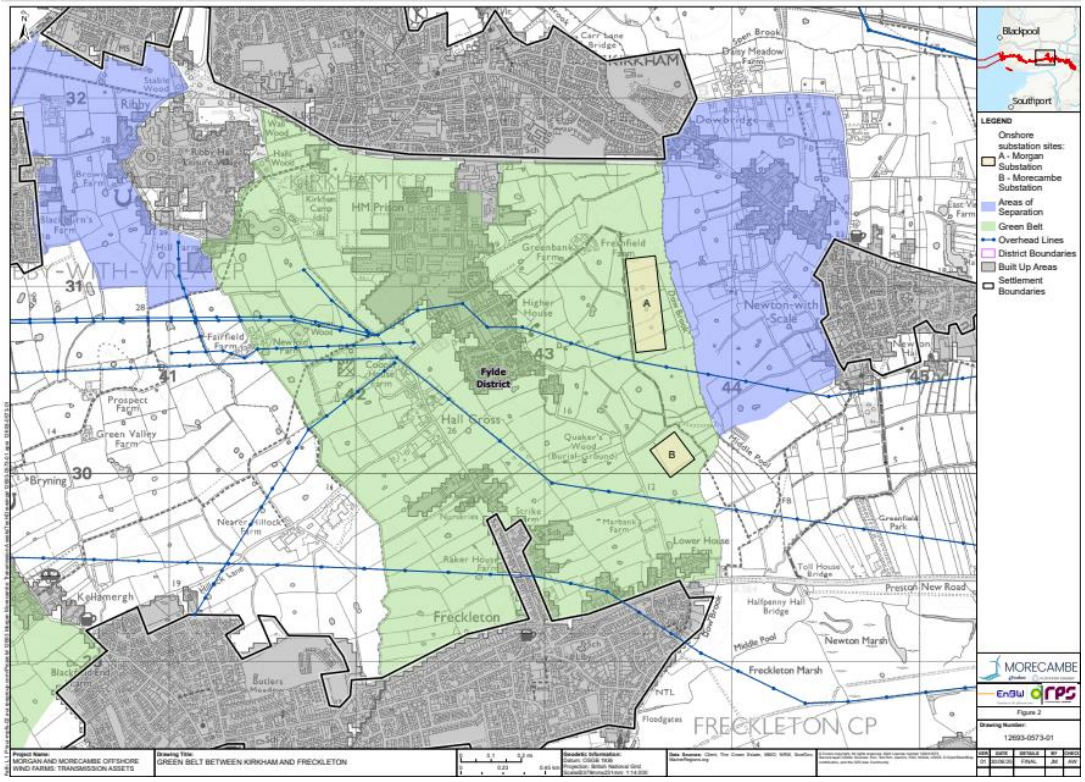
c) to assist in safeguarding the countryside from encroachment;

1.6.4.38 The construction of the substations in this area of Green Belt will introduce an urbanising form (namely a series of buildings, built structures, exposed electrical infrastructure, security fencing, hard surfacing and open areas, see section 3.15.7 of REP2-008) into an area which is, at present, generally open and undeveloped. Therefore, the proposed substations will result in encroachment. The substations are acknowledged to be inappropriate development and therefore harmful to the Green Belt.

1.6.4.39 The extent of built form within the substations will vary depending on whether they are of AIS or GIS design, (see paragraphs 3.15.7.16 and 3.15.7.16 of REP2-008) with GIS technology characterised by greater built form and in the case of AIS, greater extents of exposed electrical infrastructure. In both cases, open areas do occur within the secure fenced boundaries will be retained.

1.6.4.40 As set out in paragraph 3.15.7.16, a flexible approach has been taken in relation to technology parameters selection for Morecambe substation regarding AIS and GIS. In the case of the Morgan substation the technology selection is GIS.

Figure 14 - Green Belt between Kirkham and Freckleton with substations



Other Potential Harm

1.6.4.41 With regard to other harms which may be identified as relevant to the Transmission Assets, the Applicants consider landscape and visual impacts to be of principal relevance.

Landscape and Visual

1.6.4.42 The landscape and visual effects of the Transmission Assets can be considered 'other harm' within the context of Green Belt policy, as they can result in temporal and/or permanent changes to landscape character and the nature of the visual environment. For the Green Belt between Kirkham and Freckleton, potential harm would arise from the construction of the export cables and two onshore substations, in combination with associated construction compounds. The harms to arise from the substations on this area of the Green Belt are considered to arise in two main phases: impacts arising during the construction phase and impacts arising during the operational phase.

1.6.4.43 The LVIA concludes that significant and adverse impacts, during construction and operation phases (before landscape mitigation planting has established), would arise on the landscape character *15d: Coastal Plain – Fylde*, as set out in Section 10.12.3. Likewise, the LVIA concludes that significant and adverse impacts would affect people using the PRoW network, specifically bridleways BW0505016 and footpath FP050503, as set out in Section 10.12.5.

1.6.4.44 These effects would be felt locally, reducing beyond the Order Limits with distance, and over time, as mitigation planting matures and establishes. The LVIA concludes that there will be no significant long term operational effects on landscape character as a result of the Transmission Assets. The only long-term significant effects on visual amenity would be sequential effects on equestrians and walkers using the linked PRoW immediately adjacent and near to the Morgan and Morecambe onshore substation sites (namely PRoWs BW0505016, FP050503 and FP050504).

1.6.4.45 In its current "undeveloped state" – i.e. without the construction and operation of the Transmission Assets – the area covered by the Order Limits is visually open. However, the character and visual openness is compromised to a degree by the presence of existing residential development, which extends along and westwards Kirkham Road; and the expansive prison facility of HMP Kirkham.

1.6.4.46 The visual extent and appreciation of additional built development of the two substations will be apparent from nearby visual receptors (listed above), but will be reduced, to a degree, by proposed mitigation planting around each substation site. The impacts on landscape character and nearby visual receptors will be felt locally but will dissipate with distance from the Order Limit. In addition, what will remain visually apparent will be subject to the design governance and post-consent controls (see Section 1.5), such that the resultant harm is limited to the local contexts of each onshore substation site.

Mitigation Hierarchy

1.6.4.47 As outlined in Section 1.4, the site selection process for the two substations was robust and took into consideration existing topography, ground conditions and substantial existing hedgerows and woodblocks (see paragraphs 3.15.7.22).

1.6.4.48 Although the substations cannot be situated together, they have been co-located and the locations carefully selected to work with the landscape and existing vegetation as far as practicable to minimise impacts to the Green Belt.

1.6.4.49 An outline Landscape Management Plan (oLMP) (AS-050) has been submitted with the Application and provides an Illustrative Landscape Strategy plan that identifies areas of landscape mitigation planting at the substation sites. This will help to further mitigate the effects of the substations in relation to encroachment on the Green Belt.

1.6.4.50 Detailed Landscape Management Plans will be prepared post consent and will be agreed with the relevant authorities (paragraph 3.15.7.23). These will include details such as the number, location and species of plants, as well as details for their management and maintenance. It is proposed that a mix of faster growing 'nurse' species and slower growing 'core' species will be used. The 'nurse' species will provide early screening to the substations, whilst the 'core' species will comprise a mix of preferred native, canopy species that will outlive the nurse species and characterise the woodland structure over the longer

term (see paragraph 3.15.7.24 of REP2-008). This landscaping will help to limit encroachment by providing a natural edge to the substation sites, enabling them to be incorporated into the landscape and screened from views from public rights of way and the surrounding settlements.

Impact to Green Belt South Ribble

Harm by Inappropriate Development

1.6.4.51 The permanent works associated with the Transmission Assets in the area to the south of the River Ribble comprise 400kV grid connection cables and the infrastructure required to connect the onshore substations to the existing National Grid Penwortham substation (see section 3.16 of REP2-008).

1.6.4.52 Connection to the substation will comprise up to twelve 400kV grid connection cables, in up to four circuits (see Table 3.28 of REP2-008) for the maximum design parameters for the 400kV grid connection cables). The cables will be buried in up to four separate trenches (one circuit per trench with up to two cable circuits/ trenches for each project). Where practicable, the cable corridors for each project abut to make one larger cable corridor to minimise environmental impacts and disruption. The exceptions to this are a short section where the cables exit from the substations where this is not be possible due to the separation of the substations, and also to the south of the River Ribble where the connection points for each project are on opposite sides of the Penwortham Substation (see paragraphs 3.15.8.1 to 3.15.8.3 of REP2-008). The cables will be installed using the same methodology as for the onshore export cables (see paragraph 3.15.8.6 and 3.16.1.2). Connection to the Penwortham Substation will include the installation of electrical infrastructure of the kind described in paragraph 3.16.1.3 of REP2-008 (such as busbar circuit breakers, disconnectors, earth switches, current and voltage transformers, surge arresters, post insulators, cable sealing ends, steel structures, 400 kV cable connection protection systems, marshalling building/room, marshalling cabinets/ units and electrical earthing). This electrical infrastructure is proposed to be in an open yard style, in combination with a marshalling building which will house marshalling and electrical equipment.

1.6.4.53 As with the onshore export cables discussed above, the 400kV grid connection cables are considered to comprise ‘engineering operations’ for the purposes of NPPF (2025) paragraph 154 and are therefore not considered to be inappropriate development in the sense of paragraph 153. Whilst some of the electrical infrastructure required for connection to the National Grid Substation is also considered to comprise ‘engineering operations’, the marshalling building is considered to be inappropriate.

Construction

1.6.4.54 In order to install the 400kV grid connection cables, temporary construction compounds and laydown areas will also be required (see

paragraphs 3.15.8.12 to 3.15.8.16, Table 3.29 and Table 3.30 of REP2-008). Whilst temporary construction works are also considered to be 'engineering operations' for the purposes of paragraph 154 of the NPPF (see Yorkshire Green, 2023, paragraphs 3.9.3 to 3.9.48); similarly to the onshore export cables, the Applicants acknowledge that in order to benefit from the exception in paragraph 154, development must also preserve the openness of the Green Belt and not conflict with its purposes

1.6.4.55 The temporary compounds will be established early in the construction programme and are designed in accordance with those for the onshore export cable corridor (paragraph 3.15.8.15). The Applicants acknowledge that there will be short term harm to the Green Belt by way of a reduction in the openness of the land affected and in relation to encroachment into the countryside contrary to purpose c) of paragraph 143 of the NPPF, for the duration of construction.

1.6.4.56 As discussed above, as the harm caused by the construction compounds will be transitory, occurring over a relatively short period and will result in no permanent harm to the Green Belt. It is not considered that harms caused by temporary works can be a determining factor in consideration of the application.

Operation

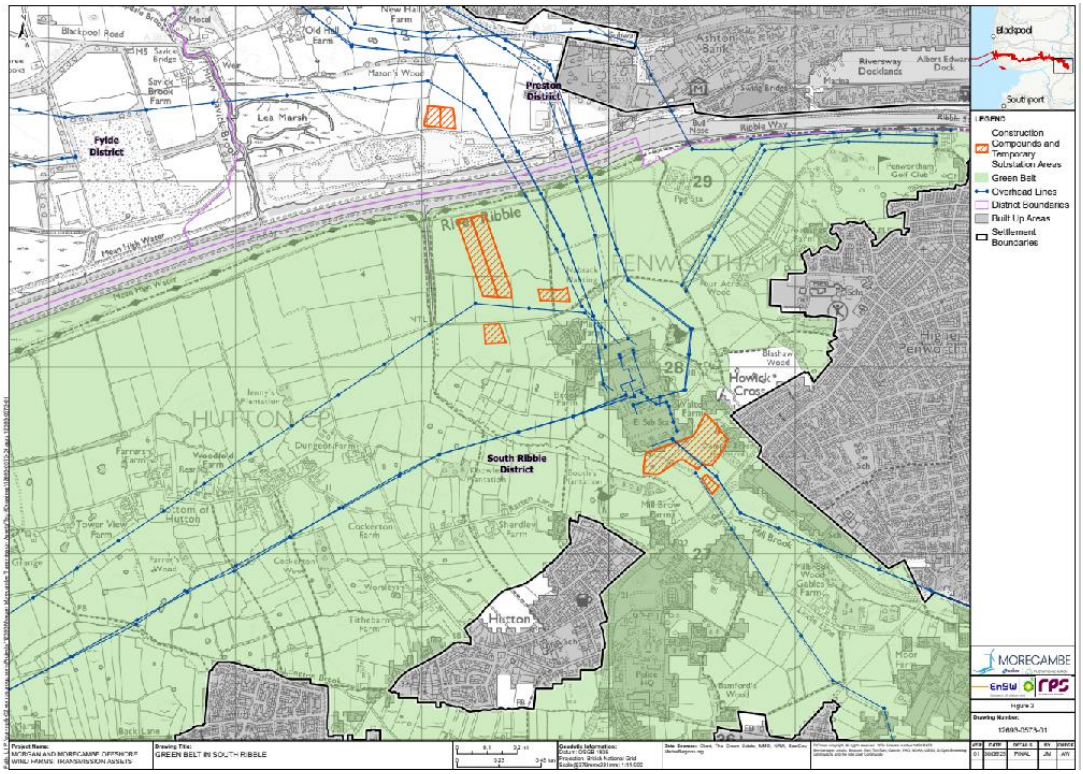
1.6.4.57 It is acknowledged that harm to the Green Belt will be caused by reason of the inappropriateness of the permanent infrastructure (as described in paragraph 3.16.1.3 of REP2-008 and paragraph 1.6.4.52 above) to be installed at Penwortham Substation.

1.6.4.58 However, this harm is mitigated by the extent of the wider Green Belt in this location and the relatively small scale of the permanent works by comparison to scale of the Green Belt area. It is also mitigated by the extent of the existing substation infrastructure context at Penwortham and existing overhead electrical transmission infrastructure in this location which provides a substantial and permanent urbanising feature in this part of the Green Belt (as illustrated on Figure 11).

1.6.4.59 This area of Green Belt will therefore continue to perform its fundamental aim of providing a clear separating function between the built-up areas of Higher Penwortham and Hutton through the retention of openness and will not result in the unrestricted sprawl of large built-up areas. It will also not result in notable encroachment into the countryside for the purposes of paragraph 143 of the NPPF.

1.6.4.60 Policy G1 of South Ribble's Local Plan states that the main objective of the Green Belt designation is to ensure control of development in certain areas, primarily open land in rural areas, to protect it from development, maintain the openness and character of the area and to restrict urban sprawl (paragraph 10.20). This area of Green Belt will continue to fulfil this objective.

Figure 15 – Green Belt in South Ribble - with compounds



Other Potential Harm

1.6.4.61 With regard to other harms which may be identified as relevant to the Transmission Assets, the Applicants consider landscape and visual impacts to be of principal relevance.

Landscape and Visual

1.6.4.62 The landscape and visual effects of the Transmission Assets can be considered 'other harm' within the context of Green Belt policy, as they can result in in temporal and/or permanent changes to landscape character and the nature of the visual environment.

1.6.4.63 For the Green Belt in South Ribble, potential harm would arise from the construction of the 400kV grid connection cables, in combination associated construction compounds. The marshalling building/room will be located within, or adjacent to, the existing extent of Penwortham National Grid substation (PDA-026).

1.6.4.64 Volume 3, Chapter 10 Landscape and visual (APP-123) assesses effects on landscape character and visual amenity during both construction and operational phases as part of a LVIA. This includes analysis of views available to receptors potentially affected by the components of the Transmission Assets, with consideration their experience to changes in these views and the overall visual environment.

1.6.4.65 The LVIA concludes in Section 10.12.4 that impacts would range between moderate adverse and negligible adverse where the 400kV grid connection cables and construction compounds directly and indirectly affect the following landscape character areas:

- 15d Coastal Plain – The Fylde.
- 17a Enclosed Coastal Marsh: Clifton and Hutton.
- 18a Open Coastal Marsh: Ribble Marshes.
- 15b Coastal Plain: Longton – Bretherton.

1.6.4.66 In accordance with the LVIA methodology, no impacts arising on landscape character areas were assessed to be significant, in EIA terms.

1.6.4.67 LVIA concludes in Section 10.12.7 that visual impacts would range between major and negligible adverse significant, affecting people using local footpaths and bridleways within 1 km of the corridor route; and occupiers of residential properties who lie close to the construction site / activities, and would experience near, open views.

1.6.4.68 These impacts would occur only during the construction phase. Once operational, the cable will be buried underground with only inspection covers visible at the joint bays and link boxes. The existing habitats and features affected by the construction of the onshore export cable corridor will be reinstated following completion with no significant landscape effects likely to persist post-construction.

1.6.4.69 In its current “undeveloped state” – i.e. without the construction of the Transmission Assets – the area covered by the Order Limits is visually open. The character to the immediate west of Higher Penwortham is, however, compromised to some extent by the presence of The National Grid Substation and its associated infrastructure, which influences the area’s character within the vicinity of the Order Limits.

1.6.4.70 As described above, to lay 400kV grid connection cables, temporary working compounds and haul roads/ access points will be required, comprising various low level temporary buildings and storage facilities, typical of any construction compound. While reversible, the medium to long term duration of construction activities, in LVIA terms, would be discordant with largely rural context. Construction activities near to and within the National Grid Substation would be less intrusive.

Mitigation Hierarchy

1.6.4.71 Once the cables are installed and connection works are complete, all temporary works areas will be removed and the ground reinstated to its original condition (including field drainage and /or irrigation). Furthermore, by way of mitigation, where practicable, consideration will be given to early restoration of sections of the cable route (see paragraph 3.15.8.38) to help mitigate these impacts.

1.7 Very Special Circumstances (VSC)

1.7.1 CNP Infrastructure

1.7.1.1 As set out in section 1.2, the Government has committed to fully decarbonising the power system by 2035, subject to security of supply, to underpin its 2050 net zero ambitions (para 4.2.1 of NPS EN-1). NPS EN-1 sets out the urgent need for new large-scale energy infrastructure (paragraph 3.2.6 of EN-1), and on account of this urgent need, the Government has concluded that there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure (Paragraphs 3.3.62 and 4.2.4 of NPS EN-1).

1.7.1.2 Paragraph 4.2.5 of EN-1 confirms that offshore wind constitutes low carbon CNP infrastructure. As the Transmission Assets are essential to the realisation of the benefits from Morecambe Offshore Windfarm: Generation Assets and the Morgan Offshore Wind Project: Generation Assets, they too are also considered to be low carbon CNP infrastructure (see Paragraphs 1.4.4.6 and 1.4.4.10 of the Statement of Reasons (REP1-012)).

1.7.1.3 As set out in Section 1.2, Paragraph 4.2.14 of NPS EN-1 confirms that where the Secretary of State is satisfied that an application meets the requirements of the NPS, applying the mitigation hierarchy and any other legal and regulatory requirements, the enhanced presumptions of CNP Infrastructure apply (paragraph 4.2.16 and 4.2.17 of EN-1). This includes a presumption that the test for very special circumstances is presumed to be met, providing the mitigation hierarchy requirements of EN-1 and the relevant technology specific NPSs (ie. EN-3 and EN-5) have been met.

1.7.1.4 Sections 1.3, 1.4 and 1.5 above, demonstrate how the Applicants have applied the mitigation hierarchy to avoid, minimise and mitigate impacts and harm to the Green Belt as far as practicable. Consequently, the starting point for determination should be that the test for very special circumstances is presumed to have been met.

1.7.1.5 Notwithstanding this approach, robust very special circumstances do exist which justify and outweigh the harms to be caused to the Green Belt, by reason of inappropriateness and any other harms as identified above. For clarity, these very special circumstances are set out below.

1.7.2 Very Special Circumstances

1.7.2.1 The Planning Statement (REP1-032) sets out in detail the need for the Transmission Assets to deliver the electricity generated by the Morgan Offshore Wind Project: Generation Assets and the Morecambe Offshore Windfarm: Generation Assets (hereafter referred to as ‘the Generation Assets’) and the contribution the offshore wind farms would make towards achieving the Government’s climate change objectives as set out in legislation and national policy (see Sections 4 and 6). Further information on the legislative and policy background in relation to climate change and the need for the Morgan and Morecambe

Generation Assets can also be found in Volume 4, Chapter 1: Climate Change of the Environmental Statement (ES) (APP-138).

1.7.2.2 The need for the Generation Assets, and therefore the Transmission Assets, as well as the further benefits to be delivered including employment and biodiversity benefits, is again summarized in the Statement of Reasons (REP1-012).

1.7.2.3 This section highlights how the need for, and benefits to be delivered by, the Generation Assets, and therefore the Transmission Assets, comprise very special circumstances which serve to outweigh the identified harm to the Green Belt described above.

Climate Change and Greenhouse Gas (GHG) Emissions

1.7.2.4 Paragraph 4.2.1 of EN-1 makes clear that the 'Government has committed to fully decarbonising the power system by 2035, subject to security of supply, to underpin its 2050 net zero ambitions'.

1.7.2.5 Part 3 of NPS EN-1 outlines the urgent need for energy and transmission infrastructure in order to achieve energy security and dramatically reduce greenhouse gas emissions (paragraphs 3.1.1, 3.3.62 and 3.3.63). This covers both the Generation Assets, and the Transmission Assets subject to this application.

1.7.2.6 The Transmission Assets, will allow for the deployment of the Generation Assets, connecting two nationally significant offshore wind farms to the UK electricity transmission network. As such, by association, the Transmission Assets will make a significant contribution to reduction of the UK's GHG emissions and therefore to meeting the global, European and national targets on CO2 reduction in line with the Climate Change Act 2008 (2050 Target Amendment) Order 2019; and the CoP Glasgow Climate Pact 2021 which was recently re-enforced by agreements made at COP 28 whereby the Global Renewables and Energy Efficiency Pledge was made.

1.7.2.7 The global and national targets for renewable and low carbon energy generation, and the significant potential of Lancashire and Fylde to contribute to meeting these targets are acknowledged in local policy (see Section 1.2 above). In particular, Strategic Policy CL3 (Renewable and Low Carbon Energy Generation – excluding onshore wind turbines) of Fylde's Local Plan acknowledges that 'Renewable and low carbon energy development potential… is significant within Fylde. Opportunities for renewable and low carbon development… should be maximised'.

1.7.2.8 This should be afforded positive weight in relation to the limited identified harms to be caused to the Green Belt.

Energy Security

1.7.2.9 The British Energy Security Strategy (April 2022) emphasises the need for the UK to address its underlying vulnerability by reducing dependence on imported oil and gas, a need which is compounded by the current geopolitical situation.

1.7.2.10 The Strategy increases the UK wide target for installed offshore wind capacity to 50GW by 2030 and advancing offshore wind electricity generation is the first point of the British Energy Security Strategy 10-point plan. The Clean Power 2030 Action Plan, published in April 2025, re-emphasises that achieving clean power is a matter of national security, and therefore the Transmission Assets are in line with a fundamental part of the British Energy Security Strategy to increase the independence and security of the UK's energy supply.

1.7.2.11 The Transmission Assets are essential for the renewable energy created by the Generation Assets to be deployed into the UK energy Grid and reducing the UK's reliance on other imported fuel types. As such, this should also be afforded positive weight in determination.

Affordable Energy Supply

1.7.2.12 The Clean Growth Strategy (HM Government, 2017) emphasised the need to grow national income while cutting greenhouse gas emissions, and states that at the heart of the UK's Industrial Strategy is an aim to achieve clean growth, whilst ensuring an affordable energy supply for businesses and consumers (paragraph 1.4.4.16 of REP1-012).

1.7.2.13 Point 1 of the UK's Ten Point Plan (HM Government, 2020) notes that offshore wind is a critical source of renewable energy for our growing economy and that by 2030, the Government plans to quadruple offshore wind capacity, making the most of this proven technology and investing to bring new jobs and growth to our ports and coastal regions (paragraph 1.4.4.17 of REP1-012).

1.7.2.14 This should be afforded positive weight in relation to any harm to be caused to the Green Belt.

Contracts for Difference Process

1.7.2.15 The Energy Act 2013 introduced a legislative framework for delivering secure, affordable and low carbon energy. It included provisions to incentivise investment in low carbon electricity generation, ensure security of supply and help the UK meet its emission reduction and renewables targets. In particular, it contained provisions for Electricity Market Reform (EMR).

1.7.2.16 As explained in section 3.3.3 of the Planning Statement (REP1-032), EMR was designed to enable the UK to develop a clean, diverse and competitive mix of electricity generation that will ensure targets on decarbonisation and security of supply are met, whilst keeping bills as low as possible for consumers.

1.7.2.17 EMR comprised two main policy areas to deliver these objectives, one of which is Contracts for Difference (CfDs).

1.7.2.18 If the Applicants take part in the CfDs process, there will be a requirement to produce Supply Chain Plans. Supply Chain Plans are designed to provide local economic benefits through the implementation of the procurement process with Tier 1, 2 and 3 suppliers. The following key areas could deliver economic opportunities to the local community;

- Port and Harbour services
- Fabrication services
- Operations and Maintenance Support
- Onshore Civil works
- Hospitality
- Offshore Surveys

1.7.2.19 If successful in the CfD process, monitoring of the Supply Chain Plans would be undertaken to ensure the commitments made are fulfilled. This includes a Post Build Implementation report.

Socio-economic Benefits

1.7.2.20 As noted in paragraph 1.5.1.20 of REP1-012, expenditure on major energy infrastructure projects can stimulate economic growth by creating jobs and increasing output. As such, the Transmission Assets will make a significant contribution towards the UK's transition to a low carbon economy. They will result in direct economic benefits through the creation of employment associated with delivering each phase of the project. Volume 4, Chapter 2: Socio-economics of the Environmental Statement (APP-141) provides more detailed information on the socio-economic benefits of the Transmission Assets, and in particular, Tables 2.69 and 2.73 identify the potential for up to 255 employment opportunities (Full Time Equivalent years) for residents in the study area during development and construction, and up to 50 such opportunities during the operational and maintenance phase.

1.7.2.21 Socio-economic benefits will be secured through the DCO as set out in paragraph 1.5.1.21 of REP1-012, and works may not commence until an employment and skills plan has been consulted on and approved. This must be substantially in accordance with the Outline Employment and Skills Plan (APP-239), which sets out various initiatives to support employment and skills development in the local area, in alignment with outline principles which have been identified to support employment and skills needs in North-West England.

Biodiversity

1.7.2.22 The Transmission Assets, alongside the associated Generation Assets, will contribute to halting overall biodiversity loss globally as a result of its contribution to addressing climate change and through integrated biodiversity net gain measures (paragraph 1.5.1.14 of REP1-012).

1.7.2.23 In relation to halting biodiversity loss, Paragraph 5.4.2 of NPS EN-1 states that *"This aim needs to be viewed in the context of the challenge presented by climate change. Healthy, naturally functioning ecosystems and coherent ecological networks will be more resilient and adaptable to climate change effects. Failure to address this challenge will result in significant adverse impact on biodiversity and the ecosystem services it provides."* NPS EN-1 goes on at paragraph 5.4.41 to state that *"The benefits of nationally significant low carbon energy infrastructure*

development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests."

1.7.2.24 Through careful design, the majority of ecological effects have been avoided or mitigated in accordance with the hierarchy. Whilst some residual effects in terms of ecology and nature conservation would remain as a result of the partial loss of Mill Brook Valley BHS, the Outline Biodiversity Benefit Statement (REP2-020) demonstrates that there would also be potential for long term benefits associated with onshore biodiversity, specifically, the additional planting at the onshore substations and associated access tracks (paragraph 1.5.1.16, REP1-012).

1.7.2.25 In addition to this, despite not being required to provide a designated level of biodiversity net gain, the Applicants have voluntarily sought to provide a standalone area of biodiversity benefit at Lea Marsh Fields. In addition, the Applicants have proposed grassland habitat enhancement, hedgerow enhancement for a retained native species-rich hedgerow at the proposed Morgan substation site, habitat enhancement along a section of Dow Brook and scrub planting in certain areas (see paragraph 1.5.1.18 of REP1-012).

1.7.2.26 These measures are designed to enhance the biodiversity of the local environment. These benefits should be afforded positive weight in relation to the identified harm.

Benefits of Co-ordination

1.7.2.27 The co-ordination between the two Applicants to deliver the Transmission Assets for both projects has brought with it a variety of material benefits in terms of reducing environmental and community impacts in line with the guidance in EN-5 (paragraphs 2.13.5 to 2.13.7).

1.7.2.28 The Application is designed to deliver two projects through a single application, with a single landfall location, aligned onshore cable corridor routes with an overall cable corridor area for almost the entirety of the route. In addition, the two onshore substations have been co-located in close proximity to one another to reduce and contain impacts as discussed above (see paragraph 1.5.1.24 of REP1-012).

1.7.2.29 The benefits of this approach from a wider community perspective are as follows:

- At a regional level, a single landfall location and substations in close proximity contains and minimises the geographic spread of the projects, minimising the number of communities and environmental receptors affected.
- At a local level, the aligned cable corridor allows for detailed alignment of infrastructure which avoids the proliferation of infrastructure within the host community (ie. the potential for a 'spaghetti junction' of cable routes). Separately developed radial connections would inevitably cause a wider spread of development and impacts (including landscape and visual), leading to a potential

need for cable crossings and increasing the number of landowners and farm holdings affected, resulting in more widespread land use impacts and a less efficient use of land.

- A single joint application for development consent, meaning the local community has only been subject to one consultation phase and one DCO examination process. This approach is unprecedented for two projects of this nature and has required a substantial amount of work by the Applicants. However, it has allowed for a far more detailed assessment of the combined impacts from all elements of the Transmission Assets, than would have been possible if the projects had been promoted and assessed separately. It has ensured that mitigation measures can also be coordinated to ensure the more effective reduction of environmental impacts and the development of a single set of outline management plans to align the approach across both projects. It also means that all post-consent management plans will be based on a single suite of outline plans which were submitted as part of the application, ensuring consistency in approach from both projects in respect of mitigation measures, delivery principles and overall construction controls.

1.7.2.30 The substantial benefits to be realised through the delivery of these two projects through a co-ordinated and single application approach should be afforded positive weight in relation to any harm to be caused to the Green Belt.

Community Funds for Transmission Infrastructure

1.7.2.31 As detailed in paragraphs 1.5.1.4 to 1.5.1.7 of the Statement of Reasons (REP1-012), the Applicants are committed to delivering a community benefit fund, in line with the Community Funds for Transmission Infrastructure guidance (published April 2025). This guidance outlines the Government's recommendation for the level of funding that developers should consider, which is outlined to be £530,000 for each onshore substation.

1.7.2.32 The Applicants intend to commence engagement with key stakeholders this year to ensure that any community benefit scheme considers the needs of the community and supports local priorities where possible.

1.7.2.33 Whilst it was confirmed at ISH 1 that any community benefit fund is not a material consideration in the determination of the application and engagement will be undertaken separately from the DCO Examination, it should be noted that if the development does not proceed to construction, then these considerable funds which could make a substantial contribution to local needs and priorities will not be delivered.

1.7.3 Conclusion in relation to VSC

1.7.3.1 Development of the Transmission Assets will result in temporary harm to areas of the Green Belt as a result of construction and the net loss of an area extending to approximately 22.35ha (4.32%) where the

substations are to be installed. However, as demonstrated above, there are no reasonable alternative options which enable the Transmission Assets to avoid Green Belt, either for the routing of the cable corridor, or for the siting of the substations.

1.7.3.2 Through the implementation of good design principles, the permanent aspects of the Transmission Assets maintain the openness of the Green Belt overall and prevent urban sprawl and significant encroachment into the countryside. The resultant harm, from both inappropriate development and other harms has therefore been demonstrated to be limited.

1.7.3.3 Responding to the NPS EN-1 test relevant to Green Belt (paragraph 5.11.37), the physical characteristics of the Transmission Assets are such that they will have a limited impact on the purposes of Green Belt considered relevant, namely to *'to check the unrestricted sprawl of large built-up areas'* and *'to safeguard the countryside from encroachment'*.

1.7.3.4 As a project of national significance, the policy set out in the relevant NPSs, namely NPS EN-1, EN3 and EN-5, has primacy in decision making. Paragraph 4.2.14 of NPS EN-1 confirms that where the Secretary of State is satisfied that an application for development consent meets the requirements of the NPS, applying the mitigation hierarchy and any other legal and regulatory requirements, '*the CNP presumptions set out below apply'*. As stipulated in paragraph 4.2.1.6 of the Planning Statement (REP1-032) and demonstrated though the consideration of the harms and proposed mitigation in this report, the Applicants believes these requirements have been met.

1.7.3.5 As such, the starting point for determination for the Transmission Assets, as CNP Infrastructure, is that the test for very special circumstances required to justify development in the Green Belt is met, by the recognised urgent need for new low carbon infrastructure (ie. there is already a presumption of very special circumstances).

1.7.3.6 Regardless of this, robust very special circumstances have been demonstrated for the Transmission Assets which are only present in their totality through the opportunity presented by this development, and which clearly outweigh any harms to be caused to the Green Belt. In summary, these are:

- The substantial contribution of the Morgan and Morecambe Wind Farm: Generation Assets, and therefore the Transmission Assets, to the generation of renewable energy and reduction of the UK's Green House Gas emissions.
- The contribution towards the security of the UK's energy supply in accordance with the British Energy Security Strategy.
- The societal economic benefits to be realised through investment in ports and coastal regions and job creation.
- The contribution towards halting biodiversity loss by addressing climate change and through the delivery of integrated biodiversity net gain measures.

- The delivery of critical national priority infrastructure for which there fis a confirmed urgent need, through a co-ordinated approach which substantially minimises the environmental and community impacts and delivers co-ordinated mitigation measures and management strategy.
- In relation to VSC, Lancashire County Council in their Local Impact Report (paragraph 7.16, REP1-085) noted that *'a very special circumstances case should also include a lack of available sites outside of the Green Belt, or other Green Belt locations which would have less impact...'* The Applicants note that this approach to alternatives is not correct. It was determined in *R (Whitley Parish Council) v North Yorkshire County Council [2022]* by Sir Lindblom, that *'Government policy for development in the Green Belt did not state that "very special circumstances" to justify planning permission being granted for such proposals as this, as "inappropriate development" in the Green Belt, would only exist in the absence of a suitable alternative site that was not in the Green Belt'* (Paragraph 56).

1.7.3.7 The breadth and depth of the need for, and benefits to be delivered by, this CNP Infrastructure are only available through this combined Application for the Transmission Assets. Notwithstanding that the starting point for CNP Infrastructure is that the test of very special circumstances is presumed to be met, the very special circumstances outlined above are considered to clearly outweigh the identified harms to justify the location of the development partially within the Green Belt.

1.8 Conclusion and Summary

1.8.1.1 This report draws together the Applicants' case on Green Belt and provides additional clarification on:

- site selection and alternatives
- design (in relation to Green Belt)
- the nature of any harm arising as a result of the proposals on the function and performance of the Green Belt in relation to its fundamental aim and purposes
- the very special circumstances

1.8.1.2 To address these points, the report is set out in the following order:

- **Policy Review** – provides an outline of the national and local policy relevant to Green Belt and the relevant tests to be applied to the determination of the Transmission Assets application. The review also outlines the policy basis for the Critical National Priority (CNP) Infrastructure designation.
- **Context** – provides an overview of how and where the proposed Transmission Assets and associated works will interact with land covered by Green Belt policy and where Green Belt is addressed within the application and examination submission documents.

- **Site Selection and Technical Justification** – provides an outline of the site selection process and assessment methodology to demonstrate that consideration of the corridor for the Transmission Assets was robust; provides an overview of the technical and constraints justification of the area of search for the substations; why two separate substations are required; provides an explanation as to how Green Belt formed part of the site selection/ refinement process (with particular reference to the substations); and makes clear that the assets could not reasonably have avoided Green Belt.
- **Design** – provides a description of how the design of the Transmission Assets has sought to reduce harm by virtue of inappropriateness and any other harm through a clear structured design process.
- **Analysis of harm resulting from the Transmission Assets** – considers the potential harm to the Green Belt that may result from inappropriate development and any other harm in relation to the fundamental aim and relevant purposes of the Green Belt. As part of this, the report examines the existing and anticipated post development performance of the affected areas of Green Belt in relation to the fundamental aim and relevant purposes. It describes and demonstrates how the mitigation hierarchy has been applied to avoid, minimise and then mitigate any harm which may be caused to the Green Belt as far as practicable.
- **Very Special Circumstances** – the report sets out the very special circumstances (VSC) which exist (including addressing the reference made by Lancashire CC in their LIR (para 7.16 in REP1-085) to the suggestion that the lack of available sites outside of the GB/other GB locations which would have less impact, such as the land adjacent to Penwortham substation) and outlines the balance of weight of any harm caused to the Green Belt by inappropriate development against the very special circumstances.

1.8.3 Conclusion

1.8.3.1 This report concludes that:

- There is no reasonable means by which the Green Belt could have been avoided particularly having regard to the siting of the two proposed substations and that all reasonably practicable effort has been made to avoid, minimise and mitigate impacts in accordance with mitigation hierarchy, including implementation of a structured design process including site selection including consideration of the Horlock Rules embedded in NPS EN-5.
- The resulting harm on fundamental aim and relevant purposes of Green Belt, will be limited and general performance of Green Belt would remain effective in both the construction and operational phases. by virtue of the Green Belt being sufficiently robust; that 'any other harm' is limited based on judgements relating to visual impact (including reference to visual openness) and landscape character change. It should be noted that any harm caused during the construction phase as a result of the construction compounds would occur over a relatively short period and will result in no permanent harm to the Green Belt. It is not considered that harms caused by temporary works should carry much, if any, weight, given Green Belt policy is directed towards consideration of development that is permanent.
- In accordance with the test set out in para 153 of NPPF, the Applicants consider that there are robust very special circumstances (VSC) which clearly outweigh the identified limited short and longer terms harms arising from the proposals by reason of inappropriate development.
- Regardless of the VSC case presented in this report, the Transmission Assets are correctly considered to comprise a Critical National Infrastructure Project – and having demonstrated that that tests for Green Belt are met and mitigation hierarchy has been applied, on this basis, Green Belt should not be considered a constraint to the proper consideration of the merits of the proposals.
- The objectives of relevant Local Plan policies are met, where reasonably practicable.

A.1 Appendix A – Horlock Rules

1.8.3.2 As explained in Section 4.3.1 of Annex 4.3 (AS-028), the relevance of planning and environmental considerations in the siting of onshore substations was set out by the Central Electricity Generating Board and more recently reviewed and adopted by NGET in the 'Horlock Rules'. The Horlock Rules are a set of guidelines produced by NGET to assist those responsible for siting and designing substations to mitigate the environmental effects of such developments (National Grid, 2003). They are still referred to and used by National Grid (and endorsed in ministerial decisions and at public inquiry) when undertaking planning studies for new infrastructure although they now have to be considered alongside the relevant policy set out in National Policy Statements, Development Plan documents, local planning policies and other sources. 4.3.1.2.

1.8.3.3 The principles embedded in the Horlock rules are relevant to the Transmission Assets and are detailed below in Table 4.3 (AS-028).

Table 4.3: Onshore infrastructure application of the Horlock Rules

Horlock Rules overarching guidelines	Further detail on the Projects consideration of the guidelines
Amenity, Cultural or Scientific Value of Sites The siting of new NGC substations, sealing end compounds and line entries should as far as reasonably practicable seek to avoid altogether internationally and nationally designated areas of the highest amenity, cultural or scientific value by the overall planning of the system connections. [Horlock Rules – Section III paragraph 2] Areas of local amenity value, important existing habitats and landscape features including ancient woodland, historic hedgerows, surface and ground water sources and nature conservation areas should be protected as far as reasonably practicable. [Horlock Rules – Section III paragraph 3]	The consideration of environmental constraints including internationally and nationally designated areas has been incorporated within the BRAG criteria for the site selection and refinement of the onshore substations further details can be found in **sections 4.5.3, 4.5.4 and 4.5.5**. All internationally and nationally designated sites have been avoided as part of the onshore substation site selection.
Local Context, Land Use and Site Planning The siting of substations, extensions and associated proposals should take advantage of the screening provided by land form and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum. [Horlock Rules – Section III paragraph 4] The proposals should keep the visual, noise and other environmental effects to a reasonably practicable minimum. [Horlock Rules – Section III paragraph 5] The land use effects of the proposal should be considered when planning the siting of substations or extensions. [Horlock Rules – Section III paragraph 6]	The stages to siting the onshore substation including the consideration of land use impacts is provided in **sections 4.5.3, 4.5.4 and 4.5.5.** Screening around the onshore substations is detailed in Volume 3; Chapter 10: Landscape and Visual Resources of this ES. Proposals to minimise visual and other environmental impacts, including the provision of screening is provided within the Outline Landscape Management Plan (document reference J2) and Outline Design Principles document (document reference J3).

A.2 Supporting Figures to this Technical Note

- Figure 1 – Overview of Green Belt Areas
- Figure 2 – Design Process Diagram (including Site Selection Process for Substations)
- Figure 3 –River Ribble Estuary Constraints (Figure 4.4 of APP-031)
- Figure 4 – Onshore Environmental Constraints (5-8km)
- Figure 5 – Substation Zone Heatmapping Sheet 1 (Figure 4.4 of AS-028)
- Figure 6 – Substation Zone Heatmapping Sheet 2 (Figure 4.5 of AS-028)
- Figure 7 – Onshore substation site selection search zones with constraints (Figure 4.6 of AS-028)
- Figure 8 – Potential substation sites Zone 1 (Figure 4.8 of AS-028)
- Figure 9 – Green Belt between Blackpool and St Annes
- Figure 10 – Green Belt between Kirkham and Freckleton
- Figure 11 – Green Belt in South Ribble
- Figure 12 – Green Belt between Blackpool and St Annes - with compounds
- Figure 13 – Green Belt between Kirkham and Freckleton - with compounds and substations
- Figure 14 – Green Belt between Kirkham and Freckleton with substations
- Figure 15 - Green Belt in South Ribble - with compound

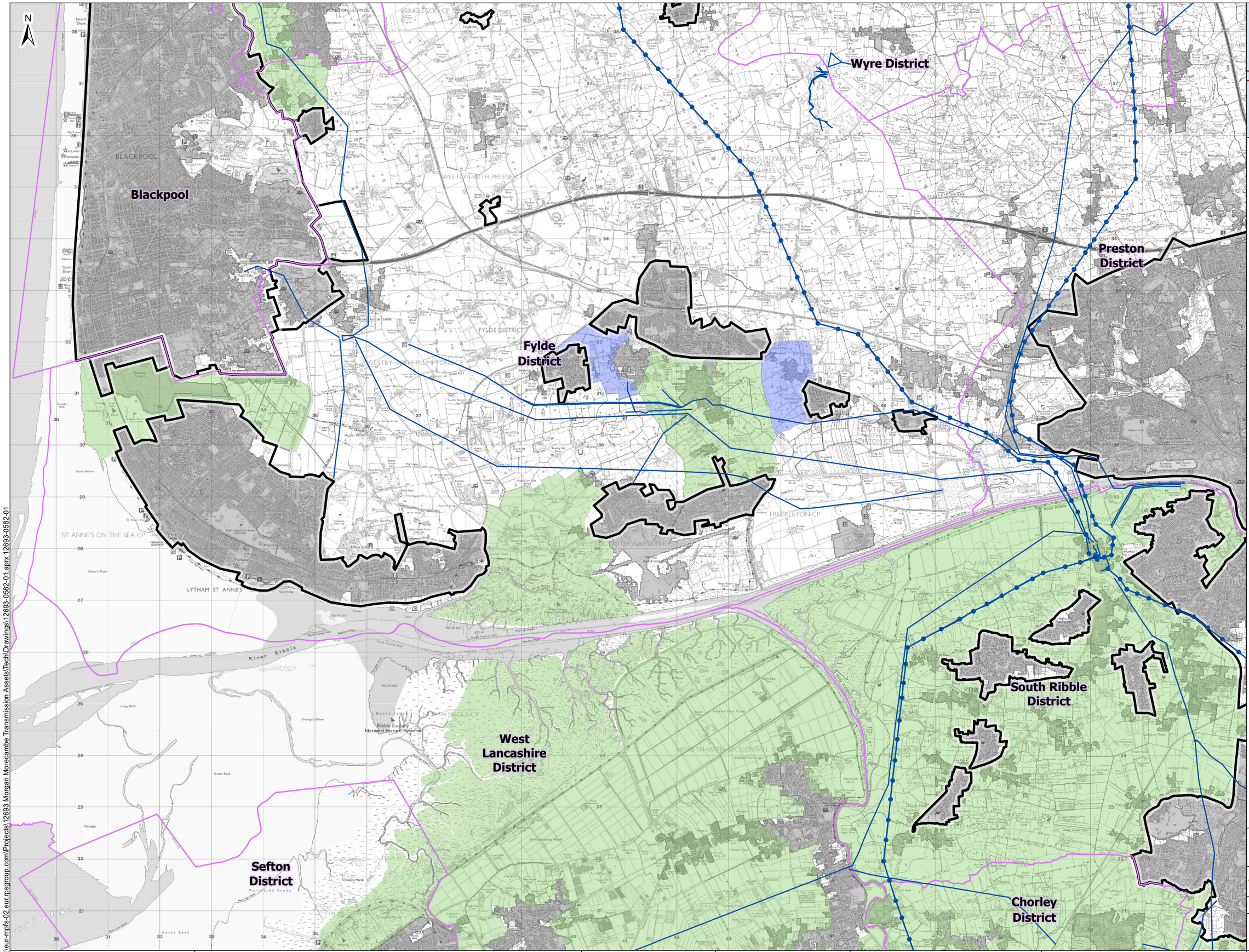


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Figure 1

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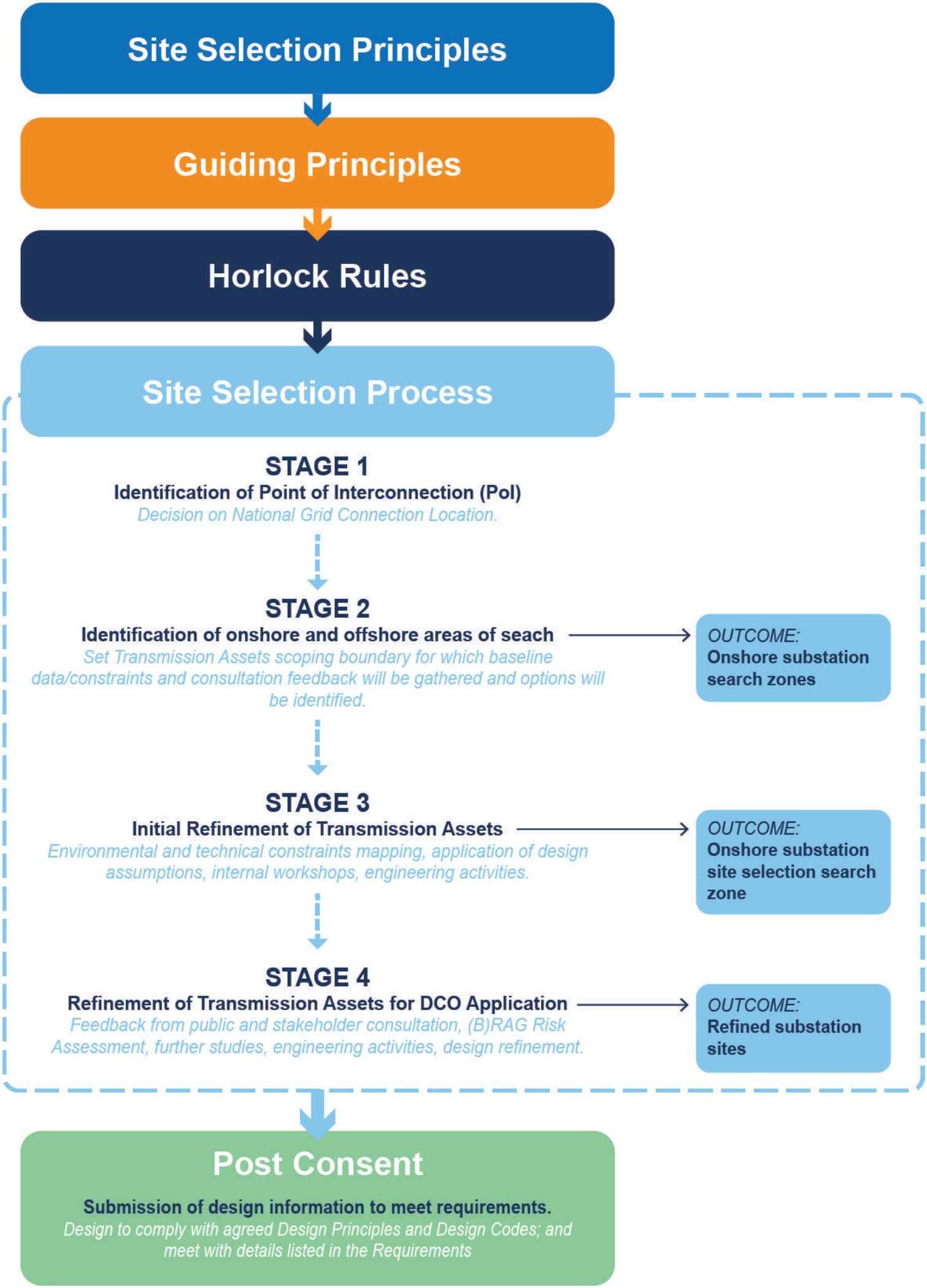

Site Selection Principles
Guiding Principles
Horlock Rules
Site Selection Process
STAGE 1
Identification of Point of Interconnection (PoI)
Decision on National Grid Connection Location.
STAGE 2
Identification of onshore and offshore areas of seach
Set Transmission Assets scoping boundary for which baseline data/constraints and consultation feedback will be gathered and options will be identified.
OUTCOME:
Onshore substation search zones
STAGE 3
Initial Refinement of Transmission Assets
Environmental and technical constraints mapping, application of design assumptions, internal workshops, engineering activities.
OUTCOME:
Onshore substation site selection search zone
STAGE 4
Refinement of Transmission Assets for DCO Application
Feedback from public and stakeholder consultation, (B)RAG Risk Assessment, further studies, engineering activities, design refinement.
OUTCOME:
Refined substation sites
Post Consent
Submission of design information to meet requirements.
Design to comply with agreed Design Principles and Design Codes; and meet with details listed in the Requirements

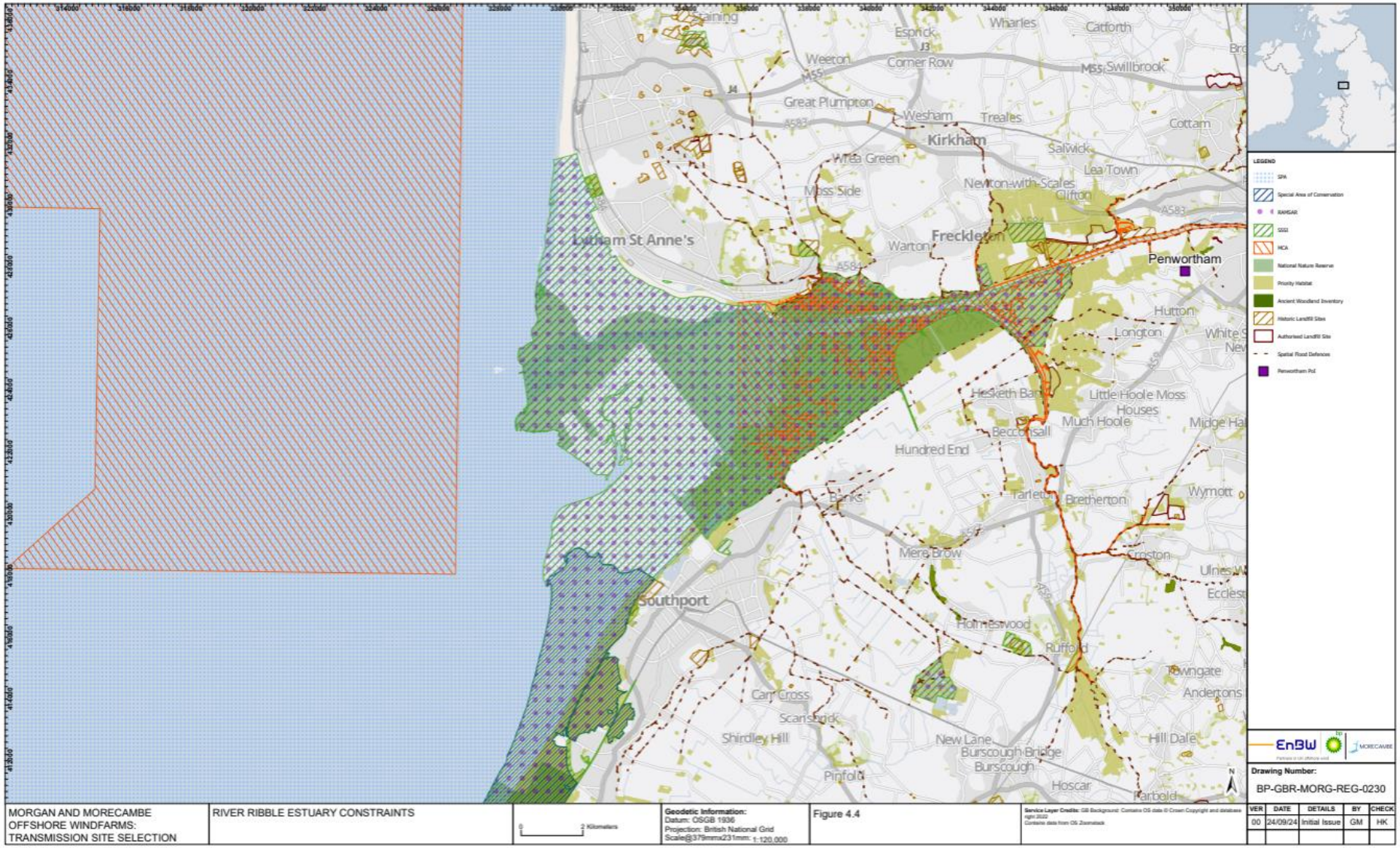
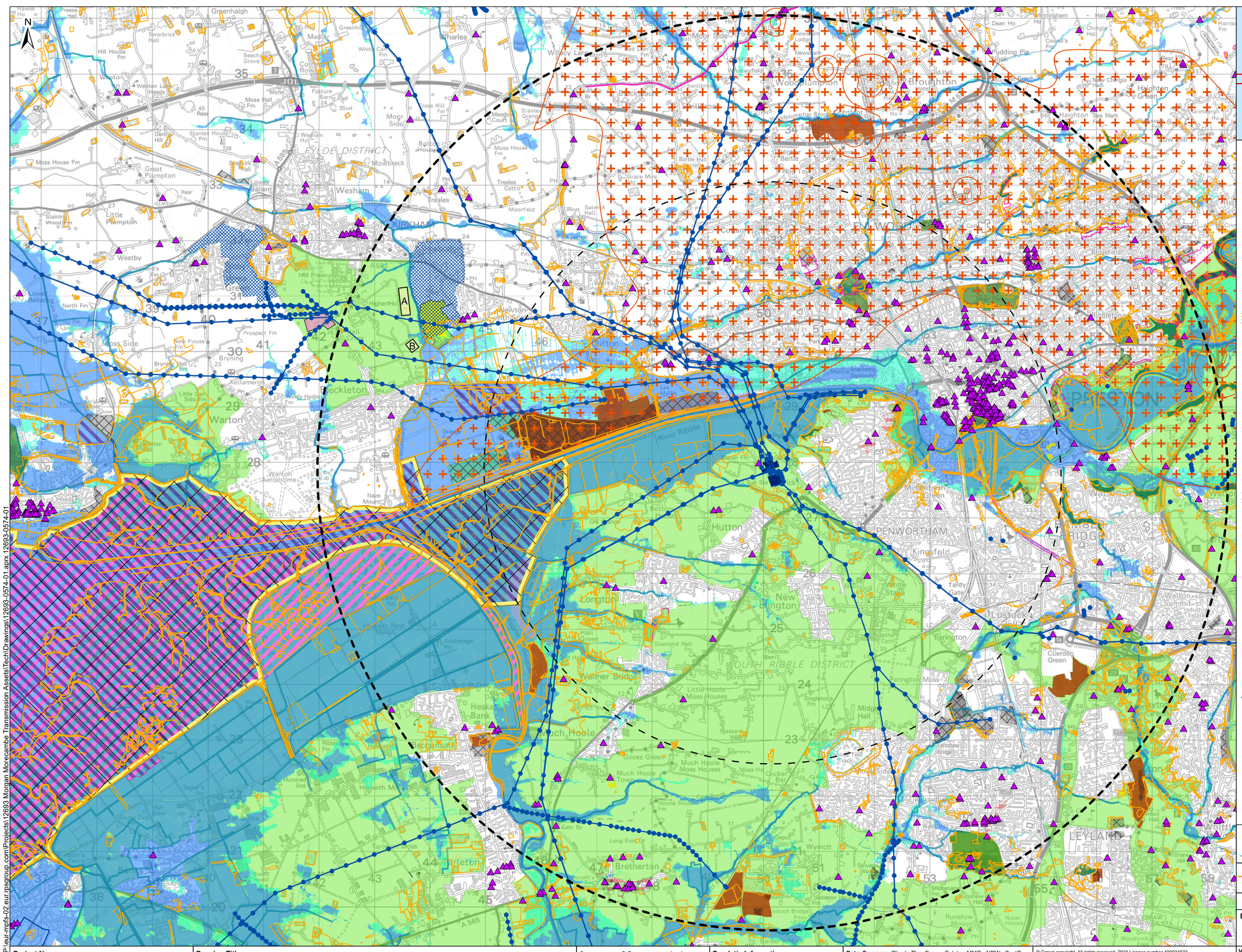


Figure 4.4: River Ribble Estuary Constraints



LEGEND

- Onshore substation sites:
  - A - Morgan Substation
  - B - Morecambe Substation
- Penwortham Substation
- Penwortham Substation 5km Buffer
- Penwortham Substation 8km Buffer
- Areas of Separation
- Green Belt
- Ancient Woodland
- Local Nature Reserve
- National Nature Reserve
- Ramsar
- Site of Special Scientific Interest
- Special Protection Area
- Priority Habitat
- Historic Landfill Sites
- Permitted Waste Sites
- Source Protection Zone
- CRoW Act 2000 Access
- Scheduled Monument
- Parks and Gardens
- Conservation Area
- Listed Building
- Main Rivers
- Flood Zone 2
- Flood Zone 3
- Overhead Lines
- Proposed Solar Farm
- Existing Solar Farm

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Figure 1

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Project Name:
MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title:
ONSHORE ENVIRONMENTAL CONSTRAINTS

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0 1 2 km

Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid
Scale@379mmx231mm: 1:60,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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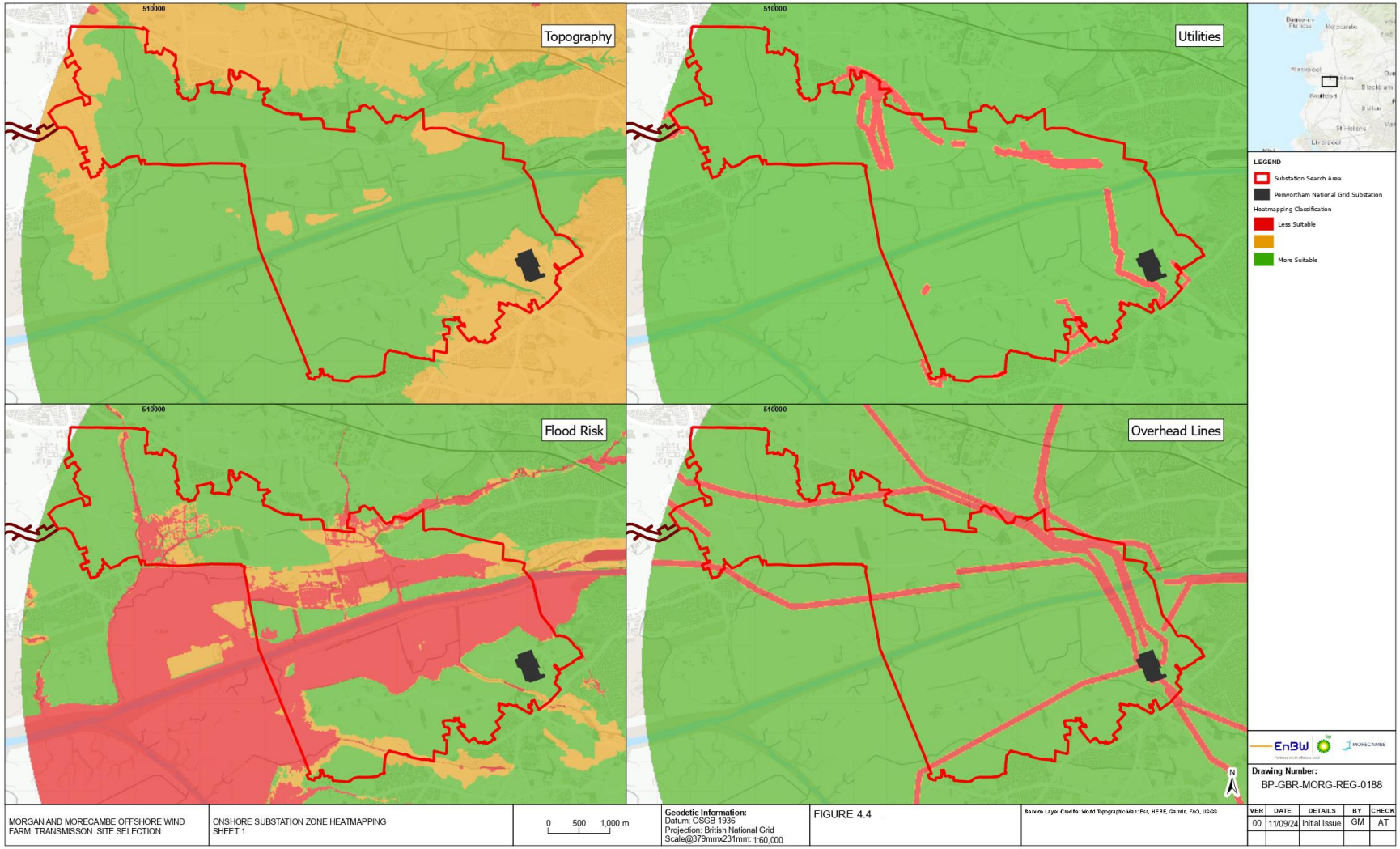

Figure 4.4: Substation Zone Heatmapping Sheet 1

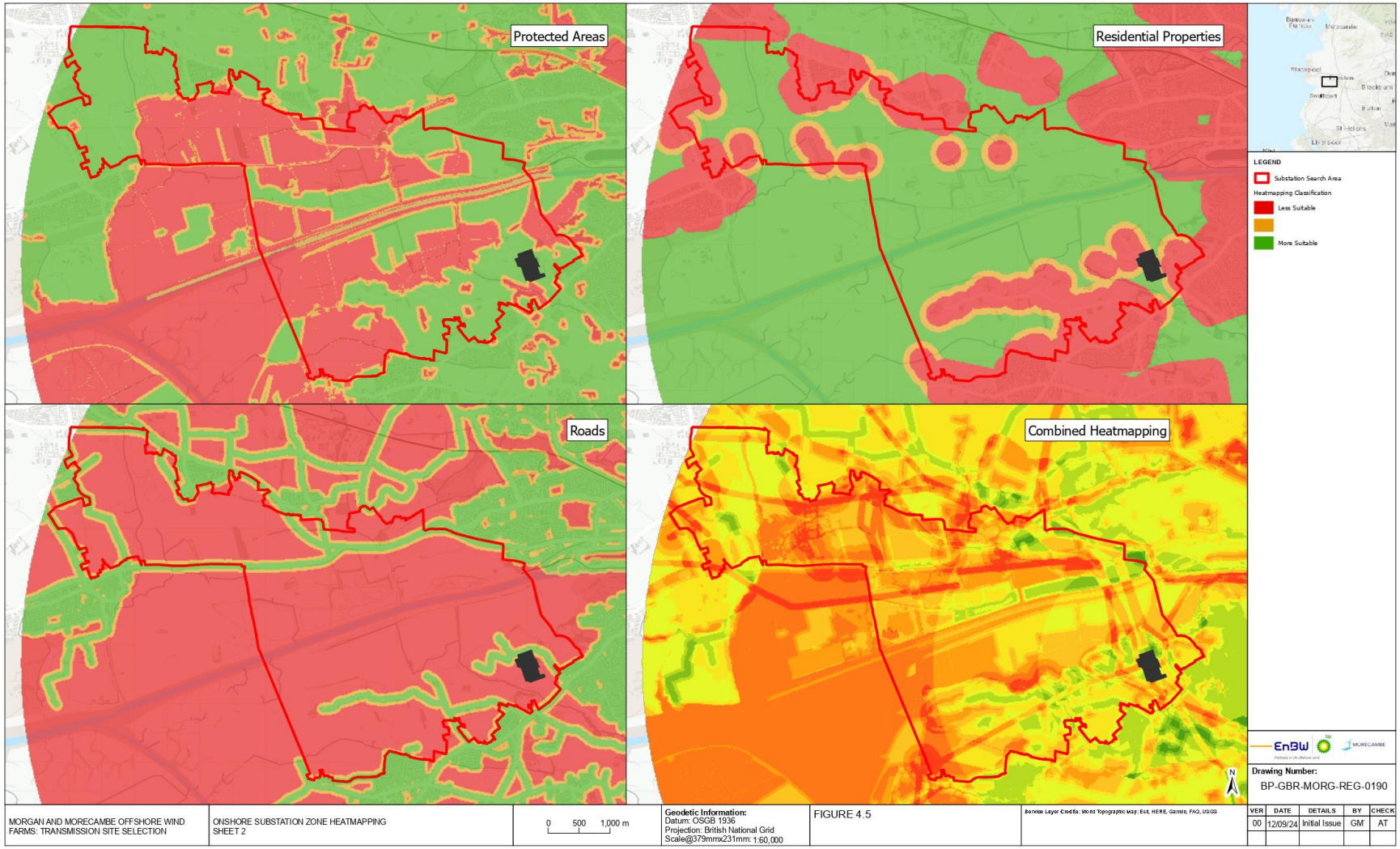

Figure 4.5: Substation Zone Heatmapping Sheet 2

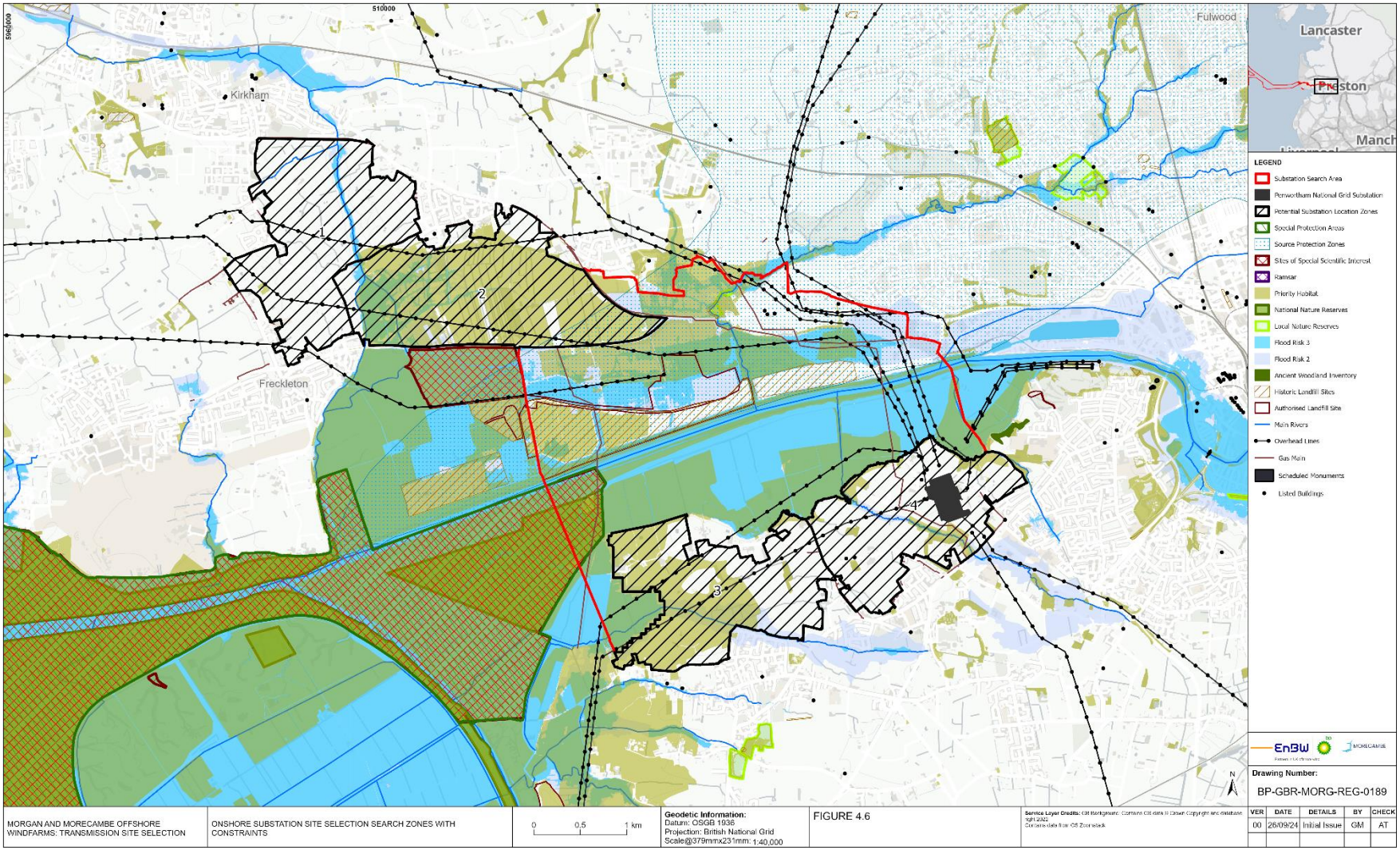

Figure 4.6: Onshore substation site selection search zones with constraints

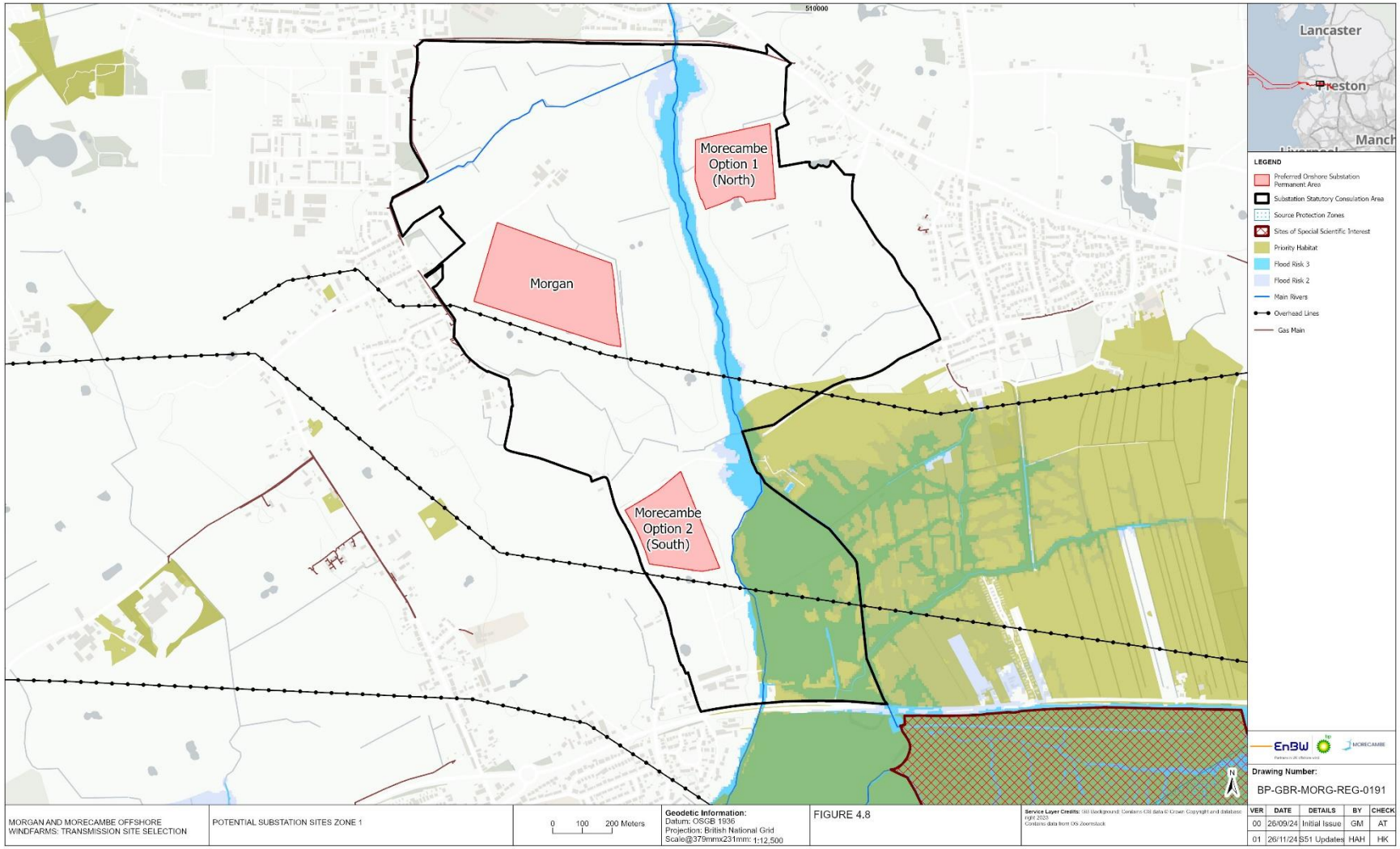

Figure 4.8: Potential substation sites zone 1

LEGEND

- Green Belt
- Overhead Lines
- District Boundaries
- Built Up Areas
- Settlement Boundaries

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Figure 1

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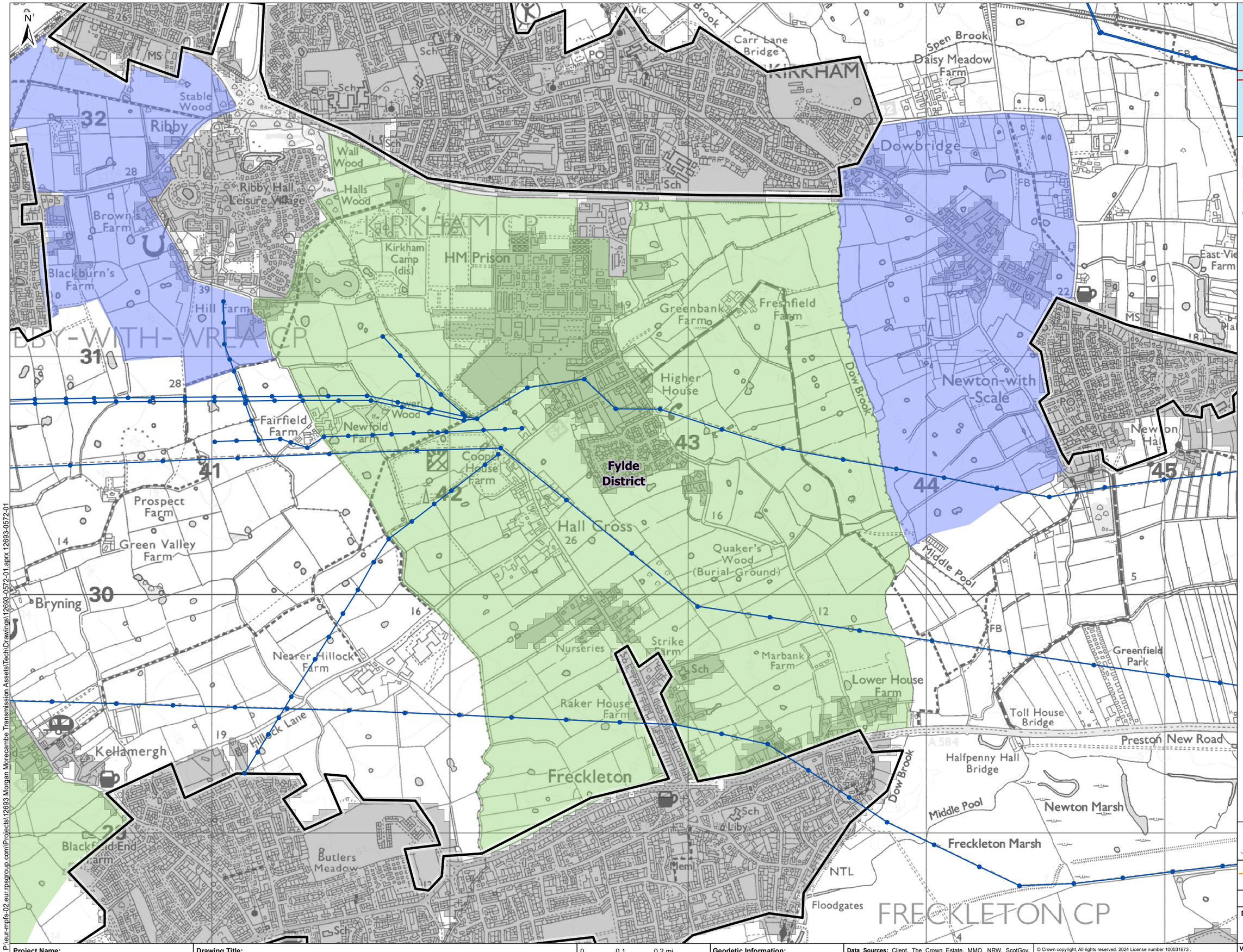

Project Name: MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS	**Drawing Title:** GREEN BELT BETWEEN KIRKHAM AND FRECKLETON	0 0.1 0.2 mi / 0 0.23 0.45 km	**Geodetic Information:** Datum: OSGB 1936 Projection: British National Grid Scale@379mmx231mm: 1:14,000	**Data Sources:** Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org	© Crown copyright, All rights reserved. 2024 License number 100031673 . Service layer credits: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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Figure 2

Drawing Number:
12693-0572-01

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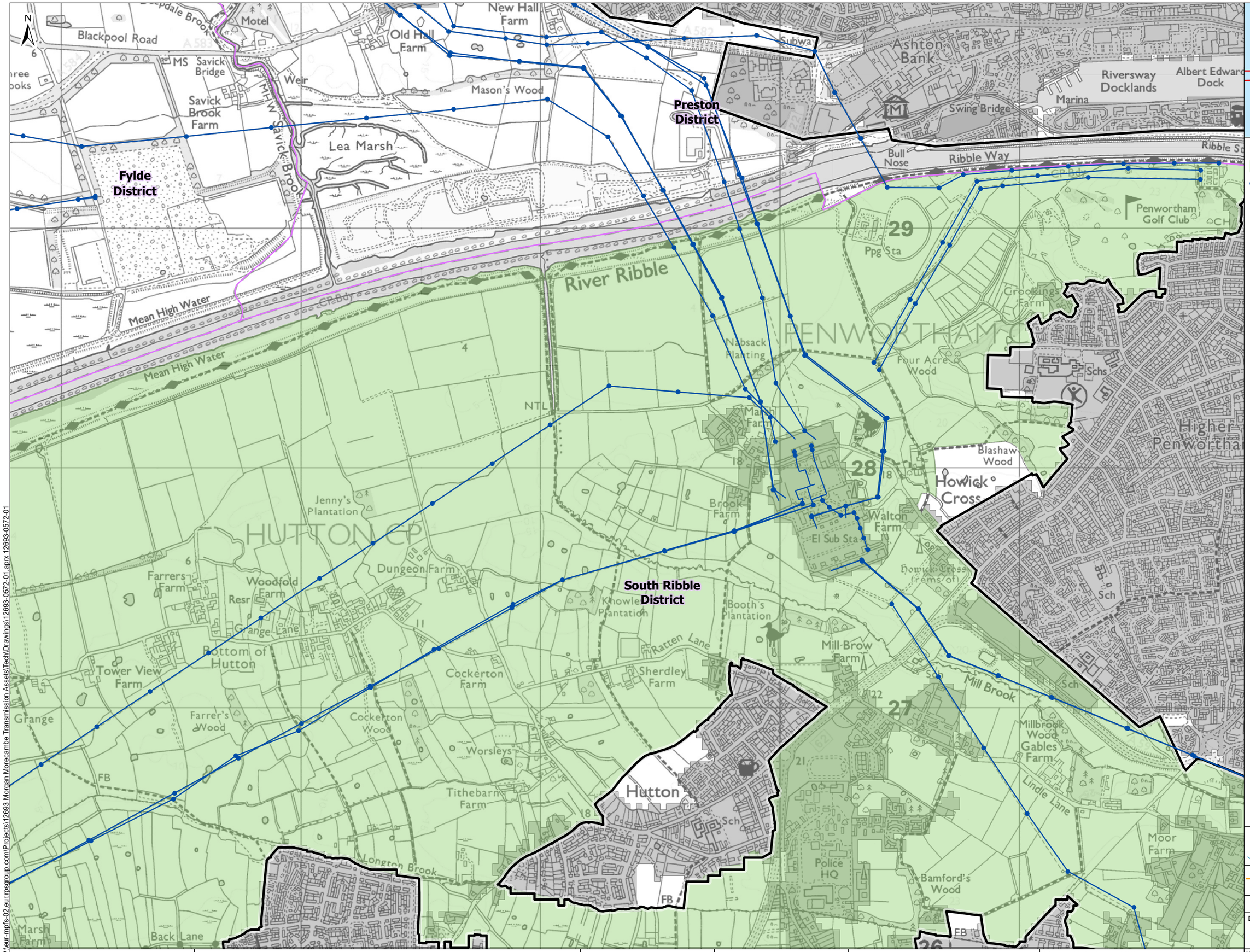

LEGEND

- Green Belt
- Overhead Lines
- District Boundaries
- Built Up Areas
- Settlement Boundaries

Figure 3

Drawing Number: 12693-0572-01

Project Name: MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS	**Drawing Title:** GREEN BELT IN SOUTH RIBBLE	0 0.1 0.2 mi / 0 0.23 0.45 km	**Geodetic Information:** Datum: OSGB 1936 Projection: British National Grid Scale@379mmx231mm: 1:14,000	**Data Sources:** Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

VER	DATE	DETAILS	BY	CHECK
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Project Name: MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS	**Drawing Title:** GREEN BELT BETWEEN BLACKPOOL AND ST ANNES	0 0.1 0.2 mi / 0 0.23 0.45 km	**Geodetic Information:** Datum: OSGB 1936 Projection: British National Grid Scale@379mmx231mm: 1:14,000	**Data Sources:** Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org	© Crown copyright, All rights reserved. 2024 License number 100031673 Service layer credits: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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Figure 1

Drawing Number:
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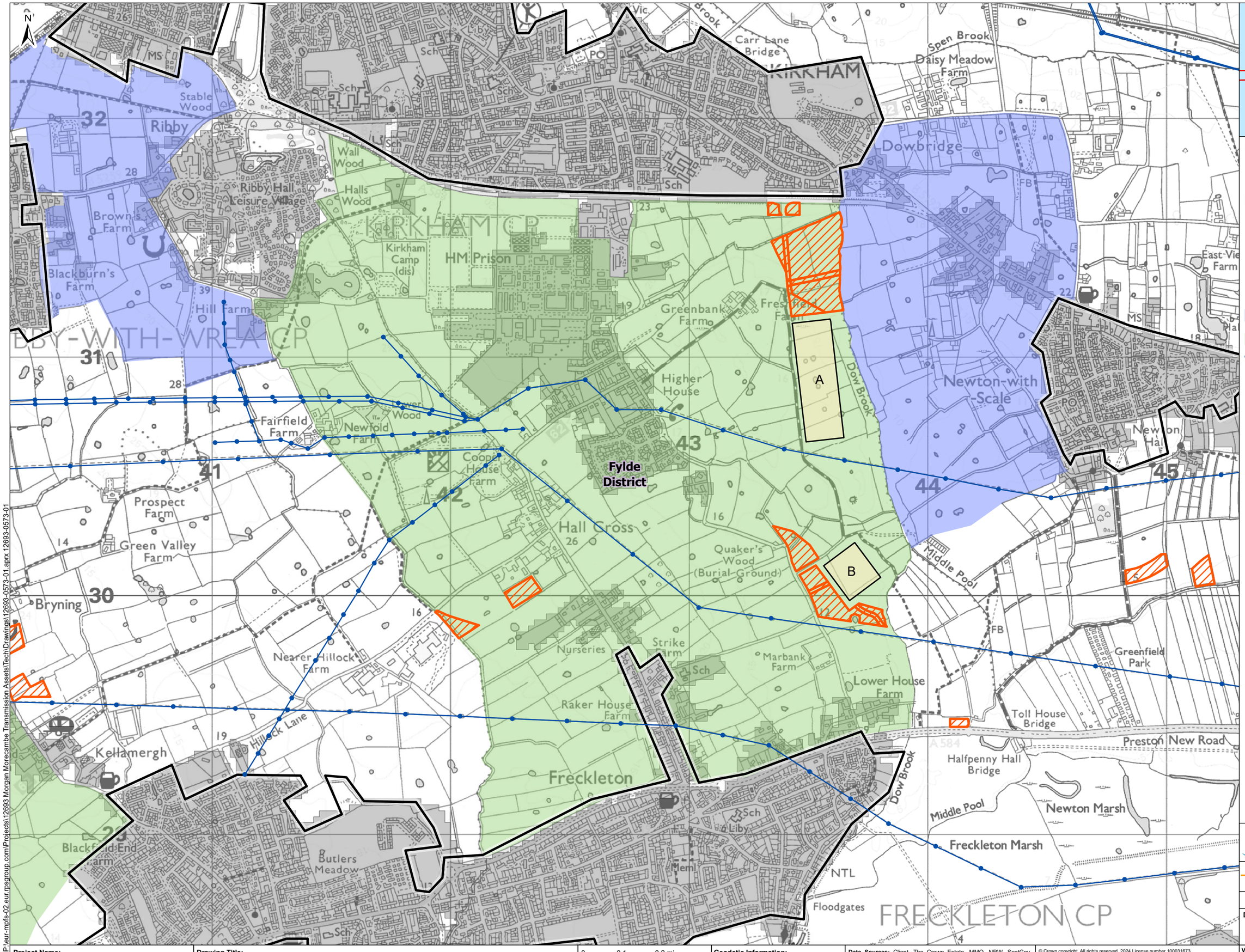
01	30/06/25	FINAL	JM	AW



LEGEND

- Onshore substation sites: A - Morgan Substation B - Morecambe Substation
- Construction Compounds and Temporary Substation Areas
- Areas of Separation
- Green Belt
- Overhead Lines
- District Boundaries
- Built Up Areas
- Settlement Boundaries

Project Name:	MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS
Drawing Title:	GREEN BELT BETWEEN KIRKHAM AND FRECKLETON
0 0.1 0.2 mi / 0 0.23 0.45 km	
Geodetic Information:	Datum: OSGB 1936 Projection: British National Grid Scale@379mmx231mm: 1:14,000
Data Sources:	Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

VER	DATE	DETAILS	BY	CHECK
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Figure 2

Drawing Number:
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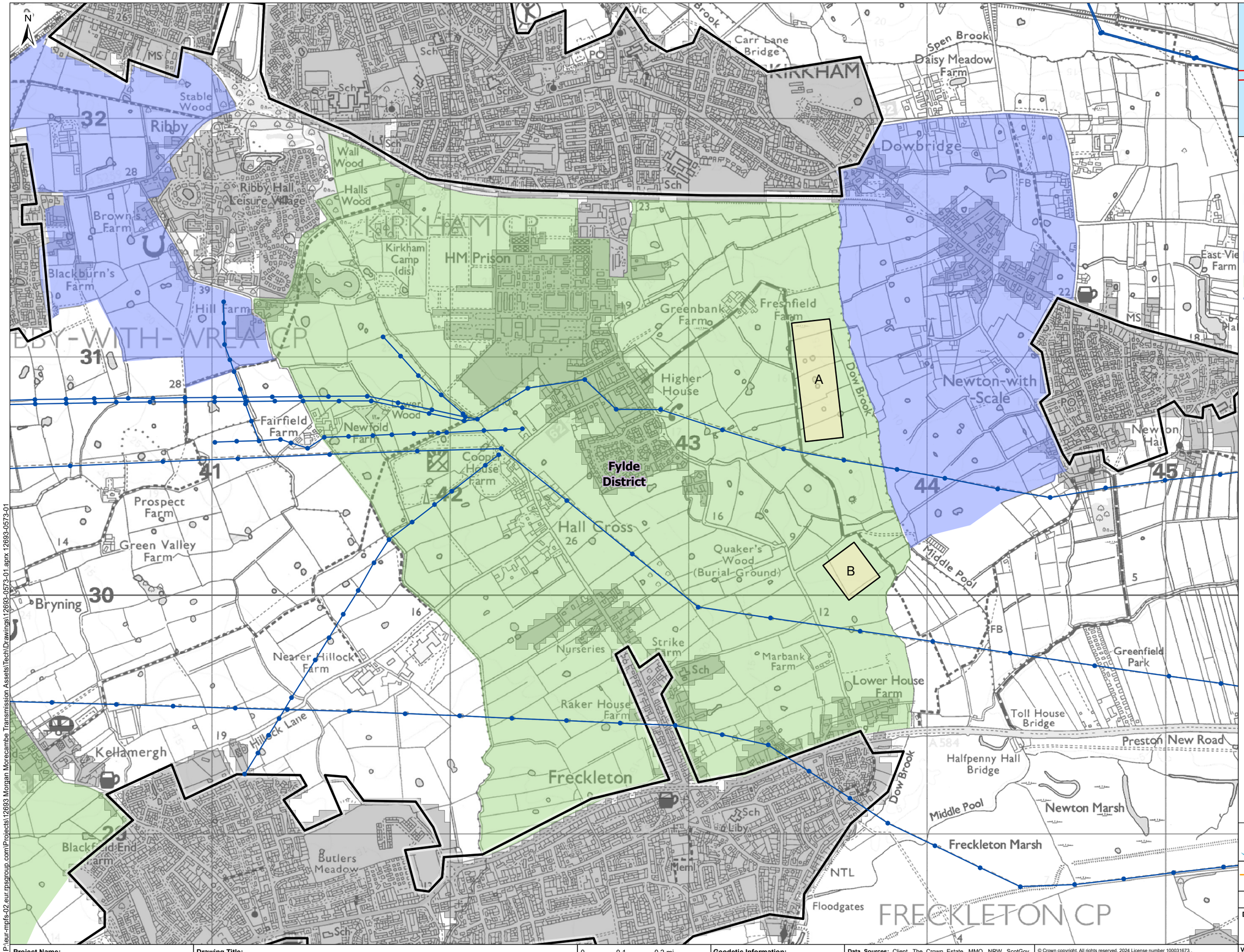

LEGEND

- Onshore substation sites:
  - A - Morgan Substation
  - B - Morecambe Substation
- Areas of Separation
- Green Belt
- Overhead Lines
- District Boundaries
- Built Up Areas
- Settlement Boundaries

Project Name:	MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS
Drawing Title:	GREEN BELT BETWEEN KIRKHAM AND FRECKLETON

0 0.1 0.2 mi
0 0.23 0.45 km

Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid
Scale@379mmx231mm: 1:14,000

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Figure 2

Drawing Number:
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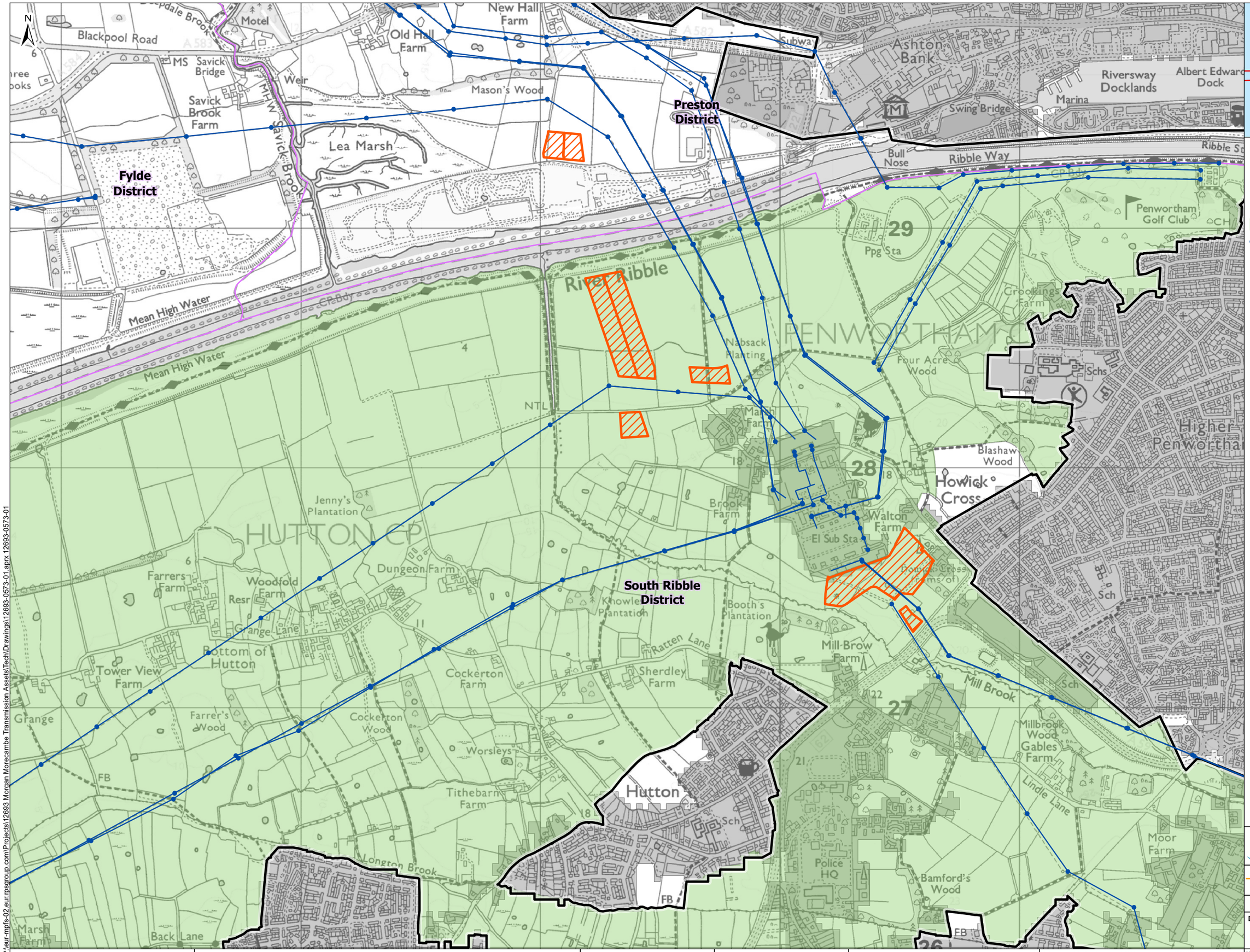

LEGEND

- Construction Compounds and Temporary Substation Areas
- Green Belt
- Overhead Lines
- District Boundaries
- Built Up Areas
- Settlement Boundaries

Figure 3

Drawing Number: 12693-0573-01

VER	DATE	DETAILS	BY	CHECK
01	30/06/25	FINAL	JM	AW

Project Name: MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Drawing Title: GREEN BELT IN SOUTH RIBBLE

0 0.1 0.2 mi
0 0.23 0.45 km

Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid
Scale@379mmx231mm: 1:14,000

Data Sources: Client, The Crown Estate, MMO, NRW, ScotGov, MarineRegions.org

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