



Volume 1: Planning and Environmental Statement

Norfolk – Met Mast Planning Application

08/11/2022



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1. INTRODUCTION

Background

- 1.1. This Planning and Environmental Statement forms part of a Planning Application submitted to South Holland District Council as Local Planning Authority (“LPA”), on behalf of Victre, (“the Applicant”), for a proposed Meteorological Mast (“Met Mast”) (the “Proposed Development”) within land north and south of Main Road and east of Dawsmere Road, Gedney Drove End which can be found at Grid Reference E543285 N329303.
- 1.2. The purpose of this Statement is to outline the Planning merit of the Proposed Development within a context of best practice guidance, legislation and National and County Planning Policy and should be read in conjunction with the following documentation that accompanies the subject application:
- **Planning Forms**
 - Cover Letter;
 - Planning Application Form
 - **Volume 1**
 - Planning and Environmental Statement.
 - **Volume 2**
 - Planning Drawings

Development Description

- 1.3. The development will consist of a temporary Met Mast up to 140m high. The mast would gather a range of meteorological data during the c. 18-month period as part of the overall feasibility assessment for the Electrolysis, Wind and PV at Jepco, including the repowering of Red House Wind Farm.

Site Description

- 1.4. The area of the Proposed Development lies at an elevation of approximately 3m Above Ordnance Datum (AOD). It is centred at approximate Grid Reference E543285 N329303 and is located on lands north and south of Main Road and east of Dawsmere Road, Gedney Drove End.

- 1.5. Located in a single field comprising agricultural land, the site is currently being used for arable farming. The field itself is bound by a mixture of trees, hedgerows and post-and-wire fencing. Access will be gained from the existing entrance off the B1359, to the south of the site. The Application is c. 6.5km North of Long Sutton and c. 8.5km northeast of Holbeach.

2. THE PROPSAL

- 2.1. The development will consist of a temporary Met Mast up to 140m high. The mast would gather a range of meteorological data during the c. 18-month period as part of the overall feasibility assessment for a future wind farm proposal. The mast would involve steel guy wires connected to anchors to secure the mast in place.
- 2.2. A meteorological monitoring system would be mounted onto the mast fixed to horizontal booms. This would consist of a series of anemometers, wind vanes and a data logger, solar panels, temperature sensor and antenna. The equipment would gather a range of meteorological data during in order to provide a detailed understanding of the area's wind characteristics.
- 2.3. While it is possible to monitor wind regimes with digital equipment that utilise sonar or radar technology, the quality of the data and therefore the accuracy of the predictions flowing from it are less compared to physically monitoring the wind resource at a range of heights using a static tall mast. For the purposes of design, impact assessment and project financing, particularly with high wind speeds that occur at this site, a meteorological mast is necessary.
- 2.4. The location has also been selected so that reasonable access of the highways is afforded without necessitating unnecessary travel distances or effects to the land from vehicles.

Design

- 2.5. The met mast would be centred at approximate Grid Reference E543285 N329303 which has been selected to ensure that accurate and representative measurements can be taken, **Figure 2** shows the site layout.
- 2.6. The met mast will be a steel tube with a matt finish supported by guy wires/ropes, designed to not be obtrusive by virtue of its form, materials and colour. It will be fitted with monitoring equipment to record wind direction and speed and other data as follows:
 - Wind speed at mast top;
 - Wind speed measurements at intervals along mast body allowing for accurate measurement of wind shear;
 - Wind direction;
 - Temperature difference between top and bottom (~2 m) of mast;
 - Absolute temperature measurement at bottom of mast (~2 m);
 - Humidity;

- Rainfall; and
- Pressure.

2.7. **Figure 4** shows an indicative met mast elevation drawing.

2.8. The wind data will be collected through a meteorological monitoring system which will be mounted to the mast by fixing it to small horizontal booms (supports on which equipment will sit). The meteorological monitoring system will include but not be limited to anemometers and wind direction sensors, thermometers and barometers. The anemometers would be located in accordance with International Standard (IEC 61400-12-1:2017), namely on booms separated by at least 20m with no booms below 30m, plus a top anemometer. This would provide up to 7 measurement heights with booms on either side or in some cases only on one side of the mast. The orientation of the booms will likely be fixed at 90 degrees in a horizontal position to the predominant wind direction.

2.9. A lighting rod would be fixed to the top of the met mast to protect the tower against any potential lightning strikes.

2.10. The met mast would be secured by either a raft or concrete foundation at the mast point and will usually be secured in-situ by at least three guy ropes connected to the ground.

2.11. The met mast is proposed as part of the application for the Electrolysis, Wind and PV at Jepco, including the repowering of Red House Wind Farm. It is standard practice for a wind farm development to seek separate permission for a met mast as part of the wind farm development process. The met mast is required to gather data about the wind conditions on the site including speed, direction, pressure, and temperature.

2.12. The Applicant has chosen this location for the development of a wind farm for a number of reasons including good wind resource across the site. The met mast will not inform the layout of the proposed Electrolysis, Wind and PV at Jepco, including the repowering of Red House Wind Farm but is required for due diligence.

Construction Phase

2.13. The met mast is simple to deliver and construct, only requiring 4x4 or all-terrain vehicles with trailers to transport the mast to site and erect it. The mast can be constructed and in operation within a period of 7 days depending on weather conditions.

2.14. Construction operations would consist of the laying of ground anchors, assembly and lifting of the mast, and testing of the equipment.

Operational Phase

2.15. During the operational phase, the meteorological data will be gathered through a data logger, downloaded and analysed remotely via a GSM or satellite connection, reducing the

requirement for frequent visits to the site. The only visits required would be for inspection and maintenance purposes to ensure the safe operation of the met mast.

Decommissioning Phase

- 2.16. Following the temporary operational period, the mast would be removed from site and the land restored to its former (current) condition. The process of decommissioning would be substantially the reverse of the construction phase.

3. PLANNING POLICY AND CONSIDERATIONS

PLANNING LEGISLATION, POLICY AND GUIDANCE

- 3.1. This Section of the Statement will outline the key Planning Legislation, Policy and Guidance that are considered relevant to the subject development. Those are:
- South East Lincolnshire Local Plan 2011-2036¹
 - National Planning Policy Framework (NPPF; 2021)².
- 3.2. The aim of this section is to determine the land use implications of the Proposed Development, consider its compliance with the relevant planning legislation, policy and guidance and identify other material considerations to be taken into account during the determination process.

Legislative Background

- 3.3. The Town and Country Planning Act 1990 Section 70(2) states that,
- “In dealing with such an application the authority shall have regard to the provisions of the Development Plan, so far as material to the application, and to any other material considerations.”*
- 3.4. Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires Local Planning Authorities to determine planning applications in accordance with the provisions of the Development Plan unless material considerations indicate otherwise. A judgement then must be made on the extent to which a proposal conflicts with the Development Plan and whether any such conflicts are outweighed by other material considerations.
- 3.5. This section identifies the key relevant planning matters contained within the Development Plan and other material planning considerations pertinent to the determination of the planning application.
- 3.6. This Section of the Statement will outline the Global, European, National, Regional and Local Planning Policy contexts that are considered relevant to the Proposed Development.
- 3.7. 2018, 19th February 2019 and 20th July 2021. This sets out the government’s planning policies for England and how these are expected to be applied and is supported by government published Planning Practice Guidance (PPG).

¹<http://www.southeastlincslocalplan.org/wp-content/uploads/2019/02/Local-Plan-text-March-2019.pdf#page=129&zoom=100,68,478>

² <https://www.gov.uk/guidance/national-planning-policy-framework>

Local Planning Policy

South East Lincolnshire Local Plan 2011-2036³

3.8. The South East Lincolnshire Local Plan 2011-2036 has strategic priorities to;

“Conserve and enhance South East Lincolnshire’s natural and historic environment and to promote greater access and understanding of assets through new development.”

3.9. And;

“To minimise the impact of and adapt to climate change by making more sustainable use of land and resources, reducing exposure to flood risk, promoting sustainable development and reducing human exposure to environmental risks”

3.10. The policies that should be considered include;

- Policy 28: the Natural Environment
- Policy 29: the Historic Environment
- Policy 31: Climate Change and Renewable and Low carbon Energy

Policy 28: The Natural Environment

3.11. Policy 28 wishes to protect and enhance the ecological network present in South east Lincolnshire and states the following in relation to international-designated sites, on land or at sea;

“Development proposals that would cause harm to these assets will not be permitted, except in exceptional circumstances, where imperative reasons of overriding public interest exist, and the loss will be compensated by the creation of sites of equal or greater nature conservation value.”

3.12. Policy 28 also references national and locally designated sites and protected or priority habitats and species outlining;

“Development proposals that would directly or indirectly adversely affect these assets will not be permitted unless:

- i. *there are no alternative sites that would cause less or no harm; and*
- ii. *the benefits of the development at the proposed site, clearly outweigh the adverse impacts on the features of the site and the wider network of natural habitats; and*

³<http://www.southeastlincslocalplan.org/wp-content/uploads/2019/02/Local-Plan-text-March-2019.pdf#page=129&zoom=100,68,478>

iii. *iii. suitable prevention, mitigation and compensation measures are provided.*"

Policy 29: The Historical Environment

- 3.13. Policy 29 outlines specific guidance for developers in relation to the historic environment and aims to conserve and where appropriate, enhance the environment. Policy 29 considers conservation areas and states;

"Proposals within, affecting the setting of, or affecting views into or out of, a Conservation Area should preserve (and enhance or reinforce, as appropriate) features that contribute positively to the area's character, appearance and setting. Proposals should:

- 1. Retain buildings/groups of buildings, existing street patterns, historic building lines and ground surfaces;*
- 2. Retain architectural details that contribute to the character and appearance of the area;*
- 3. Where relevant and practical, remove features which are incompatible with the Conservation Area;*
- 4. Retain and reinforce local distinctiveness with reference to height, massing, scale, form, materials and plot widths of the existing built environment;*
- 5. Assess, and mitigate against, any negative impact the proposal might have on the townscape, roofscape, skyline and landscape;*
- 6. Aim to protect trees, or where losses are proposed, demonstrate how such losses are appropriately mitigated against."*

- 3.14. Regarding archaeology and scheduled monuments Policy 29 states;

"Proposals that affect archaeological remains, whether known or potential, designated or non-designated, should take every reasonable step to protect and, where possible, enhance their significance.

Planning applications for such development should be accompanied by an appropriate and proportionate assessment to understand the potential for and significance of remains, and the impact of development upon them.

If initial assessment does not provide sufficient information, developers will be required to undertake field evaluation in advance of determination of the application. This may include a range of techniques for both intrusive and non-intrusive evaluation, as appropriate to the site.

Wherever possible and appropriate, mitigation strategies should ensure the preservation of archaeological remains in-situ. Where this is either not possible or not desirable, provision must be made for preservation by record according to an agreed written scheme of investigation submitted by the developer, undertaken by a suitably qualified person, and approved by the Local Planning Authority.

Any work undertaken as part of the planning process must be appropriately archived in a way agreed with the Local Planning Authority”

- 3.15. Policy 29 outlines that proposals for enabling development will only be permitted where;

1.it will not materially harm the heritage values of a heritage asset or its setting;

2. it avoids detrimental fragmentation of management of the heritage asset:

3. it will secure the long-term future of the place and, where applicable, its continued use for a sympathetic purpose;

4. it is necessary to resolve problems arising from the inherent needs of the heritage asset rather than the circumstances of the present owner or the purchase price paid

5. sufficient subsidy is not available from any other source;

6. it is demonstrated that the amount of enabling development is the minimum necessary to secure the future of the heritage asset and that its form minimises harm to other public interests; and

7. the public benefit of securing the future of the heritage asset through such enabling development decisively outweighs the dis-benefits of breaching other policies within the Local Plan and national policy

- 3.16. If a development proposal is to affect the significance of the heritage asset (designated or non-designated), it should be informed by proportionate historic environment assessments and evaluations (such as heritage impact assessments, desk-based appraisals, field evaluation and historic building reports) that;

“1.identify all heritage assets likely to be affected by the proposal;

2. explain the nature and degree of any effect on elements that contribute to their significance and demonstrating how, in order of preference, any harm will be avoided, minimised or mitigated;

3. provide a clear explanation and justification for the proposal in order for the harm to be weighed against public benefits; and

4. demonstrate that all reasonable efforts have been made to sustain the existing use, find new uses, or mitigate the extent of the harm to the significance of the asset; and whether the works proposed are the minimum required to secure the long term use of the asset.”

Policy 31: Climate Change and Renewable and Low Carbon Energy

- 3.17. In relation to renewable energy, Policy 31 states:

“With the exception of Wind Energy the development of renewable energy facilities, associated infrastructure and the integration of decentralised technologies on existing or proposed structures will be permitted provided, individually, or cumulatively, there would be no significant harm to:

- 1. visual amenity, landscape character or quality, or skyline considerations;*
- 2. residential amenity in respect of: noise, fumes, odour, vibration, shadow flicker, sunlight reflection, broadcast interference, traffic;*
- 3. highway safety (including public rights of way);*
- 4. agricultural land take;*
- 5. aviation and radar safety;*
- 6. heritage assets including their setting; and*
- 7. the natural environment.*

Provision should be made for post-construction monitoring and the removal of the facility and reinstatement of the site if the development ceases to be operational. Proposals by a local community for the development of renewable and low-carbon sources of energy, in scale with their community’s requirements, including supporting infrastructure for renewable energy projects, will be supported and considered in the context of contributing to the achievement of sustainable development and meeting the challenge of climate change and against criteria B1-7.”

Material Considerations

3.18. National Policy and Guidance is a material consideration in the determination of planning applications. Relevant National Policy and Guidance considerations include the following:

- National Planning Policy Framework (NPPF) (2021)⁴
- National Planning Practice Guidance (PPG) (2014)⁵
- Climate Change Act 2008⁶
- Clean Growth Strategy (2017)⁷

⁴ <https://www.gov.uk/guidance/national-planning-policy-framework>

⁵ <https://www.gov.uk/government/collections/planning-practice-guidance>

⁶ <https://www.legislation.gov.uk/ukpga/2008/27/contents>

⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf

- Overarching National Policy Statement for Energy EN-1 (DECC, July 2011)⁸
- National Policy Statement for Renewable Energy Infrastructure EN-3 (DECC, July 2011)⁹

National Planning Policy Framework (2021)

- 3.19. The National Planning Policy Framework (NPPF) is the current National Planning document in England and was first published on 27th March 2012, and subsequently updated on 24th July 2018, 19th February 2019 and 20th July 2021. This sets out the government's planning policies for England and how these are expected to be applied and is supported by government published Planning Practice Guidance (PPG).
- 3.20. In accordance with **Chapter 2, paragraphs 7 and 10**, there is a strong presumption in favour of sustainable development within the NPPF. In addition, **Paragraph 8c** of the NPPF notes that a key part of achieving sustainable development is *"mitigating and adapting to climate change, including moving to a low carbon economy"*.
- 3.21. **Chapter 14** of the NPPF, *'Meeting the challenge of climate change, flooding and coastal change'*, recognises that planning plays a key role in helping to shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy and associated infrastructure. This is considered central to economic, social, and environmental dimensions of sustainable development.
- 3.22. With regards to low carbon and renewable energy, the NPPF states in **paragraph 152** that the planning system should help;
- "...support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure."*
- 3.23. **Paragraph 158** states that applicants are not required to demonstrate the overall need for renewable or low carbon energy and that LPAs should recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions. LPAs are directed to approve applications if impacts are (or can be made) acceptable.
- 3.24. The NPPF also contains policies on several environmental issues relating to sustainable development within **Chapters 15 and 16. Paragraphs 174 to 208** emphasise the importance of preservation and enhancement of the built and natural environment. They set out detailed

⁸https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf

⁹ <https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure>

requirements for the assessment of the impact on the landscape value, biodiversity and habitats, and the historic environment.

National Planning Practice Guidance

- 3.25. The National Planning Practice Guidance (NPPG) was published in March 2014 and contains guidance on the planning system and should be read alongside the NPPF. The NPPG's are a material consideration in the consideration of planning applications.
- 3.26. With specific regard to solar farm development, the NPPG on Renewable and Low Carbon Energy provides the following points of consideration for the decision maker at Paragraph 013.
- *Where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays;*
 - *That solar farms are normally temporary structures and planning conditions can be used to ensure that the installations are removed when no longer in use and the land is restored to its previous use;*
 - *The proposal's visual impact, the effect on landscape of glint and glare and on neighbouring uses and aircraft safety;*
 - *The extent to which there may be additional impacts if solar arrays follow the daily movement of the sun;*
 - *The need for, and impact of, security measures such as lights and fencing;*
 - *Great care should be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large scale solar farms on such assets. Depending on their scale, design and prominence, a large scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;*
 - *The potential to mitigate landscape and visual impacts through, for example, screening with native hedges; and*

- *The energy generating potential, which can vary for a number of reasons including, latitude and aspect.*

International Energy Policy

- 3.27. International energy policy is based on the demand to battle climate change and reduce carbon dioxide (CO₂) emissions and, therefore, is relevant to renewable energy development. The United Nations Framework Convention on Climate Change (UNFCCC) implemented by the United Nations in May 1992, determined a long-term objective to lessen greenhouse gases in the atmosphere, with the purpose of preventing anthropogenic interference with the climatic system. Subsequently, the Kyoto Protocol was implemented in 1997. National governments who signed up to the Kyoto Protocol are committed to reducing their greenhouse gas emissions.
- 3.28. The Paris Agreement marks the latest step in the development of the UN regime on climate change. Its central objective is to boost global response to climate change, keep global temperature rise low and strengthen efforts to support this. The European Union signed The United Kingdom of Great Britain and Northern Ireland up to the Agreement on 22nd April 2016 and it came into force on the 18th December 2016.
- 3.29. European and national energy policy has been established from the Kyoto Protocol and Paris Agreement requirements and will continue to be framed by emerging guidance and scientific information.
- 3.30. In December 2019 the European Commission published a communication called The European Green Deal.¹¹¹ It is described as resetting “the Commission’s commitment to tackling climate and environmental-related challenges that is this generation’s defining task.” It presented an initial roadmap of the key policies and measures needed to achieve a number of goals. The European Commission presented a proposal for a European Climate Law on 4 March 2020, which included a net zero by 2050 target.

UK Energy Policy

Climate Change Act 2008

- 3.31. The Climate Change Act 2008 set in legislation the UK's approach to tackling and responding to climate change. It introduced the UK's long-term legally binding 2050 target to reduce greenhouse gas emissions by at least 80% relative to 1990 levels. In June 2019, the Government amended this headline target to a 100% reduction (compared to 1990 levels) by 2050 (otherwise known as net zero). Since 1990, the UK has cut greenhouse gas emissions by 40%.

The Clean Growth Strategy 2017

- 3.32. In October 2017, the UK Government published its Clean Growth Strategy (CGS) setting out ambitious policies and proposals, through to 2032 and beyond, to reduce emissions across the economy and promote clean growth.
- 3.33. The strategy outlines the ambition of delivering a: *“diverse electricity system that supplies our homes and businesses with secure, affordable and clean power”* and identifies one possible clean growth pathway (to 2032) that *“could see power emissions fall by 80 per cent compared to today, to around 16 Mt.”* It states that *“This could be achieved by:*
- *Growing low carbon sources such as renewables and nuclear to over 80 per cent of electricity generation and phasing out unabated coal power.*
 - *Enabling a smarter, more flexible system, unlocking significant expansion of interconnection, electricity storage, and demand side response, the first steps of which are set out in the Smart Systems and Flexibility Plan...”*
- 3.34. The Proposed Development would contribute to delivering the electricity generation from clean sources and move to a low carbon economy as envisaged by the strategy.
- 3.35. In November 2017 the UK published its modern Industrial Strategy, which includes a Clean Growth Grand Challenge. The Grand Challenge aims to put the UK at the forefront of industries of the future, by maximising the advantages for UK industry from the global shift to low carbon.

Overarching National Policy Statement for Energy EN-1 (DECC, July 2011)

- 3.36. The overarching NPS for Energy (EN-1) was adopted in July 2011 and sets out the overall national energy policy for delivering major energy infrastructure. Part 1 advises that within the context of the planning system the NPS is likely to be a material consideration.
- 3.37. Part 2 of NPS EN-1 sets out the Central Government policy context for major energy infrastructure. It comprises the need to meet legally binding targets to cut greenhouse gas emissions; transition to a low carbon economy; decarbonise the power sector; reform the electricity market; secure energy supplies; replace outdated energy infrastructure; and widen objectives of sustainable development. In particular in this section, paragraph 2.2.16 identifies that approximately a quarter of the UK’s generating capacity was due to close by 2018 and that new low-carbon generation is required which is reliable, secure and affordable. As a result, the Proposed Development is considered consistent with the aims of NPS EN-1.

Single Department Plan

- 3.38. In June 2019, the Department for BEIS published 'The Single Department Plan'¹⁰ which identifies five overarching objectives, including ensuring that *"the UK has a reliable, low cost and clean energy system"*.
- 3.39. This objective is broken down into the following sub-objectives:
- *"Set out a vision for the energy system consistent with the Government's 2050 climate goals, with concrete actions that the Government will take up to 2030" – to be achieved by "delivering an ambitious Energy White Paper addressing the transformation of the GB electricity system, including proposed legislation where appropriate"; and "further developing carbon capture, use and storage deployment, to support decarbonisation and meet our legally binding carbon budgets, including potential 'net zero' by 2050."*
 - *"Support clean growth and promote global action to tackle climate change" – to be achieved by "working with businesses...to deliver the Clean Growth Strategy"; "becoming the first major economy to legislate for net zero. Maintain the UK's position as a global leader in cutting emissions while growing the economy and develop world leading sectors to drive clean growth across the UK"; and "continuing to decarbonise the power sector by running the next Contracts for Difference allocation round to secure new renewable capacity."*
 - *"Ensure our energy system is reliable and secure" – to be achieved by "ensuring reliable supplies of electricity and gas"*
 - *"Deliver affordable energy for households and businesses" – to be achieved by: "continuing to implement the Government and Ofgem's 'Smart Systems and Flexibility Plan' by 2022, removing barriers to smart technologies..."*
- 3.40. The Proposed Development would help deliver the clean and secure energy network envisaged by the plan.

The Sixth Carbon Budget

- 3.41. The Climate Change Committee (CCC) published the Sixth Carbon Budget: The UK's Path to Net Zero¹¹ on 9th December 2020. The Sixth Carbon Budget sets out, for the first time, what actions the UK will need to take to achieve net zero emissions by 2050.

¹⁰ [Department for Business, Energy and Industrial Strategy single departmental plan, June 2019 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/812121/Single-Departmental-Plan-June-2019.pdf)

¹¹ [The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf](https://www.ccc.org.uk/sites/default/files/2020-12/20201209_SixthCarbonBudget.pdf)

- 3.42. The CCC's recommended pathway, the Balanced Net Zero Pathway, pathway aims to decarbonise electricity generation by 2035, with action thereafter focused on meeting new demands in a low-carbon way. The pathway requires a 78% reduction in UK territorial emissions by 2035, a 63% reduction from 2019.
- 3.43. The key features of the scenario are an increasing demand for electricity, decreasing carbon intensity of generation, and a more flexible system. The Proposed Development aligns with the Sixth Carbon Budget by contributing to the decarbonisation of electricity generation.

Summary

- 3.44. From the review above, it is clear that the national policy message on clean and secure is strong and unambiguous. There is a clear need to ensure long-term security of supply as non-renewable sources diminish, through the development of a diverse energy generation systems to support international and nationally binding climate change targets.

4. LANDSCAPE & VISUAL

Introduction

- 4.1. This section of the Supporting Information specifically addresses landscape and visual matters associated with the proposed Norfolk – Met Mast.

Zone of Theoretical Visibility (ZTV)

- 4.2. The discussion of landscape and visual matters is supported by a Zone of Theoretical Visibility (ZTV) map which demonstrates the predicted visibility of the proposed met mast from the surrounding landscape (please refer to **Figure 5 – Met Mast with Viewpoints**).
- 4.3. **Figure 5** presents a scenario of theoretical visibility (illustrated in blue) within the 10km radius. However, due to the design and appearance of the met mast, it is considered unlikely that discernible effects would be exerted towards the outer limit of this radius. Figure A has been presented in this way to provide a broader context to the development, illustrating the localised nature of theoretical visibility.
- 4.4. The Landscape and Visual section is accompanied by the following figures, which should be read together:
- Figure 1 – Location Plan
 - Figure 2 – Layout Plan
 - Figure 3 – Block Plan
 - Figure 4 - Elevations
 - Figure 5 – Viewpoints with ZTV
 - Figure 6 – Wireframes & Photomontages

Methodology

Guidance

- 4.5. The section does not constitute a formal assessment of landscape and visual effects. However, the approach, terminology and commentary provided has been informed by the Guidelines for Landscape and Visual Impact Assessment (GLVIA3) – Third Edition, 2013.

- 4.6. Photography used to prepare **Figure 6** was undertaken as part of the Landscape and Visual Assessment process of the Norfolk Met Mast and therefore accords with Landscape Institute Technical Guidance Note 06/19 – Visual Representation of Development Proposals.

Site Visit

- 4.7. Extensive field survey was carried out to support this Application. A specific site visit was undertaken during a period of clear visibility from publicly accessible locations, and included the following:
- verification of landscape character areas and verification of how these might be affected by the Proposed Development;
 - assessment to identify specific features that contribute to landscape character or that are important to the wider landscape setting; and
 - survey of visual amenity from receptors representative of the range of views and viewer types including views from a variety of distances, aspects, elevations, and extents.

Landscape and Visual Baseline

Landscape Character

- 4.8. The Proposed Development is within the **Fens National Character Area (NCA 46)** and **Character Zone WSH4 (Reclaimed Wash Farmlands within The Wash Character Area)** situated southeast of Boston Town. Major roads such as the A17, c. 4.0km south southeast of the site at its closet point and the B1359 c. 1.7km south of the site at its closest point, often providing distant views across the landscape.
- 4.9. As identified in the National Character Area Profile for the UK¹², the site, (situated within NCA 46) comprises of highly fertile fields, typically of medium-large to large-scale, flat, open landscape with extensive vistas to level horizons.
- 4.10. The key characteristics of the **National Character Area (46)**¹³ are:
- Open fields, bounded by a network of drains and the distinctive hierarchy of rivers (some embanked), have a strong influence on the geometric/rectilinear landscape pattern.

¹² <http://publications.naturalengland.org.uk/publication/6229624?category=587130>

¹³ <http://corkcocoplans.ie/wp-content/uploads/bsk-pdf-manager/2016/07/Draft-Landscape-Strategy-2007.pdf>

- Expansive, flat, open, low-lying wetland landscape influenced by the Wash estuary, and offering extensive vistas to level horizons and huge skies throughout, provides a sense of rural remoteness and tranquillity.
- The NCA contains 4,022 ha of woodland, 1 per cent of the total area, of which 160 ha is ancient woodland.
- The soils are important for agriculture, which is hugely significant for the rural economy in the Fens.
- Inland, the younger, rich soils of the Peat Fens support a pattern of large fields
- Created by varied and multiple cropping, with a strong rectilinear pattern of drainage, fields and roads.
- There are over 4,000 farms in the Fens; enough wheat is grown here annually to produce a quarter of a million loaves of bread and one million tons of potatoes are grown here. In addition to traditional vegetables, exotics such as pak choi are now cultivated.
- Settlements and isolated farmsteads are mostly located on the modestly elevated 'geological islands' and the low, sinuous roddon banks (infilled ancient watercourses within fens).
- Ely, Boston, Wisbech, Spalding and King's Lynn provide the major historic settlements within the Fens.

4.11. As identified in the Lincolnshire County Council Landscape Character Zones¹⁴ the proposed site is situated in **Character Zone WSH4** with the key characteristics include;

- Land use throughout the entire zone is primarily agricultural, and there are a number of large scale farmsteads of industrial size in the zone. A small number of orchards exist in the south-west of the zone.
- The agricultural landscape of the zone comprises a semi-regular pattern of field enclosures, with occasional areas of coherent rectilinear field divisions in the east of the zone and around Moulton Common.

¹⁴ <https://www.lincolnshire.gov.uk/downloads/file/2206/the-historic-landscape-character-zones-pdf>

- Field boundaries predominantly comprise narrow and shallow wet dykes, although embanked natural watercourses form continuous linear boundaries across the zone.
- Relict sea-banks around the periphery of the zone are associated with successive stages of coastal land reclamation.
- Woodland in the zone is sparsely distributed throughout, and mainly consists of thin rectilinear plantations and holts located along field boundaries or adjacent to buildings.
- The south-west of the zone has a limited number of orchards.
- Numerous small agricultural reservoirs are scattered within the zone.

4.12. Beyond the 5km study area of the Option Area, the surrounding landscape sits within the following National Landscape Character Types;

- 44 Central Lincolnshire Vale
- 75 Kesteven Uplands
- 76 North West Norfolk

Landscape Designations

Landscape designations within the study area for the proposed met mast include:

4.13. Within the National Character Area (46) the Ramsar, SPA, SAC and NNR sites include;

- The Wash;
- Ouse Washes;
- Nene Washes;
- Wicken Fen;
- Woodwalton Fen; and
- North Norfolk Coast.

4.14. The Moulton Marsh Nature Reserve is situated c.9.16km Northwest of the Proposed Development. The Proposed Development is situated nearest to 'The Wash'. As noted in **National Character Area (46)**, It is accordingly designated;

- a Ramsar site, a Special Area of Conservation (SAC),
- a Special Protection Area (SPA), a European Marine Site(EMS),

- a Site of Special Scientific Interest (SSSI), a National Nature Reserve (NNR) and a Local Nature Reserve (LNR).
- 4.15. It is noted that 2,701 ha of the NCA are within the Norfolk Coast Area of Outstanding Natural Beauty (AONB), less than 1 per cent of the total NCA area. There are 253 local sites in The Fens covering 4,468 ha, which is 2 per cent of the NCA. With this in mind, the NCA 46 Landscape Objective is to;
- “Protect the long views and open expansive unwooded character of the landscape and work to visually mitigate the impact of large structures including unsympathetic buildings and energy infrastructure that are highly visible in this flat landscape.” And*
- “Expand the total area of semi-natural habitat and increase connectivity to allow adaptation to climate change. In particular, increase connectivity between new and existing wetlands by the creation of linear habitats and river enhancement”*
- “Retain long open views and the experience of big skies and Fenland sunsets.”*
- 4.16. The Proposed Development is situated c.15.31km from the AONB ‘Norfolk Coast’. This long coastal strip incorporates the finest, remotest and wildest of Norfolk’s renowned marsh coastlands.
- 4.17. Recommendations within the NCA 46 The Fens include relevant principles for siting and design of new development (including forestry and wind farms)¹⁵ :
- SEO 1: Manage the agricultural landscape and soils which allow the Fens to be a major provider of food and horticultural produce, while seeking to enhance opportunities for biodiversity.
 - SEO 4: Conserve, manage and enhance the Fens landscape and increase educational opportunities to access its geodiversity, archaeology and cultural heritage to enhance enjoyment and understanding for those who live and work in and visit the Fens.

Visual Amenity

- 4.18. The ZTV (Figure 5) has been produced using digital terrain data and a maximum proposed development height of 140 m to demonstrate the distribution of theoretical views of the met mast throughout the study area.
- 4.19. Potential views of the met mast are limited to the following visual receptors:
- Recreational walkers along local roads.

¹⁵ <http://publications.naturalengland.org.uk/publication/6229624?category=587130>

- Users of B roads and the minor road network in the vicinity of the proposed site near Norfolk House Farm along the B1359, Dawsmere Road, Church Road and Black Barn Road.

Potential Landscape and Visual Effects

The Site

- 4.20. The proposed development site will be physically altered by the introduction of the proposed met mast. Parts of the site may be excavated to accommodate foundations at the mast location and ground anchors will be constructed to secure the mast via guy wires. The construction of the mast will introduce a new human-made feature to the baseline landscape.
- 4.21. Beyond this intervention, the construction and operation of the proposed met mast will make limited physical alteration to the site. The footprint of the proposed changes comprises a small area of land and will be exerted over a short timeframe. The physical disturbance to the site is wholly reversible and a commitment is in place to remove all foundations/ anchor points and restore the disturbed land to its previous condition.

Landscape Character and Designations

- 4.22. Holbeach Town is c. 7.49km southwest of the Application Site and due to local fluctuations of landform and intervening vegetation, views of the area are considered unlikely. Lond Sutton is situated c.4.72km South of the proposed site. The town is situated closely to the Proposed Development.
- 4.23. NCA 46- The Fens National Character Area has a flat open landscape which provides expansive views over the landscape. There is a high level of agriculture with a small amount of coniferous forestry plantation. The landscape consists of a pattern of large fields created by varied and multiple cropping, with a strong rectilinear pattern of drainage, fields and roads. This area consists of a varied settlement pattern. Open views over the landscape are dominant although intermittent vegetation screens much of the views (See viewpoint 02 and viewpoint 03). Situated North and east of the proposed development, there are limited views looking south and west from viewpoint 02 and viewpoint 03. This NCA Zone expands over the 10km ZTV area (as seen in **Figure 6**).
- 4.24. Character Zone WSH4 -Reclaimed Wash Farmlands within The Wash Character Area, the agricultural landscape of the zone comprises a semi-regular pattern of field enclosures.
- 4.25. This area has limited levels of visibility due to intervening vegetation, yet the proposed development lies within the 5km to 10km ZTV area (see viewpoint 01 and viewpoint 04). The visual influence of the proposed met mast upon other landscape designations is considered to be very minor by virtue of limited theoretical visibility and distance. The viewpoints 01 and viewpoint 04 have little to no views looking north towards the proposed development.

- 4.26. Although the proposed met mast represents a new, tall structural element of the baseline landscape, it is designed to be slender and unobtrusive by virtue of its form, materials, and colour. Where the met mast forms an evident component of the landscape character:
- Near the site - visibility would be limited to the upper portions of the met mast and frequently restricted by intervening vegetation; and
 - In longer distance viewing opportunities - particularly where the NCA 46 forms a backdrop to more settled/populated areas such as in the vicinity of Holbeach Town, although a visible component of the skyline the met mast would not have sufficient mass to form a defining element of the landscape.
- 4.27. Beyond a viewing distance of 1.5 – 2.5 km a met mast of this height may be a discernible feature of the wider landscape; however, the limited mass of the design and the matt finish of the tubular construction mean they lack the substance to significantly alter the setting or appreciation of the baseline landscape conditions.
- 4.28. Viewpoint locations can be seen in Figure 05 and Photomontages can be seen in Figure 06.
- 4.29. The nearest scenic route 'Wash Viewpoint' and is c.5.25km to the east of the proposed site. It is situated near the River Nene and is an area where bird watching occurs. Views of the Proposed Development are not considered likely due to intervening vegetation and flat landscape terrain.
- 4.30. There is a noted **Ramsar Area 'The Wash'** as a **Proposed Natural Heritage Area** (pPNHA) situated approx. c.2.65km Northeast of the proposed site. There may be possible views towards this area, although due to intermittent vegetation within fields and the level topography of the landscape, views are unlikely.
- 4.31. The Proposed Development sits close to the Wash, with the River Wellend located (c.8.90km) Northwest of the site and the River Nene located (c.3.76km) East of the site.
- 4.32. Overall, there may also be new receptors that have received planning or have been built which have not been accounted for.
- 4.33. Current and relevant international, national, and local planning policies, legislation and guidelines will be referenced. The local planning authority will be consulted to agree the extent of the proposed study area, the methodology (including cumulative methodology), key receptors to be considered, the number and location of suitable viewpoints, along with the number of visualisations to be produced from these viewpoints and other supporting figures to be included.
- 4.34. **Overall significant landscape and visual effects resulting from the introduction of the Proposed Development on landscape and visual receptors are considered unlikely.** Given the flat elevated topography of the land, nearby residential receptors, limited visual effects are not predicted upon the residential visual receptors, road users or recreational users.

5. ENVIRONMENTAL CONTEXT

Ecology

- 5.1. The proposed mast location and access routes have been appraised using survey information gathered by Avian Ecology during their 2021 Phase 1 Habitat Survey performed on the 11th of May 2021. The survey data includes full coverage of the proposed met mast location.
- 5.2. The met mast will be positioned on arable and horticulture habitat, which is not a priority habitat, nor holds any significant ecological importance. This habitat is not considered to present constraint to the Proposed Development.

Ornithology

- 5.3. Multiple ornithology surveys were undertaken from the 26th of January 2021 until the 14th of June 2022, the area surveyed includes the Proposed Development site. Based on the species present, no additional collision risk modelling will be required over what is necessary for the Proposed Development of the wind farm, which is being undertaken by Avian Ecology.
- 5.4. Mitigation outlined in NatureScot's 'Guidance - assessment and mitigation of impacts of power lines and guyed meteorological masts on bird' can be considered if required, including the installation of bird diverters on the guy wires to further reduce potential collision risk.

Geology, Hydrology & Hydrogeology

- 5.5. The Proposed Development is located within an area which would be at risk from coastal flooding if no formal flood defences were in place. However, there are defences in place which are in 'fair' condition and reduce the risk of flooding to a 1 in 150 chance each year. Taking into account the 1 in 200 year breach flood event, the maximum depth of flooding at Application Site is likely to be 0.5m to 1.0m depth.
- 5.6. Although the Proposed Development isn't outlined within any of the vulnerability guidelines, it is considered appropriate for this to be classed as 'Water Compatible' as it is merely a mast with guy ropes. The minimum height of the weather equipment will be approximately 30m AGL and therefore won't be affected by any flooding. Using the 'Flood Risk Vulnerability' Classification, 'Water Compatible' infrastructure is appropriate in any flood zone.
- 5.7. There will be no requirement for any formal drainage due to the negligible amount of land take from the Proposed Development.

Historic Environment

- 5.8. As part of a wider development encompassing the area of the proposed mast, a walkover survey and Historic Environment Record search has been undertaken for the proposed

development site. No recorded archaeology or heritage assets are located within close proximity to the proposed mast, while the walkover survey similarly did not identify any features of archaeological interest in its vicinity.

- 5.9. The only designated asset present within a 1km study area is the Grade II listed Wiles Farmhouse (1359232), located c. 700m to the north of the proposed mast. The walkover survey identified that the farmhouse is well screened in this direction and views with the mast are therefore unlikely.
- 5.10. A total of five non-designated assets from the Historic Environment Record are present within 1km, including:
- 1635 Sea Bank, Gedney Dawsmere (MLI80730), located c. 500m to the east-northeast
 - Wiles Farmhouse, Gedney (MLI94578), located c. 700m to the north (duplicate of the Grade II listed building)
 - Parklands, Gedney Dawsmere (MLI90052), located c. 800m to the west-northwest
 - Fleet Light Railway (MLI22107), located c. 800m to the northwest
 - Norfolk House, Gedney (MLI94409), located c. 890m to the southeast
- 5.11. The features are all located far from the proposed mast and will not be directly impacted. Similarly, no sub-surface archaeology is expected to be at risk of direct impacts from the proposed mast. Indirect effects upon the above, as well as all other heritage assets in the surrounding landscape, are anticipated to be negligible.

6. CONCLUSION

- 6.1. This assessment can conclude that the Proposed Development, **will not result in any unacceptable impacts**. We would reiterate that current legislation and planning policy advocate support for renewable energy developments and require positive consideration, subject to development management and environmental considerations. The Proposed Development is deemed to have struck an acceptable balance between renewable energy production and all relevant planning and environmental considerations and, on this basis, we contend that planning permission should be granted.

7. APPENDICES

- Figure 1: Site Location Plan
- Figure 2: Site Layout Plan
- Figure 3: Site Block Plan
- Figure 4: Elevations
- Figure 5: Viewpoints with ZTV
- Figure 6: Wireframes and Photomontages