APPENDIX 12.1 – CLIMATE CHANGE GUIDANCE AND LEGISLATION

1 LEGISLATION

1.1 Climate Change Act 2008 (2050 Target Amendment, Order 2019)

1.1.1 The Climate Change Act 2008 establishes the framework for the United Kingdom (UK) to set and deliver GHG emission reduction targets; mainly through the establishment of the Committee on Climate Change (CCC) which ensures targets are evidence based and progress is independently assessed. An amendment to The Act in 2019 commits the UK government to reduce GHG emissions to a minimum of 100% below 1990 baseline levels by 2050 – Net Zero.

1.1.2 The Act requires the Government to regularly report on emission target progress, assess the risks and opportunities to the UK associated with climate change, and develop preparation and adaptive plans for these. The UK Climate Change Risk Assessment is produced every five years. The third UK Climate Change Risk Assessment (CCRA3) was published in January 2022 and this series of reports, alongside other documents, are used in this chapter to assess potential vulnerabilities and adaptive potential of the proposed development regarding climate change impacts. The risks identified by the CCC in the Independent Assessment of UK Climate Risk published in June 2021 have also been considered in this assessment.

1.2 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

1.2.1 On 16th May 2017, The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 came into force in the UK. This legislation requires the consideration of climate change within an EIA. The key text concerning climate change is as follows:

1.2.2 *The EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors—*

(a)population and human health;

(b)biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC(14) and Directive 2009/147/EC(15);

(c)land, soil, water, air and climate;

(d)material assets, cultural heritage and the landscape;

(e)the interaction between the factors referred to in sub-paragraphs (a) to (d).

1.2.3 Schedule 3: Regulation 9(1) states:

1.2.4 *The characteristics of development must be considered with particular regard to—*

(a) the size and design of the whole development;

(b) cumulation with other existing development and/or approved development;

(c) the use of natural resources, in particular land, soil, water and biodiversity;

(d) the production of waste;

(e) pollution and nuisances;

(f) the risk of major accidents and/or disasters relevant to the development concerned, including those caused by climate change, in accordance with scientific knowledge;

(g) the risks to human health (for example due to water contamination or air pollution).

1.2.5 Schedule 4: Regulation 14(2) states:

1.2.6 *A description of the factors specified in regulation 5(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.*

1.2.7 *A description of the likely significant effects of the development on the environment resulting from, inter alia—*

(a)the construction and existence of the development, including, where relevant, demolition works;

(b)the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;

(c)the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;

(d)the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);

(e)the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;

(f)the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;

(g)the technologies and the substances used.

2 PLANNING POLICY AND GUIDANCE

2.1 National Policy

Emerging Overarching National Policy Statement for Energy EN-1 (November 2023)

2.1.1 This Overarching National Policy Statement (NPS) for Energy is part of a suite of NPSs and sets out the government's policy for delivery of major energy infrastructure.

2.1.2 A further five technology-specific NPSs for the energy sector cover:

- natural gas electricity generation (EN-2);
- renewable electricity generation (both onshore and offshore) (EN-3);
- gas supply infrastructure and gas and oil pipelines (EN-4);
- the electricity transmission and distribution network (EN-5);
- and nuclear electricity generation (EN-6).

2.1.3 This NPS sets out the need for new nationally significant energy infrastructure projects, assessment principles and generic impacts.

2.1.4 Paragraph 2.1.6 within the statement confirms that the NPS considers "*the large-scale infrastructure which will be required to ensure the UK can provide a secure, reliable, and affordable supply of energy, while also meeting our decarbonisation targets*."

2.1.5 Discussing the role of wind and solar power in the UK energy mix, the NPS states at Paragraph 3.3.20:

"Wind and solar are the lowest cost ways of generating electricity, helping reduce costs and providing a clean and secure source of electricity supply (as they are not reliant on fuel for generation). Our analysis shows that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar."

2.1.6 Section 4.10 addresses Climate Change Adaptation and Resilience. Paragraph 4.10.1 and 4.10.2 states:

2.1.7 *"Whilst we must continue to accelerate efforts to end our contribution to climate change by reaching Net Zero greenhouse gas emissions, adaptation is also necessary to manage the impacts of current and future climate change. If new energy infrastructure is not sufficiently resilient against the possible impacts of climate change, it will not be able to satisfy the energy needs as outlined in Part 3 of this NPS.*

2.1.8 *Climate change is already altering the UK's weather patterns and this will continue to accelerate depending on global carbon emissions. This means it is likely there will be more extreme weather events. As well as climatic and seasonal changes such as hotter, drier summers and warmer, wetter winters, there is also a likelihood of increased flooding, drought, heatwaves, and intense rainfall events, as well as rising sea levels, increased storms and coastal change. Adaptation is therefore necessary to deal with the potential impacts of these changes that are already happening.*

2.1.9 Paragraph 4.10.8 and 4.10.9 continues:

"New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the direct (e.g. site flooding, limited water availability, storms, heatwave and wildfire threats to infrastructure and operations) and indirect (e.g. access roads or other critical dependencies impacted by flooding, storms, heatwaves or wildfires) impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure.

2.1.10 *The ES should set out how the proposal will take account of the projected impacts of climate change, using government guidance and industry standard benchmarks such as the Climate Change Allowances for Flood Risk Assessments, Climate Impacts Tool, and British Standards for climate change adaptation, in accordance with the EIA Regulations. This information will be needed by the Secretary of State."*

2.1.11 Section 5.8 deals with Flood Risk, and Paragraph 5.8.2 states:

"The effects of weather events on the natural environment, life and property can be increased in severity both as a consequence of decisions about the location, design and nature of settlement and land use, and as a potential consequence of future climate change. Having resilient energy infrastructure not only reduces the risk of flood

damages to the infrastructure, it also reduces the disruptive impacts of flooding on those homes and businesses that rely on that infrastructure. Although flooding cannot be wholly prevented, its adverse impacts can be avoided or reduced through good planning and management."

2.1.12 Paragraph 5.8.5 continues:

"*Climate change is already having an impact and is expected to have an increasing impact on the UK throughout this century. The UK Climate Projections 2018*[1] *show an increased chance of milder, wetter winters and hotter, drier summers in the UK, with more intensive rainfall causing flooding. Sea levels will continue to rise beyond the end of the century, increasing risks to vulnerable coastal communities. Within the lifetime of energy projects, these factors will lead to increased flood risks in areas susceptible to flooding, and to an increased risk of the occurrence of floods in some areas which are not currently thought of as being at risk. A robust approach to flood risk management is a vital element of climate change adaptation; the applicant and the Secretary of State should take account of the policy on climate change adaptation in Section 4.9."*

Emerging National Policy Statement for Renewable Energy EN-3 (November 2023)

2.1.13 This NPS covers the following types of nationally significant renewable electricity generating stations:

- energy from biomass and/or waste including mixed waste containing non-renewable fractions (>50 MW in England and >350MW in Wales);
- pumped hydro storage (>50 MW in England and >350MW in Wales);
- solar photovoltaic (PV) (>50 MW in England and >350MW in Wales);
- offshore wind (>100MW in England and >350MW in Wales); and
- tidal stream (>100MW in England and >350MW in Wales).

2.1.14 Section 3.4 covers climate change adaptation. Paragraph 3.4.10 specifically considers solar photovoltaics, stating:

"Solar photovoltaic (PV) sites may also be proposed in low lying exposed sites. For these proposals, applicants should consider, in particular, how plant will be resilient to:

[1] See https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69257/pb13274-uk-climate-projections-090617.pdf

- *increased risk of flooding; and*
- *impact of higher temperatures."*

2.1.15 Chapter 3.10 sets out the guidance for Solar Photovoltaic generation and includes factors for assessing applicants. These factors cover site selection and design as well as technical considerations, impacts and mitigations.

Emerging National Policy Statement for Electricity Networks Infrastructure EN-5 (November 2023)

2.1.16 This NPS states "*Other kinds of electricity infrastructure (including lower voltage overhead lines, underground or sub-sea cables at any voltage, and associated infrastructure as referred to above) will only be subject to the 2008 Act – and so be covered by this NPS – in the following circumstances:*

i. if it constitutes associated development for which consent is sought along with an NSIP such as an offshore wind generating station or relevant overhead line; or

ii. if the Secretary of State gives a direction under Section 35 of the 2008 Act (for developments which, when completed, will be wholly in one or more of the areas specified in subsection 35(3)) that it should be treated as an NSIP and requires a development consent order (DCO)."

2.1.17 It goes on to state, "*When evaluating the impacts of electricity networks infrastructure in particular, all of the generic impacts detailed in EN-1 are likely to be in play, even if only during specific phases of the development (such as construction), or at one specific part of the development (such as a substation).*

This NPS has additional policy on:

- *factors influencing site selection and design;*
- *biodiversity and geological conservation;*
- *landscape and visual;*
- *noise and vibration;*
- *Electric and Magnetic Fields; and*
- *Sulphur Hexafluoride."*

The National Planning Policy Framework (as amended) (NPPF, 2023)

2.1.18 The NPPF sets out the national planning policies for England. It provides a framework that ensures sustainable development can be achieved. Implementing policies of the NPPF within the design of the development ensure the economic, social and environmental objectives are delivered.

2.1.19 The policies within the NPPF relevant to climate change can be found in chapter 14 'Meeting the challenge of climate change, flooding and coastal change'. Those most specific to this assessment are detailed below:

2.1.20 Paragraph 152: *"The planning system should 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."*

2.1.21 Paragraph 153: *"Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures[2]. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure."*

2.1.22 Paragraph 154: *"New development should be planned for in ways that: a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure; and b) can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards."*

2.1.23 Paragraph 155*: "To help increase the use and supply of renewable and low carbon energy and heat, plans should: a) provide a positive strategy for energy from these*

[2] In line with the objectives and provisions of the Climate Change Act 2008.

sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts); b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development; and c) identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers."

2.1.24 Paragraph 156: "*Local planning authorities should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood planning*."

2.1.25 Paragraph 157: "*In determining planning applications, local planning authorities should expect new development to: a) comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and b) take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption*."

2.1.26 Paragraph 158: "*When determining planning applications[3] for renewable and low carbon development, local planning authorities should:*

a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions;

b) approve the application if its impacts are (or can be made) acceptable[4]. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial

[3] Wind energy development involving one or more turbines can also be permitted through Local Development Orders, Neighbourhood Development Orders and Community Right to Build Orders. In the case of Local Development Orders, it should be demonstrated that the planning impacts identified by the affected local community have been appropriately addressed and the proposal has community support.

[4] Except for applications for the repowering and life-extension of existing wind turbines, a planning application for wind energy development involving one or more turbines should not be considered acceptable unless it is in an area identified as suitable for wind energy development in the development plan or a supplementary planning document; and, following consultation, it can be demonstrated that the planning impacts identified by the affected local community have been appropriately addressed and the proposal has community support.

scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas, and

c) in the case of applications for the repowering and life-extension of existing renewable sites, give significant weight to the benefits of utilising an established site, and approve the proposal if its impacts are or can be made acceptable."

2.1.27 Paragraph 161: *"All plans should apply a sequential, risk-based approach to the location of development – taking into account the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by: a) applying the sequential test and then, if necessary, the exception test as set out below; b) safeguarding land from development that is required, or likely to be required, for current or future flood management; c) using opportunities provided by new development to reduce the causes and impacts of flooding (where appropriate through the use of natural flood management techniques); and d) where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations."*

Net Zero Strategy: Build Back Greener (2021)

2.1.28 The Net Zero Strategy (NZS) sets out the UK Government's long-term plan for a transition to Net Zero emissions by 2050 that will take place over the next three decades, with plans for reducing emissions from each sector of the UK economy. The NZS states that:

"*By 2035 the UK will be powered entirely by clean electricity, subject to security of supply".*

2.1.29 Many of the policies in the strategy will be phased in over the next decade or longer. The NZS includes key policies in the following areas:

- Power;
- Fuel supply and Hydrogen;
- Industry;
- Heat and Buildings;
- Transport;
- Natural resources, waste, and fluorinated gases;
- Greenhouse gas removals; and
- Supporting the transition with cross-cutting action.

IPCC Sixth Assessment Report

2.1.30 This report summarises the state of knowledge of climate change, its widespread impacts and risks, and climate change mitigation and adaptation. It considers current status and trends, future climate change, risks, and long-term responses, and responses in the near term.

CCC: Delivering a reliable decarbonisation power system (2023)

2.1.31 This report describes what a reliable, resilient, decarbonised electricity supply system could look like in 2035, and the steps required to achieve it. The key messages are:

- *"A reliable, resilient, decarbonised electricity system can be delivered by 2035. This is needed to deliver emissions reductions in line with the path to Net Zero, while ensuring a reliable and resilient electricity supply and substantially reducing the UK's dependence on imported fossil fuels.*
- *The Government must give equal focus to low-carbon flexible solutions as to the full delivery of its existing renewables and nuclear commitments.*
- *Decarbonising and expanding the electricity system will rapidly reduce the UK's dependence on imported oil and gas, reducing in turn our exposure to volatile international prices.*
- *Transforming the electricity system provides opportunities for growth. Currently, over 31,000 people across the UK are employed in offshore wind alone – this is set to rise to 97,000 by 2030, driven by £155 billion in private investment, with further investment and employment in solar and onshore wind."*

Powering Up Britain: Net Zero Growth Plan (2023)

2.1.32 This policy paper outlines the connection between energy security and net zero. It outlines the government's progress and delivery of deploying renewable energy.

Central Lincolnshire Local Plan 2023, adopted 13 April 2023

2.1.33 Policy S11: Embodied Carbon states, "*All development should, where practical and viable, take opportunities to reduce the development's embodied carbon content, through the careful choice, use and sourcing of materials."*

2.1.34 Policy S14: Renewable Energy deals with the deployment of renewable energy installations and states, "*The Central Lincolnshire Joint Strategic Planning Committee is committed to supporting the transition to a net zero carbon future and will seek to*

maximise appropriately located renewable energy generated in Central Lincolnshire (such energy likely being wind and solar based).

Proposals for renewable energy schemes, including ancillary development, will be supported where the direct, indirect, individual and cumulative impacts on the following considerations are, or will be made, acceptable..."

2.1.35 It continues under the section entitled, 'Additional matters for solar based energy proposals':

"Proposals for solar thermal or photovoltaics panels and associated infrastructure to be installed on existing property will be under a presumption in favour of permission unless there is clear and demonstrable significant harm arising.

Proposals for ground based photovoltaics and associated infrastructure, including commercial large scale proposals, will be under a presumption in favour unless:

- *there is clear and demonstrable significant harm arising; or*
- *the proposal is (following a site specific soil assessment) to take place on Best and Most Versatile (BMV) agricultural land and does not meet the requirements of Policy S67; or*
- *the land is allocated for another purpose in this Local Plan or other statutory based document (such as a nature recovery strategy or a Local Transport Plan), and the proposal is not compatible with such other allocation.*

Proposals for ground based photovoltaics should be accompanied by evidence demonstrating how opportunities for delivering biodiversity net gain will be maximised in the scheme taking account of soil, natural features, existing habitats, and planting proposals accompanying the scheme to create new habitats linking into the nature recovery strategy."

2.1.36 The section 'Decommissioning renewable energy infrastructure' section states,

"Permitted proposals will be subject to a condition that will require the submission of an End of Life Removal Scheme within one year of the facility becoming non-operational, and the implementation of such a scheme within one year of the scheme being approved. Such a scheme should demonstrate how any biodiversity net gain that has arisen on the site will be protected or enhanced further, and how the materials to be removed would, to a practical degree, be re-used or recycled."

2.1.37 Policy S16: Wider Energy Infrastructure, states:

"The Joint Committee is committed to supporting the transition to net zero carbon future and, in doing so, recognises and supports, in principle, the need for significant investment in new and upgraded energy infrastructure.

Where planning permission is needed from a Central Lincolnshire authority, support will be given to proposals which are necessary for, or form part of, the transition to a net zero carbon sub-region, which could include: energy storage facilities (such as battery storage or thermal storage); and upgraded or new electricity facilities (such as transmission facilities, sub-stations or other electricity infrastructure.

However, any such proposals should take all reasonable opportunities to mitigate any harm arising from such proposals, and take care to select not only appropriate locations for such facilities, but also design solutions (see Policy S53) which minimises harm arising."

2.1.38 Policy S17: Carbon Sinks states,

"Existing carbon sinks, such as peat soils, must be protected, and where opportunities exist they should be enhanced in order to continue to act as a carbon sink.

Where development is proposed on land containing peat soils or other identified carbon sinks, including woodland, trees and scrub; open habitats and farmland; blanket bogs, raised bogs and fens; and rivers, lakes and wetland habitats, the applicant must submit a proportionate evaluation of the impact of the proposal on either the peat soil's carbon content or any other form of identified carbon sink as relevant and in all cases an appropriate management plan must be submitted.*

There will be a presumption in favour of preservation of peat and other carbon sinks in-situ. Proposals that will result in unavoidable harm to, or loss of, peat soils or other identified carbon sinks will only be permitted if it is demonstrated that:

a) the site is allocated for development; or

b) there is not a less harmful viable option to development of that site.

In any such case, the harm caused must be shown to have been reduced to the minimum possible and appropriate, satisfactory provision will be made for the evaluation, recording and interpretation of the peat soils or other form of carbon sink before commencement of development.

For peat soils that are to be removed, the soils must be temporarily stored and then used in a way that will limit carbon loss to the atmosphere.

Proposals to enhance peat soils and protect its qualities will be supported. Proposals to help strengthen existing, or create new, carbon sinks will be supported.

Carbon Sequestration

The demonstration of meaningful carbon sequestration through nature based solutions within a proposal will be a material consideration in the decision-making process. Material weight in favour of a proposal will be given where the net situation is demonstrated to be a significant gain in nature based carbon sequestration as a consequence of the proposal. Where a proposal will cause harm to an existing nature based carbon sequestration process, weight against such a proposal will be given as a consequence of the harm, with the degree of weight dependent on the scale of net loss.

** Please refer to Carbon Storage and Sequestration by Habitat 2021 (NERR094) (Natural England), which identifies 'reliable', 'long term' and 'important' carbon sinks and to the maps in 'Central Lincolnshire Local Plan: Climate Change Evidence Base Task L – Peat Soil Mapping' (documents CLC011 and CLC012 in the local plan evidence base).”*

2.1.39 Policy S53: Design and Amenity

“*All development... must achieve high quality sustainable design that contributes positively to local character, landscape and townscape, and supports diversity, equality and access for all.*

Good design will be at the centre of every development proposal and this will be required to be demonstrated through evidence supporting planning applications to a degree proportionate to the proposal. Design Codes may be produced for parts of Central Lincolnshire or in support of specific developments. The approach taken in these Design Codes should be informed by the National Model Design Code and where these codes have been adopted, developments will be expected to adhere to the Code.

... All development proposals will be assessed against, and will be expected to meet the following relevant design and amenity criteria. All development proposals will [inter alia]:

9. Resources

a) Minimise the need for resources both in construction and operation of buildings and be easily adaptable to avoid unnecessary waste in accordance with Policies S10 and S11;

b) Use high quality materials which are not only suitable for the context but that are durable and resilient to impacts of climate change in accordance with the requirements of Policy S20;

10. Lifespan

a) Use high quality materials which are durable and ensure buildings and spaces are adaptive; and

b) Encourage the creation of a sense of ownership for users and the wider community with a clear strategy for ongoing management and stewardship.

Development proposals will be expected to satisfy requirements of any adopted local design guide or design code where relevant to the proposal."

2.1.40 Policy S59: Green and Blue Infrastructure Network

"*The Central Lincolnshire Authorities will safeguard green and blue infrastructure in Central Lincolnshire from inappropriate development and work actively with partners to maintain and improve the quantity, quality, accessibility and management of the green infrastructure network.*

Proposals that cause loss or harm to the green and blue infrastructure network will not be supported unless the need for and benefits of the development demonstrably outweigh any adverse impacts. Where adverse impacts on green infrastructure are unavoidable, development will only be supported if suitable mitigation measures for the network are provided.

Development proposals should ensure that existing and new green and blue infrastructure is considered and integrated into the scheme design from the outset. Where new green infrastructure is proposed, the design and layout should take opportunities to:

a) incorporate a range of types and sizes of green and blue spaces, green routes and environmental features that are appropriate to the development and the wider green and blue infrastructure network to maximise the delivery of multi-functionality;

b) deliver biodiversity net gain and support ecosystem services;

c) respond to landscape/townscape and historic character;

d) support climate change adaptation and resilience including through use of appropriate habitats and species; and

e) encourage healthy and active lifestyles.

Development proposals must protect the linear features of the green and blue infrastructure network that provide connectivity between green infrastructure assets, including public rights of way, bridleways, cycleways and waterways, and take opportunities to improve and expand such features.

Development will be expected to make a contribution proportionate to their scale towards the establishment, enhancement and on-going management of green and/or blue infrastructure by contributing to the development of the strategic green infrastructure network within Central Lincolnshire, in accordance with the Developer Contributions SPD."

Southeast Lincolnshire Local Plan 2011 – 2036, adopted 8 March 2019

2.1.41 Under the section entitled 'Our Vision' the Local Plan explains "*New development will be of a high standard of design and will help South East Lincolnshire mitigate and adapt to climate change. The use of renewable energy technologies and sustainable drainage systems will also help minimise carbon emissions and flood risk respectively*".

2.1.42 Section 7, entitled 'A Distinctive, Greener, Cleaner, Healthier Environment' goes on, "*Planning plays a key role in helping shape places to secure reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low-carbon energy and associated infrastructure. This is central to the economic, social and environmental dimensions of sustainable development*."

2.1.43 Policy 31: Climate Change and Renewable and Low Carbon Energy states:

"A. Climate Change

All development proposals will be required to demonstrate that the consequences of current climate change has been addressed, minimised and mitigated by:

1. *employing a high-quality design;*
2. *the adoption of the sequential approach and Exception Test to flood-risk and the incorporation of flood-mitigation measures in design and construction to reduce the effects of flooding, including SuDS schemes for South East Lincolnshire Local Plan 2011-36 all 'Major' applications;*

3. *the protection of the quality, quantity and availability of water resources, including for residential developments, complying with the Building Regulation water efficiency standard of 110 litres per person per day;*
4. *reducing the need to travel through locational decisions and, where appropriate, providing a mix of uses;*
5. *incorporating measures which promote and enhance green infrastructure and provide an overall net gain in biodiversity as required by Policy 28 to improve the resilience of ecosystems within and beyond the site.*

<u>B. Renewable Energy</u>

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 skyscape 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"

Guidance

2.1.44 The climate change impact assessment will primarily be based on the latest EIA guidance published by the Institute of Environmental Management and Assessment (IEMA).

2.1.45 Part A of the assessment will primarily follow the *'Environmental Impact Assessment: Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance'* (2022). This is the most recent guidance available and is applicable to the UK. It is also considered to be the most holistic method of assessing GHG emissions as it applies a whole lifecycle methodology, incorporating not just the construction and operational phase of development, but also the decommissioning/end of life and beyond asset lifecycle stages. The whole lifecycle methodology allows for a more robust 'worst case scenario' to be applied which is proportionate to the nature and scale of the proposed development.

2.1.46 Several guidance publications have been produced containing suggested methods for establishing a GHG emissions baseline and limited advice on techniques for applying significance thresholds. The European Investment Bank (EIB) *'EIB Project Carbon Footprint Methodologies. Methodologies for the Assessment of Project GHG Emissions and Emission Variations'* (2023) guidance will be used when considering baseline scenarios. This goes into greater detail in terms of a baseline methodology and allows for easier comparison of impacts where there is no prior development in an area.

2.1.47 Guidance on the whole life cycle emissions of the Business as Usual (BaU) alternative baseline, in this case natural gas, is described through the United Nations Economic Commission Europe's (UNECE) assessment: *Carbon Neutrality in the UNECE Region: Integrated Life-cycle Assessment of Electricity Sources* (2022).

2.1.48 Part B of the climate change assessment will apply the IEMA 'Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation' (2020) guidance as this is the most recent available and is applicable to the UK.

2.1.49 In addition, the following guidance documents have also been used to inform both parts of the climate change impact assessment:

- European Commission, 'Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment' (2013);

- Royal Institution of Charted Surveyors (RICS), 'Whole life carbon assessment for the built environment' (1st Edition 2017, Draft 2nd Edition 2023); and BSI - PAS 2080:2016 'Carbon Management in Infrastructure'.