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EN010154

6.3 Environmental Statement Appendices

Appendix 14-A: Other Environmental Topics Policy and Legislation

Planning Act 2008 (as amended)

Regulation 5(2)(a)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

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6

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulation 2009 (as amended)

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Development Consent Order 202[ ]

6.3 Environmental Statement Appendices

Appendix 13-E: Transport Assessment Note

Regulation Reference	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	EN010154
Application Document Reference	EN010154/APP/6.3
Author	Fosse Green Energy Limited

Version	Date	Issue Purpose
Rev 1	18 July 2025	DCO Submission

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1. Introduction

1.1 Purpose of this Appendix

1.1.1 This Environmental Statement appendix identifies and describes the legislation, policy and supporting guidance considered relevant to the assessment of the likely significant effects of the Proposed Development on Other Environmental Topics:

a. Air quality (Section 2);

b. Glint and Glare (Section 3);

c. Ground Conditions (Section 4);

d. Major Accidents and Disasters (Section 5);

e. Materials and Waste (Section 6);

f. Telecommunications and Utilities (Section 7); and

g. Electric and Electromagnetic Fields (Section 8)

1.1.2 Legislation and policy are considered at both national and local levels.

1.1.3 This appendix does not assess the Proposed Development against legislation and policy, instead the purpose of considering legislation and policy in the Environmental Impact Assessment (EIA) is twofold;

a. To identify legislation and policy that could influence the determination of important other environmental features (and therefore the significance of effects) and any requirements for mitigation; and

b. To identify legislation and policy that could influence the methodology to be used within the EIA which is presented in the Environmental Statement (ES). For example, a policy may require the assessment of an impact or the use of a specific methodology.

1.1.4 The following sections identify and describe the legislation, policy and supporting guidance considered specifically relevant to the Other Environmental Topics assessment (the assessment) as presented in **Chapter 14: Other Environmental Topics** of this ES **[EN010154/APP/6.1].**

1.1.5 The EIA takes account of the following National Policy Statements (NPSs), designated in January 2024, which have effect in relation to the Proposed Development and provide a framework for decision making by the Secretary of State:

a. Overarching National Policy Statement for Energy (EN1) (Ref 1);

b. National Policy Statement for Renewable Energy Infrastructure (EN-3) (Ref 2); and

c. National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref 3).

1.1.6 The NPSs set out the Government's energy policy, the need for new infrastructure and guidance for determining an application for a Development Consent Order (DCO). The NPSs include specific criteria and issues which should be covered by the Applicants' assessments of the effects of their Proposed Development, and how the decision maker should consider these impacts.

2. Air Quality

National Legislation

The Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulations 2017

2.1.1 Regulation 5(2)(c) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017) (Ref 5) requires that the EIA must identify, describe and assess in an appropriate manner, the direct and indirect significant effects of the Proposed Development on Air Quality.

National Air Quality Legislation

2.1.2 The principal air quality legislation within the United Kingdom is the Air Quality Standards Regulations (as amended 2016) (Ref 6), along with amendments including 'The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020' (Ref 7).

2.1.3 The UK is no longer a member of the European Union following the European Union (Withdrawal) Act 2018 (Ref 8), however, EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation, under the control of the UK's Parliaments and Assemblies. The Clean Air for Europe (CAFE) programme consolidated and replaced (with the exception of the 4th Daughter Directive) preceding EU directives with a single legal act, the Ambient Air Quality and Cleaner Air for Europe Directive 2008/50/EC ('EU Air Quality Framework Directive') (Ref 10). This directive is transcribed into UK legislation by the Air Quality Standards Regulations (Ref 6). The limit values defined therein are legally-binding and are considered to apply everywhere (with the exception of the carriageway and central reservation of roads and any locations where the public do not have access).

National Clear Air Strategy (2019)

2.1.4 The UK Government published its Clean Air Strategy (Ref 16) in 2019, to complement the Industrial Strategy; Clean Growth Strategy; and the 25 Year Environment Plan. The Strategy demonstrates how the UK Government will tackle all sources of air pollution, making the air healthier to breathe, protecting nature and boosting the economy.

2.1.5 Priorities of the past included tackling only the biggest individual sources of pollution, whereas this plan aims to also introduce action to refocus efforts on the smaller and more diffuse sources of air pollution, including from smaller industrial sites to product use and open fires in households.

Environmental Act (2021)

2.1.6 The Environment Act 2021 (Ref 66) was approved in November 2021, after first being introduced to Parliament in January 2020 to address environmental protection and the Government's 25-year plan following the UK's departure from the EU. The act amends the Environment Act 1995 (Ref 38) and includes provisions to establish a post-Brexit set of statutory environmental principles and ensure environmental governance through an environmental watchdog, the Office for Environmental Protection (OEP). Part IV of the Environment Act (2021) requires the Government to update the AQS (Ref 22) which contains standards, objectives and measures for improving ambient air quality. The Environment Act (2021) proposes that the Secretary of State publishes a report reviewing the AQS every five years (as a minimum and with yearly updates to Parliament), in the form of the Environmental Improvement Plan.

Environmental Improvement Plan (2021)

2.1.7 Originally published in January 2018, the 25 Year Environment Plan (25YEP) (Ref 19) set out the vision for a quarter-of-a-century of action to help the natural world regain and retain good health. The Environmental Improvement Plan 2023 (EIP) (Ref 20) provides the first revision of the 25YEP and sets out 10 goals to achieve its vision, including 'Goal 2: Clean Air'. The plan highlights several actions that have been achieved since 2018 including the publication of the Clean Air Strategy (referenced earlier) and the introduction of Clean Air Zones (CAZs) in cities across the Country. Emphasis has also been placed on reducing pollution from domestic burning, the biggest source of emissions of $PM_{2.5}$, with the creation of new targets included within the plan to reduce $PM_{2.5}$ including:

a. *"A legal target to reduce population exposure to $PM_{2.5}$ by 35% in 2040 compared to 2018 levels, with a new interim target to reduce by 22% by the end of January 2028"; and*

b. *"A legal target to require a maximum annual mean concentration of 10 micrograms of $PM_{2.5}$ per cubic metre ($\mu g/m^3$) by 2040, with a new interim target of 12$\mu g/m^3$ by the end of January 2028".*

2.1.8 The $PM_{2.5}$ target was set on the 30 January 2023 in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (Ref 21). This legislation only refers to national compliance.

Air Quality Strategy (2023)

2.1.9 The Air Quality Strategy: framework for local authority delivery was revised in 2023 and supersedes the Air Quality Strategy: Volume 1 (Ref 22) in England only. In Northern Ireland and Scotland, the strategy (Volume 1) remains in force. The Air Quality Strategy (AQS) (Ref 23) sets out the actions that Defra expects local authorities to take in support of our long-term air quality goals. It provides a framework to enable local authorities to make best use of their powers and make improvements for their communities.

2.1.10 Local authorities have a duty the address air quality exceedances in their area, including declaring Air Quality Management Plans (AQMAs) and publishing Air Quality Action Plans (AQAP) setting out the measures they will take to ensure compliance.

National Policy Statements

2.1.11 The EIA takes account of the following National Policy Statements (NPSs), published in November 2023, which have effect in relation to the Proposed Development and provide a framework for decision making by the Secretary of State:

a. Overarching National Policy Statement for Energy (EN-1) (Ref 1);

b. National Policy Statement for Renewable Energy Infrastructure (EN-3) (Ref 2) and

c. National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref 3).

2.1.12 The NPSs set out the Government's energy policy infrastructure for delivery of major energy infrastructure, along with the need for new infrastructure and guidance for determining applications for Development Consent Orders (DCOs). The NPSs provide specific guidance and criteria that the Applicants should cover when assessing the effects of their Proposed Development, and how the Secretary of State should consider these impacts and any mitigation measures applied.

2.1.13 The relevant NPS requirements for Air Quality are provided in **Table 1**, along with an indication of where in the ES this information can be sourced. NPS EN-3 and NPS EN-5 do not contain any requirements relevant to the Proposed Development and Air Quality. Therefore, only requirements from NPS EN-1 are considered in **Table 1**.

Table 1: Relevant NPS EN-1 Policy for Air Quality

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
Paragraph 5.2.8	Where the Proposed Development is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the ES.	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**
Paragraph 5.2.9	The ES should describe: • existing air quality concentrations and the relative change in air quality from existing levels; • any significant air quality effects, mitigation action taken and any residual effects, distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project; • the predicted absolute emission levels of the proposed project, after mitigation methods have been applied; and • any potential eutrophication impacts.	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]** presents baseline air quality characteristics, and a Dust Risk Assessment (DRA) considering human and ecological receptors. Construction phase road traffic volumes do not meet the threshold above which detailed air quality modelling is required.
Paragraph 5.2.11	Defra publishes future national projections of air quality based on estimates of future levels of emissions, traffic, and vehicle fleet. Projections are updated as the evidence base changes and the applicant should ensure these are current at the point of an application. The applicant's assessment should be consistent with this but may include more detailed modelling and evaluation to demonstrate local and national impacts. If an applicant believes they have robust additional supporting evidence, to the extent they could affect the conclusions of the assessment, they should include this in their representations to the Examining Authority along with the source.	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].** There are not anticipated to be any significant changes to air quality as a result of The Proposed Development.

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
Paragraph 5.2.12	Where a proposed development is likely to lead to a breach of any statutory air quality limits, objectives or targets, or affect the ability of a non-compliant area to achieve compliance within the timescales set out in the most recent relevant air quality plan/strategy at the time of the decision, the applicant should work with the relevant authorities to secure appropriate mitigation measures to ensure that those statutory limits, objectives or targets are not breached.	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].** No exceedances of any air quality objectives are expected due to The Proposed Development.
Paragraph 5.2.13	The Secretary of State should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at this stage. In doing so the Secretary of State should have regard to the Air Quality Strategy in England, or the Clean Air Plan for Wales in Wales, or any successors to these and should consider relevant advice within Local Air Quality Management guidance and PM2.5 targets guidance	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]** presents embedded mitigation measures for the Proposed Development in relation to Air Quality.
Paragraph 5.2.19	In all cases, the Secretary of State must take account of any relevant statutory air quality limits, objectives and targets. If a project will lead to non-compliance with a statutory limit, objective or target the Secretary of State should refuse consent.	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].** There are not anticipated to be any significant changes to air quality as a result of The Proposed Development.
Paragraph 5.7.5	The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity, as part of the ES.	**Appendix 14-B** of this ES **[EN010154/APP/6.3]** presents the dust risk assessment.
Paragraph 5.7.6	In particular, the assessment provided by the applicant should describe: • the type, quantity and timing of emissions;	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	• aspects of the development which may give rise to emissions; • premises or locations that may be affected by the emissions; • effects of the emission on identified premises or locations; and • measures to be employed in preventing or mitigating the emissions.	

National Planning Policy Framework

2.1.14 National Planning Policy Framework (NPPF) (Ref 4) sets out the Governments planning policies for England and how these are expected to be applied. Paragraph 5 outlines that while the Framework does not contain specific policies for Nationally Significant Infrastructure Projects (NSIPs), the NPPF is still relevant when considering the determination of DCOs. Therefore, the ES for the Proposed Development has taken the NPPF into account.

2.1.15 Paragraph 8 defines three overarching objectives within the NPPF, which are interdependent and need to be pursued in mutually supportive ways:

a. An economic objective: to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

b. A social objective: to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

c. An environmental objective: to contribute to protecting and enhancing the natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

2.1.16 Relevant NPPF requirements relating to Air Quality, along with an indication of where this information is located within the ES to address these requirements, are provided in **Table 2**.

Table 2: Relevant NPPF Policy for Air Quality

Relevant NPPF paragraph reference	Requirement of the NPPF	Where this is addressed in the ES
Paragraph 180	Planning policies and decisions should contribute to and enhance the natural and local environment by: • protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); • preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and • remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]** – sets out mitigation measures pertaining to air quality.
Paragraph 192	Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]** – provides an assessment of the effects of the Proposed Development on air quality. The Proposed Development is not located in or near to an AQMA or Clean Air Zone, and air quality limits are not in danger of being exceeded.

Relevant NPPF paragraph reference	Requirement of the NPPF	Where this is addressed in the ES
	for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.	

National Guidance

National Planning Practise Guidance

2.1.17 The National Planning Policy Guidance (NPPG) (Ref 26) was published on the 24th of June 2014 and revised in 2019 and provides more in-depth guidance to the NPPF. The NPPG 'Air Quality' provides guidance on how planning can take account of the impact of new development on air quality.

2.1.18 The NPPG notes that where air quality is a relevant consideration the local planning authority may need to establish:

a. The existing air quality (existing baseline);

b. including what would happen to air quality in the absence of development (existing baseline); and

c. Whether the proposed development could significantly change air quality during the construction and operational phases (with mitigation).

d. Within paragraph 7 it is stated that air quality assessments need to be proportionate to the nature and scale of development proposed and the potential impacts (taking into account existing air quality conditions), and because of this are likely to be locationally specific.

Local Planning Policy

2.1.19 Local planning policy documents concerning Air Quality that are relevant to the Proposed Development, have been outlined below and policy relevant to these documents further considered within **Table 3**.

Central Lincolnshire Local Plan

2.1.20 The Central Lincolnshire Local Plan (Ref 27) was adopted in April 2023 and is a revision of the previous Central Lincolnshire Plan that was adopted in 2017. Following approval by the Central Lincolnshire Joint Strategic Planning Committee at the end of February 2022, consultation on the plan ran between March and May 2022.

2.1.21 The Local Plan contains planning policies and allocations for the growth and regeneration of Central Lincolnshire over the next 20 years. The Local Plan was revised to ensure it remains current and consistent with latest national guidelines and local circumstances.

Neighbourhood Plans

2.1.22 There are no relevant policies contained within any neighbourhood plans related directly to Air Quality and therefore these are not included within **Table 3.**

Table 3: Relevant Local Policy and Guidance with respect to Air Quality

Relevant document	Policy	Where this is addressed in the ES
Central Lincolnshire Local Plan (2023)	Policy S14: Renewable Energy sets out criteria that proposals for renewable energy schemes and ancillary development should incorporate for the direct, indirect, individual and cumulative impacts of development to be considered acceptable. This includes ensuring the impacts are acceptable *"on the amenity of sensitive neighbouring uses by virtue of matters such as… air quality"*. Policy S53: Design and Amenity states that *"all development proposals will… not result in adverse noise and vibration taking into account surrounding users nor result in adverse impacts upon air quality from odour, fumes, smoke, dust and other sources".*	Section 14.2 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]** – the Proposed Development is not expected to result in adverse impacts on air quality

Professional Guidance (Institute of Air Quality)

2.1.23 Land-Use Planning & Development Control: Planning For Air Quality When determining the significance of the air quality assessment results with the Proposed Development, the assessment follows the non-statutory best practice guidance published by Environmental protection UK (EPUK) and the Institute of Air Quality Management (IAQM) (Ref 12, Ref 28). The guidance provides developers with a means of reaching sound decisions, having regard to the air quality implications of development proposals.

2.1.24 The guidance states that “development is not inherently negative for air quality. Whilst a new development at a particular site may have its own emissions, it may also bring an opportunity to reduce overall emissions in an area over time by installing new, cleaner technologies and applying policies that promote sustainability”.

2.1.25 The IAQM has produced guidance (Ref 12, Ref 29) that is to be used in the preparation of construction impact assessment (including demolition and earthworks as appropriate). This guidance was most recently updated in August 2023. This guidance has been prepared to classify the risk of dust impacts from a site, which will then allow mitigation measures commensurate with that risk to be identified. The dust risk assessment in this report has been carried out following this guidance.

3. Glint and Glare

3.1.1 Sections below describe the key policy and guidance documents relevant to glint and glare assessment. The full review of applicable policies and guidance is provided in **Appendix 14-D: Glint and Glare Assessment** of this ES **[EN010154/APP/6.3]**.

National Legislation

3.1.2 There is no national legislation relevant to the glint and glare assessment.

National Policy

3.1.3 The suite of relevant energy NPSs and the NPPF do not expressly mention glint and glare, however reference is made in NPS EN-1 (Ref 1) to safeguarding aviation interests affected by energy developments. For the Proposed Development this would include the impacts of glint and glare. The relevant NPS requirements associated with this receptor that influence the glint and glare assessment, together with an indication of where in the ES chapter the information is provided to address these requirements. This is provided in **Table 4.** Relevant requirements of NPS EN-3 (Ref 2) are provided in

3.1.4 **Table 5**.

Table 4: Relevant NPS EN-1 Policy for Glint and Glare

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
Paragraph 5.5.37	Where the proposed development may affect the performance of civil or military aviation CNS, meteorological radars and/or other defence assets an assessment of potential effects should be set out in the ES.	This is taken account in the glint and glare assessment, and a summary is presented in Section 14.3 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**
Paragraph 5.5.39	The applicant should consult the MoD, Met Office, Civil Aviation Authority, NATS and any aerodrome – licensed or otherwise – likely to be affected by the proposed development in preparing an assessment of the proposal on aviation or other defence interests.	During the production of the Glint and Glare Assessment, consultation has been undertaken regarding any aerodrome that may have potential to be affected by the Proposed Development, including specifically the MoD regarding RAF Waddington. See Section 14.3 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**
Paragraph 5.5.40	Any assessment of aviation or other defence interests should include potential impacts of The Proposed Development upon the operation of CNS infrastructure, flight patterns (both civil and military), generation of weather warnings and forecasts, other defence assets and aerodrome operational procedures. It should also assess the cumulative effects of the project with other relevant projects in relation to aviation and defence.	This is taken account in the glint and glare assessment, and a summary is presented in Section 14.3 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**
Paragraph 5.5.59	The Secretary of State should be satisfied that the effects on meteorological radars, civil and military aerodromes, aviation technical sites and other defence assets or operations have been addressed by the applicant and that any necessary	This is taken account in the preliminary glint and glare assessment, and a summary is presented in 14.3 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	assessment of the proposal on aviation, NSWWS or defence interests has been carried out.	
Paragraph 5.5.60	Provided that the Secretary of State is satisfied that the impacts of proposed energy developments do not present risks to national security and physical safety, and where they do, provided that the Secretary of State is satisfied that appropriate mitigation can be achieved, or appropriate requirements can be attached to any Development Consent Order to secure those mitigations, consent may be granted.	This is taken account in the glint and glare assessment, and a summary is presented in Section 14.3 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**

Table 5: Relevant NPS EN-3 Policy for Glint and Glare Assessment

Relevant NPS EN-3 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
2.10.102	Solar panels are specifically designed to absorb, not reflect, irradiation. However, solar panels may reflect the sun's rays at certain angles, causing glint and glare. Glint is defined as a momentary flash of light that may be produced as a direct reflection of the sun in the solar panel. Glare is a continuous source of excessive brightness experienced by a stationary observer located in the path of reflected sunlight from the face	N/A

Relevant NPS EN-3 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	of the panel. The effect occurs when the solar panel is stationed between or at an angle of the sun and the receptor.	
2.10.103	Applicants should map receptors to qualitatively identify potential glint and glare issues and determine if a glint and glare assessment is necessary as part of the application.	All ground-based receptors have been mapped out within the Glint and Glare Assessment (**Appendix 14-D: Glint and Glare Assessment [EN010154/APP/6.3]**).
2.10.104	When a quantitative glint and glare assessment is necessary, applicants are expected to consider the geometric possibility of glint and glare affecting nearby receptors and provide an assessment of potential impact and impairment based on the angle and duration of incidence and the intensity of the reflection.	The geometric possibility and intensity of Glint and Glare impacts has been considered within **Appendix 14-D: Glint and Glare Assessment [EN010154/APP/6.3]**.
2.10.105	The extent of reflectivity analysis required to assess potential impacts will depend on the specific project site and design. This may need to account for 'tracking' panels if they are proposed as these may cause differential diurnal and/or seasonal impacts.	**Appendix 14-D: Glint and Glare Assessment [EN010154/APP/6.3]** considered both fixed south facing and single axis tracker panels.
2.10.106	When a glint and glare assessment is undertaken, the potential for solar PV panels, frames and supports to have a combined reflective quality may need to be assessed, although the glint and glare of the frames and supports is likely to be significantly less than the panels.	Where panels are located, the entire footprint is treated as having no gaps and being as reflective as the panel surface for a worst-case scenario.
2.10.134	Applicants should consider using, and in some cases the Secretary of State may require, solar panels to comprise of (or be covered with) anti-glare/anti-reflective coating with a	Solar PV Panels used as part of the Proposed Development will include anti-glare coating as standard (see **Appendix 14-D: Glint and Glare Assessment**)

Relevant NPS EN-3 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	specified angle of maximum reflection attenuation for the lifetime of the permission.	
2.10.135	Applicants may consider using screening between potentially affected receptors and the reflecting panels to mitigate the effects.	This has been determined as part of the visibility assessment within the Glint and Glare Assessment (presented in **Appendix 14-C: Glint and Glare Assessment [EN010154/APP/6.3]**), which takes into account the final layout of the Proposed Development and the existing and proposed planting.
2.10.136	Applicants may consider adjusting the azimuth alignment of or changing the elevation tilt angle of a solar panel, within the economically viable range, to alter the angle of incidence. In practice this is unlikely to remove the potential impact altogether but in marginal cases may contribute to a mitigation strategy	See **Appendix 14-D: Glint and Glare Assessment [EN010154/APP/6.3]**.
2.10.158	Solar PV panels are designed to absorb, not reflect, irradiation. However, the Secretary of State should assess the potential impact of glint and glare on nearby homes, motorists, public rights of way, and aviation infrastructure (including aircraft departure and arrival flight paths).	All sensitive receptors that fall within defined study areas have been considered within **Appendix 14-D: Glint and Glare Assessment [EN010154/APP/6.3]**.
2.10.159	Whilst there is some evidence that glint and glare from solar farms can be experienced by pilots and air traffic controllers in certain conditions, there is no evidence that glint and glare from solar farms results in significant impairment on aircraft safety. Therefore, unless a significant impairment can be demonstrated, the Secretary of State is unlikely to give any more than limited	Aviation impacts have been considered within **Appendix 14-D: Glint and Glare Assessment [EN010154/APP/6.3]**.

Relevant NPS EN-3 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	weight to claims of aviation interference because of glint and glare from solar farms	

Guidance

Aviation Assessment Guidance

3.1.5 The UK Civil Aviation Authority (CAA) issued interim guidance relating to Solar Photovoltaic Systems (SPV) on 17 December 2010 and was subject to a CAA information alert 2010/53. The formal policy was cancelled on 7 September 2012 (Ref 30) however the advice is still applicable until a formal policy is developed. The relevant aviation guidance from the CAA is presented in the section below.

3.1.6 CAA Interim Guidance This interim guidance makes the following recommendations (p.2-3):

'It is recommended that, as part of a planning application, the SPV developer provide safety assurance documentation (including risk assessment) regarding the full potential impact of the SPV installation on aviation interests.

Guidance on safeguarding procedures at CAA licensed aerodromes is published within CAP 738 Safeguarding of Aerodromes and advice for unlicensed aerodromes is contained within CAP 793 Safe Operating Practices at Unlicensed Aerodromes.

Where proposed developments in the vicinity of aerodromes require an application for planning permission the relevant LPA normally consults aerodrome operators or NATS when aeronautical interests might be affected. This consultation procedure is a statutory obligation in the case of certain major airports, and may include military establishments and certain air traffic surveillance technical sites. These arrangements are explained in Department for Transport Circular 1/2003 and for Scotland, Scottish Government Circular 2/2003.

In the event of SPV developments proposed under the Electricity Act, the relevant government department should routinely consult with the CAA. There is therefore no requirement for the CAA to be separately consulted for such proposed SPV installations or developments.

If an installation of SPV systems is planned on-aerodrome (i.e. within its licensed boundary) then it is recommended that data on the reflectivity of the solar panel material should be included in any assessment before installation approval can be granted. Although approval for installation is the responsibility of the Aerodrome Licence holder (ALH), as part of a condition of a CAA Aerodrome Licence, the ALH is required to obtain prior consent from CAA Aerodrome Standards Department before any work is begun or approval to the developer or LPA is granted, in accordance with the procedures set out in CAP 791 Procedures for Changes to Aerodrome Infrastructure.

During the installation and associated construction of SPV systems there may also be a need to liaise with nearby aerodromes if cranes are to be used; CAA notification and permission is not required.

The CAA aims to replace this informal guidance with formal policy in due course and reserves the right to cancel, amend or alter the guidance provided in this document at its discretion upon receipt of new information.

Further guidance may be obtained from CAA's Aerodrome Standards Department via aerodromes@caa.co.uk.'

3.1.7 In some instances, an aviation stakeholder can refer to the ANO 2009 with regard to safeguarding. Key points from the document are presented below.

3.1.8 A person must not recklessly or negligently act in a manner likely to endanger an aircraft, or any person in an aircraft.

3.1.9 A person must not exhibit in the United Kingdom any light which—

a. by reason of its glare is liable to endanger aircraft taking off from or landing at an aerodrome;

b. or (b) by reason of its liability to be mistaken for an aeronautical ground light is liable to endanger aircraft.

3.1.10 If any light which appears to the CAA to be a light described in paragraph (1) is exhibited, the CAA may direct the person who is the occupier of the place where the light is exhibited or who has charge of the light, to take such steps within a reasonable time as are specified in the direction—

a. To extinguish or screen the light; and

b. To prevent in the future the exhibition of any other light which may similarly endanger aircraft.

3.1.11 The direction may be served either personally or by post, or by affixing it in some conspicuous place near to the light to which it relates.

3.1.12 In the case of a light which is or may be visible from any waters within the area of a general lighthouse authority, the power of the CAA under this article must not be exercised except with the consent of that authority.

3.1.13 A person must not in the United Kingdom direct or shine any light at any aircraft in flight so as to dazzle or distract the pilot of the aircraft.' The document states that no 'light', 'dazzle' or 'glare' should be produced which will create a detrimental impact upon aircraft safety.

Rail Assessment Guidance

3.1.14 The Guidance on Signal Sighting Assessment Requirements (Ref 31) supersedes the Signal Positioning and Visibility Guidance. The Signal Positioning and Visibility Guidance ceased to be in force as of 4 June 2016.

3.1.15 The Rail Safety and Standards Board (RSSB) guidance provides an overview of the signal sighting assessment process that is used to confirm compatibility of lineside signalling system, assets with train operations. Reflections and Glare are mentioned in "A.5 Reflection and glare - Appendix A: Compatibility Factors that Prevent Reliable Reading". Within this section it mentions the following Guidance:

"G A.5.1.2 A5 is present if direct glare or reflected light is directed into the eyes or into the lineside signalling asset that could make the asset appear to show a different aspect or indication to the one presented.

G A.5.1.3 A5 is relevant to any lineside signalling asset that is capable of presenting a lit signal aspect or indication.

G A.5.1.4 The extent to which excessive illumination could make an asset appear to show a different signal aspect or indication to the one being presented can be influenced by the product being used. Requirements for assessing the phantom display performance of signalling products are set out in GKRT0057 section 4.1.

G A.5.1.5 Problems arising from reflection and glare occur when there is a very large range of luminance, that is, where there are some objects that are far brighter than others. The following types of glare are relevant:

a) Disability glare, caused by scattering of light in the eye, can make it difficult to read a lit display.

b) Discomfort glare, which is often associated with disability glare. While being unpleasant, it does not affect the signal reading time directly, but may lead to distraction and fatigue.

G A.5.1.6 Examples of the adverse effect of disability glare include:

a) When a colour light signal presenting a lit yellow aspect is viewed at night but the driver is unable to determine whether the aspect is a single yellow or a double yellow.

b) Where a colour light signal is positioned beneath a platform roof painted white and the light reflecting off the roof can make the signal difficult to read.

G A.5.1.7 Options for militating against A5 include:

a) Using a product that is specified to achieve high light source: phantom ratio values.

b) Alteration to the features causing the glare or reflection.

c) Provision of screening."

3.1.16 A5 is referring to reflections and glare in the above passage.

3.1.17 Additionally, there is some text on the driver's field of vision and how minor distractions can reduce visibility of signals if viewed towards the driver's field of vision. The following is in "F6.6 b) of Appendix F: Guidance on Field of Vision":

"Sensitivity to movement in the peripheral field, even minor distractions can reduce the visibility of the asset if it is viewed towards the peripheral field of vision. The presence of clutter to the sides of the running line can be highly distracting (for example, fence posts, lamp-posts, traffic, or non-signal lights, such as house, compatibility factors or security lights)."

3.1.18 The RSSB guidance refers to the effect of glare and reflections upon train drivers and signals. Predominantly the guidance focus' on the ability of the train driver to see and accurately read the signals. However, there has been reference to phantom lighting, with this only being an issue if the signal is facing in the same direction at which the glare is coming from.

Local Legislation, Policy and Guidance

3.1.19 The following local policy **Table 6** is relevant to the assessment of the effects of the Proposed Development on Glint and Glare.

Table 6: Relevant Local Legislation, Policy and Guidance with Respect to Glint and Glare

Relevant document	Relevant polices	Where this is addressed in the ES
Central Lincolnshire Local Plan (Adopted April 2023)	Policy S14: Renewable Energy 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. To determine whether it is acceptable, the following tests will have to be met: • The impacts are acceptable having considered the scale, siting and design, and the consequent impacts on landscape character; visual amenity; biodiversity; geodiversity; flood risk; townscape; heritage assets, their settings and the historic landscape; and highway safety and rail safety; • The impacts are acceptable on aviation and defence navigation system/communications; and • The impacts are acceptable on the amenity of sensitive neighbouring uses (including local residents) by virtue of matters such as noise, dust, odour, shadow flicker, air quality and traffic.	The particular planning considerations can be found in Section 14.3 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**.

4. Ground Conditions

National Legislation

4.1.1 Regulation 5(2)(c) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 5) requires that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the likely significant direct and indirect effects of the Proposed Development on land and soil.

4.1.2 There are six key legislative drivers for dealing with risks to human health and the environment from ground conditions, namely:

a. Part 2A of the Environmental Protection Act (EPA) 1990 (the Contaminated Land Regime) (Ref 32);

b. The Water Resources Act 1991 (Ref 33);

c. Water Act 2003 (Ref 34);

d. Building Act 1984 (Ref 35);

e. The Building Regulations 2010 (Ref 36); and;

f. Planning Act 2008 (Ref 37).

4.1.3 In the UK, Part IIA of the EPA (Ref 32), as introduced by Section 57 of the Environment Act 1995 (Ref 38), provides the legislative framework within which site data is to be assessed. Under Part IIA, sites are identified as 'contaminated land' if they are: causing significant harm to human health; if there is a significant possibility of causing significant harm to human health; if the DCO Site is causing significant harm, or there is a significant possibility that it causes harm to non-human receptors; or there is pollution of controlled waters (i.e. both surface and groundwaters).

4.1.4 The Water Act 2003 (HMSO, 2004) (Ref 34) introduced a revision to the wording of the EPA, which requires that if a site is causing, or there is a significant possibility it could cause, significant pollution of controlled waters it may be determined as contaminated land. Once a site is determined to be "contaminated land" then remediation is required to render significant pollutant linkages insignificant (i.e. the source-pathway-receptor relationships that are associated with significant harm to human health and/or significant pollution of controlled waters), subject to a test of reasonableness.

4.1.5 The Water Resources Act 1991 (HMSO, 1991) (Ref 33) provides statutory protection for controlled waters (streams, rivers, canals, marine environment and groundwater) and makes it an offence to discharge to controlled waters without the permission or consent of the regulators of these areas.

4.1.6 The Building Act 1984 (HMSO, 1984) (Ref 35) and the Building Regulations etc. (Amendment) (England) 20230(Ref 36) are the two key legislative drivers when considering structural and design aspects of a development in terms of geotechnical properties of the ground. The Building Act 1984 requires that buildings are constructed so that ground movement caused by swelling, shrinkage, freezing, landslip or subsidence of the sub-soils will not impair the stability of any part of the building.

4.1.7 Other legislation of relevance to this topic includes:

a. Environmental Permitting (England and Wales) Regulations 2016 (Ref 39) (as amended);
b. Hazardous Waste (England and Wales) Regulations 2005 (Ref 40);
c. Contaminated Land (England) Regulations 2006 (Ref 41);
d. Environmental Damage (Prevention and Remediation) Regulations 2015 (Ref 42); and
e. Anti-Pollution Works Regulations 1999 (Ref 43).

National Policy

4.1.8 The relevant National Policy Statement (NPS) requirements, together with an indication of where in the ES the information provided to address these requirements in relation to ground conditions, are provided in **Table 7**.

Table 7: Relevant NPS EN-1 requirements for the ground conditions assessment

Relevant NPS EN-1 paragraph reference	Requirement	Where this is addressed in the ES
Paragraph 4.12.1	Issues relating to discharges or emissions from a proposed project, and which lead to other direct or indirect impacts on terrestrial, freshwater, marine, onshore, and offshore environments, or which include noise and vibration may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes, for example local planning consent or marine licences.	Effects on land quality are considered in the Phase 1 Preliminary Risk Assessment (PRA) Report provided as **Appendix 14-C [EN010154/APP/6.3]**. A summary of the assessment is provided in Section 14.5 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**
Paragraph 4.12.2	The planning and pollution control systems are separate but complementary. The planning system controls the development and use of land in the public interest. It plays a key role in protecting and improving the natural environment, public health and safety, and amenity, for example by attaching conditions to allow developments which would otherwise not be environmentally acceptable to proceed, and preventing harmful development which cannot be made acceptable even through conditions. Pollution control is concerned with preventing pollution through the use of measures to prohibit or limit the releases of substances to the environment from different sources to the lowest practicable level. It also ensures that ambient air and water quality meet standards that guard against impacts to the environment or human health.	This is considered in the Phase 1 PRA Report provided as **Appendix 14-C [EN010154/APP/6.3]**. a) A summary of the assessment is provided in Section 14.5 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**
Paragraph 4.12.6	Many projects covered by this NPS will be subject to the Environmental Permitting Regulations, which also incorporates operational waste management requirements for certain activities. When an applicant applies for an Environmental Permit, the relevant regulator (usually the EA or NRW but sometimes the local authority) requires that the	Environmental Permits will be sought prior to construction where relevant.

Relevant NPS EN-1 paragraph reference	Requirement	Where this is addressed in the ES
	application demonstrates that processes are in place to meet all relevant Environmental Permitting Regulations requirements.	
Paragraph 14.12.7	Applicants should make early contact with relevant regulators, including EA or NRW and the MMO, to discuss their requirements for Environmental Permits and other consents, such as marine licences.	The Environment Agency has been consulted throughout the pre-application stage as detailed in the relevant technical chapters.
Paragraph 4.12.9 and 4.12.10	In considering an application for development consent the Secretary of State should focus on whether The Proposed Development itself is an acceptable use of the land or sea, and the impact of that use, rather than the control of processes, emissions or discharges themselves. The Secretary of State should work on the assumption that the relevant pollution control regime and other environmental regulatory regimes, including those on land drainage, water abstraction and biodiversity, will be properly applied and enforced by the relevant regulator. It should act to complement but not seek to duplicate them.	This is considered in the Phase 1 PRA Report provided as **Appendix 14-C [EN010154/APP/6.3]**. A summary of the assessment is provided in Section 14.5 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**
Paragraph 4.12.14	The Secretary of State should be satisfied that development consent can be granted taking full account of environmental impacts. Working in close cooperation with the EA or NRW and/or the pollution control authority, and other relevant bodies, such as the MMO, the SNCB, Drainage Boards, and water and sewerage undertakers, the Secretary of State should be satisfied, before consenting any potentially polluting developments, that: • the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework • the effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the proposed	Effects on ground conditions and potential contamination are considered in the Phase 1 PRA Report provided as **Appendix 14-C [EN010154/APP/6.3]**. A summary of the assessment is provided in Section 14.5 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**

Relevant NPS EN-1 paragraph reference	Requirement	Where this is addressed in the ES
	development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits.	
Paragraph 5.11.13	Applicants should also identify any effects and seek to minimise impacts on soil health and protect and improve soil quality taking into account any mitigation measures proposed.	Effects on ground conditions and potential contamination are considered in the Phase 1 PRA Report provided as **Appendix 14-C [EN010154/APP/6.3]**. A summary of the assessment is provided in Section 14.5 of **Chapter 14: Other Environmental Topics [EN010154/APP/6.1].**
Paragraph 5.11.14	Applicants are encouraged to develop and implement a Soil Management Plan which could help minimise potential land contamination. The sustainable reuse of soils needs to be carefully considered in line with good practice guidance where large quantities of soils are surplus to requirements or are affected by contamination. Is	A **Framework Soil Management Plan [EN010154/APP/7.10]** has been prepared and is submitted with the DCO application. This Plan considers the sustainable reuse of soils in line with good practice guidance.
Paragraph 5.11.15	Developments should contribute to and enhance the natural and local environment by preventing new and existing developments from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.	

National Planning Policy Framework (NPPF)

4.1.9 The relevant NPPF paragraphs, together with an indication of where in the ES the information is provided to address these requirements, are provided in **Table 8**.

National Guidance

4.1.10 The assessment has also considered the following relevant policy, standards and guidance:

a. Environment Agency, (2009); Updated technical Background to the CLEA model; Science Report: SC050021/SR3 (Contaminated land exposure assessment (CLEA) spreadsheet based tool) (Ref 44);

b. Environment Agency Remedial Targets Methodology: Hydrogeological Risk Assessment for Land Contamination (Ref 45);

c. Human Health Toxicological Assessment of Contaminants in Soil, Science Report SC050021/SR2 (Ref 46);

d. Environment Agency, 2020; Land Contamination: Risk Management (Ref 47);

e. Environment Agency, 2010; Guiding Principles for Land Contamination (GPLC) 1, 2 and 3 (Ref 48);

f. Construction Industry Research and Information Association (CIRIA) Guidance C532, 'Control of Water Pollution from Construction Sites' (Ref 49);

g. The Chartered Institute of Environmental Health (CIEH) Local Authority Handbooks (Ref 50);

h. British Standard (BS) 8485:2015 - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (Ref 51); and

i. CIRIA Guidance C665, ‘Assessing Risks Posed by Hazardous Ground Gases to Buildings’ (Ref 52).

Local Policy

4.1.11 **Table 9** contains the following local policy which is relevant to the assessment of ground conditions effects of the Proposed Development.

Table 8: Relevant NPPF requirements for ground conditions assessment

Relevant NPPF paragraph reference	Requirement of the NPPF	Where this is addressed in the ES
Paragraph 180	Planning policies and decisions should contribute to and enhance the natural and local environment by: • protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); • preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and • remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.	Phase 1 PRA Report provided as **Appendix 14-C** of this ES **[EN010154/APP/6.3]**.
Paragraph 189	Planning policies and decisions should ensure that: • site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation); • after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and • adequate site investigation information, prepared by a competent person, is available to inform these assessments.	Phase 1 PRA Report provided as **Appendix 14-C** of this ES **[EN010154/APP/6.3]**.
Paragraph 190	Where a site is affected by contamination or land stability issues, responsibility for securing safe development rests with the developer and/or landowner.	N/A

Table 9: Relevant local legislation and policy for ground conditions

Relevant document	Requirement of the policy	Where this is addressed in the ES
Central Lincolnshire Local Plan (Adopted April 2023)	Policy S14: Renewable Energy 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. To determine whether it is acceptable, the following tests will have to be met: • The impacts are acceptable having considered the scale, siting and design, and the consequent impacts on landscape character; visual amenity; biodiversity; geodiversity; flood risk; townscape; heritage assets, their settings and the historic landscape; and highway safety and rail safety; and • The impacts are acceptable on the amenity of sensitive neighbouring uses (including local residents) by virtue of matters such as noise, dust, odour, shadow flicker, air quality and traffic. Policy S56: Development on Land Affected by Contamination Development proposals must take into account the potential environmental impacts on people, biodiversity, buildings, land, air and water arising from the development itself and any former use of the site, including, in particular, adverse effects arising from pollution. Where development is proposed on a site which is known to be or has the potential to be affected by contamination, a preliminary risk assessment should be undertaken by the developer and submitted to the relevant Central Lincolnshire Authority as the first stage in assessing the risk of contamination. Proposals will only be permitted if: • it can be demonstrated that the site is suitable for its proposed use; • layout and drainage have taken adequate account of ground conditions, contamination and gas risks arising from previous uses and any proposed sustainable land remediation and	Phase 1 PRA Report provided as **Appendix 14-C** of this ES **[EN010154/APP/6.3]**.

Relevant document	Requirement of the policy	Where this is addressed in the ES
	• there are no significant impacts on future users, neighbouring users, groundwater or surface water.	

5. Major Accidents or Disasters

National Legislation

5.1.1 Regulation 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 5) requires that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the likely significant direct and indirect effects of the Proposed Development on the population and human health. Regulation 5(4) provides that consideration should also be given to the vulnerability of the proposed development to major accidents or disasters that are relevant to that development.

5.1.2 The EIA Directive and domestic Infrastructure Planning (Environmental Impact Assessment) Regulations (Ref 5) cite two specific directives as examples of risk assessments to be considered within EIA. These are the Directive 2012/18/EU of the European Parliament and of the European Council (which deals with major accident hazard registered sites) (Ref 53) and the Council Directive 2009/71/Euratom (which deals with nuclear sites) (Ref 54). Neither of these Directives is relevant to the Proposed Development.

5.1.3 Legislation in force to ensure the protection of workers in the workplace, thus minimising any risk from major accidents or disasters to a reasonable level, includes:

a. Health and Safety at Work etc. Act 1974 (Ref 55);
b. Management of Health and Safety at Work Regulations 1999 (Ref 56);
c. Workplace (Health, Safety and Welfare) Regulations 1992 (Ref 57); and
d. Construction (Design and Management) (CDM) 2015 Regulations (Ref 58).

National Policy

5.1.4 The relevant NPS requirements, together with an indication of where in the ES the information provided to address these requirements, are provided in **Table 10**. NPS EN-3 and EN-5 do not contain requirements relevant to the Major Accidents and Disasters assessment for this Proposed Development. Therefore, **Table 10** only lists relevant NPS requirements from NPS EN-1.

Table 10: Relevant NPS EN-1 requirement for Major Accidents and Disasters

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
Paragraph 4.13.3	Some energy infrastructure will be subject to the Control of Major Accident Hazards (COMAH) Regulations 2015. These Regulations aim to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any that do occur. COMAH regulations apply throughout the life cycle of the facility, i.e. from the design and build stage through to decommissioning. They are enforced by the Competent Authority comprising HSE or ONR (Office for Nuclear Regulation, for nuclear) and the EA acting jointly in England and by the HSE and NRW acting jointly in Wales, and the HSE and Scottish Environment Protection Agency (SEPA) acting jointly in Scotland.	The Proposed Development is not subject to the COMAH Regulations.
Paragraph 4.13.5	Applicants should consult with the HSE on matters relating to safety.	The HSE have been formally consulted by the Planning Inspectorate as part of the preparation of the Scoping Opinion (**Appendix 1-B [EN010154/APP/6.3]**). As a prescribed consultation body, the HSE was also consulted during statutory consultation.

National Planning Policy Framework

5.1.5 Although not directly relevant to energy developments, the NPPF does refer, at paragraph 97, to the fact that:

"planning policies and decisions should promote public safety and take into account wider security and defence requirements by:

a. anticipating and addressing possible malicious threats and natural hazards, especially in locations where large numbers of people are expected to congregate. Policies for relevant areas (such as town centre and regeneration frameworks), and the layout and design of developments, should be informed by the most up-to-date information available from the police and other agencies about the nature of potential threats and their implications. This includes appropriate and proportionate steps that can be taken to reduce vulnerability, increase resilience and ensure public safety and security; and

b. recognising and supporting development required for operational defence and security purposes and ensuring that operational sites are not affected adversely by the impact of other development proposed in the area."

National Guidance

5.1.6 Guidance on the methodology for assessing major accidents and disasters in EIA are provided by the Institute of Environmental Management Assessments (IEMA) in their 'Primer', which is intended to introduce the concept of the topic and to offer an initial appreciation on methodology that could be adopted (Ref 59).

Local Policy

5.1.7 There is no local planning policy in relation to major accidents and disasters.

6. Materials and Waste

National Legislation

6.1.1 Regulation 5(2)(d) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 5) requires that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the likely significant direct and indirect effects of the Proposed Development on material assets.

Waste Framework Directive

6.1.2 Establishes the wider regulatory context for waste management across Europe. In addition to defining waste, it also introduces the concept of the waste hierarchy and establishes landfill diversion targets for Member States. The requirements of the Waste Framework Directive are transposed into applicable national law through the Waste (England and Wales) Regulations 2011 (Ref 60) as amended and The Waste (Miscellaneous Amendments) (EU Exit) Regulations 2019 (Ref 61).

The Waste (England and Wales) Regulations 2011

6.1.3 The Regulations (Ref 60) transposes the requirements of the Waste Framework Directive in England and Wales and requires the Secretary of State (SoS) to establish waste prevention programmes and waste management plans that apply the waste hierarchy (as defined in the Waste Framework Directive). The waste hierarchy prioritises waste prevention, followed by preparing for reuse, recycling, recovery and finally disposal to the management of waste. The Regulations require businesses to apply the waste hierarchy when managing waste, and also require that measures are taken to ensure that, by the year 2020, at least 70% by weight of non-hazardous Construction and Demolition (C&D) waste is subjected to material recovery.

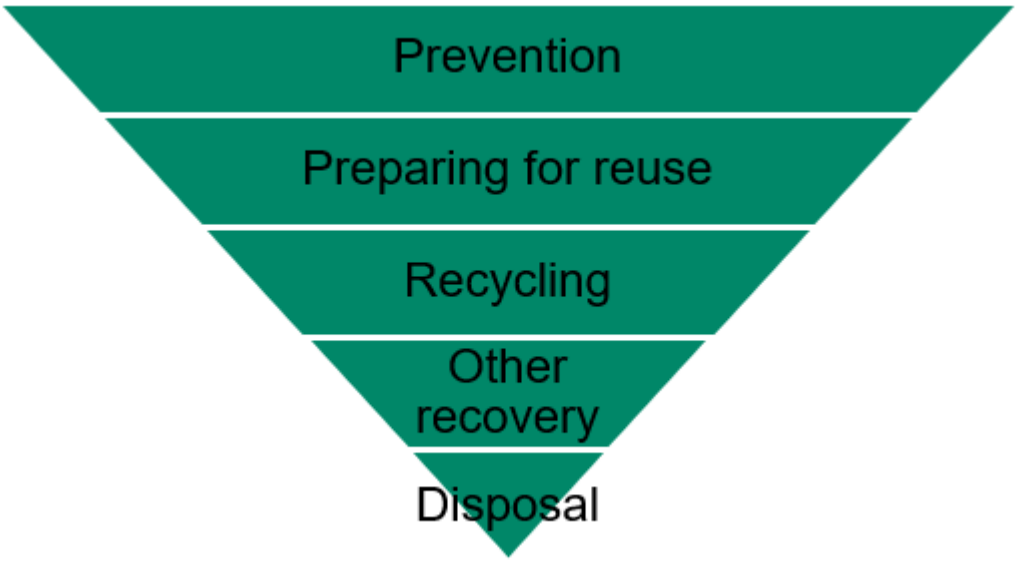

Figure 1: The Waste Hierarchy

Source: Ref 62

Environmental Protection Act 1990

6.1.4 The duty of care for waste management is set out under section 34 of the Environmental Protection Act 1990 (Ref 63) and the Waste (England and Wales) Regulations 2011 (as amended) (Ref 60). It requires anyone who imports, produces, carried, keeps, treats or disposes of waste to take all reasonable steps to ensure that waste is managed properly and places a duty on producers and holders of waste to:

a. Prevent illegal disposal, treatment or storage of waste;

b. Handle their waste safely;

c. Know whether the waste is hazardous or non-hazardous;

d. Store waste securely in a manner that prevents release of the waste;

e. Provide an accurate written description of the waste in order to facilitate the compliance of others with the Duty and avoidance of the offences under Section 33 of the Environmental Protection Act 1990: via a compulsory system of Controlled Waste Transfer Notes (WTNs) which controls the transfer of waste between parties; and

f. Ensure anyone dealing with their waste has the necessary authorisation.

The Environmental Permitting (England and Wales) Regulations 2016

6.1.5 The Regulations (Ref 64) require sites where waste is processed, treated or disposed of to hold a valid Environmental Permit issued by the Environment Agency (EA). The Regulations also include a schedule of activities that are exempt from the requirements of permitting. However, to comply with the

Regulations, an exempt activity must generally be registered with the EA before commencing.

The Hazardous Waste (England and Wales) Regulations 2005 (amended in 2016)

6.1.6 The Regulations (Ref 65) place a requirement on producers of the waste to:

a. Classify the waste;

b. Separate hazardous waste from other general waste streams;

c. Use authorised businesses to collect, recycle or dispose of waste; and

d. Complete relevant hazardous waste consignment notes.

Environment Act 2021

6.1.7 The Act (Ref 66) makes provision about targets, plans and policies for improving the natural environment; for statements and reports about environmental protection; for the establishment of the Office for Environmental Protection; about waste and resource efficiency; about air quality; for the recall of products that fail to meet environmental standards; about water; about nature and biodiversity; for conservation covenants; about the regulation of chemicals; and for connected purposes. The Act will deliver:

a. An extension of producer responsibility to make producers pay for 100% of the cost of disposal of products, starting with plastic packaging.

b. A Deposit Return Scheme for single use drinks containers.

c. Charges for single use plastics.

d. Greater consistency in recycling collections in England.

e. Electronic waste tracking to monitor waste movements and tackle fly-tipping.

f. Further tackling of waste crime.

g. The power to introduce new resource efficiency information (labelling on the recyclability and durability of products).

h. The regulation of the shipment of hazardous waste.

i. A ban or export restriction of waste to non-Organisation for Economic Co-operation and Development (OECD) countries.

The Waste Electrical and Electronic Equipment (WEEE) Regulations 2013

6.1.8 The WEEE Regulations 2013 (as amended) (Ref 67) aim to reduce the environmental impact of electrical and electronic waste. They require producers to finance the collection, treatment, and recycling of such waste, ensuring that hazardous substances are managed safely. The regulations also

set targets for the recovery and recycling of materials, promoting a circular economy by encouraging the reuse of valuable resources.

The Waste Batteries and Accumulators (Amendment) Regulations 2009

6.1.9 The Waste Batteries and Accumulators Regulations 2009 (Ref 68) set out comprehensive requirements for the collection, treatment, recycling, and disposal of all battery types in the UK. Key aims include reducing the environmental impact of batteries by ensuring their proper disposal and recycling and meeting specific collection targets: 25% by 2012 and 45% by 2016. The regulations mandate that producers finance the collection and recycling processes, and they establish obligations for battery compliance schemes, distributors, and other economic operators to facilitate the safe and efficient handling of waste batteries.

National Policy

National Planning Policy for Waste

6.1.10 The National Planning Policy for Waste (Ref 69) sets out detailed waste planning policies to be applied in conjunction with the National Planning Policy Framework. It states:

"*when determining planning applications for non-waste development, local planning authorities should, to the extent appropriate to their responsibilities, ensure that:*

a. *The likely impact of proposed, non-waste related development on existing waste management facilities, and on sites and areas allocated for waste management, is acceptable and does not prejudice the implementation of the waste hierarchy and/or the efficient operation of such facilities;*

b. *New, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development, and*

c. *The handling of waste arising from the construction and operation of development maximises reuse/recovery opportunities, and minimises off-site disposal*".

The Waste Management Plan for England 2021

6.1.11 The Waste Management Plan for England 2021 (Ref 70) Provides an overview of waste management in England and reiterates the requirement for all waste producers and waste management providers to implement the waste hierarchy. It also highlights the need for waste to be managed using the proximity principle and confirms England's commitment to recovering at least 70% by weight of non-hazardous C&D waste by 2020 (excluding soils and stones). Recovery is assumed in the context of this policy to include reuse, recycling and incineration with energy recovery.

A Green Future: Our 25 Year Plan to Improve the Environment 2018

6.1.12 The Green Future Plan (Ref 71) "sets out goals for improving the environment within a generation and leaving it in a better state than we found it". It details how the government will work with communities and businesses to do this. The following policies are relevant:

a. Make sure that resources are used more efficiently and kept in use for longer to minimise waste and reduce its environmental impacts by promoting reuse, remanufacturing and recycling.

b. Work towards eliminating all avoidable plastic waste by the end of 2042 and all avoidable waste by 2050.

c. Reducing food supply chain emissions and waste.

d. Reducing litter and littering.

e. Improving management of residual waste.

Environmental Improvement Plan 2023

6.1.13 The 25 Year Environment Plan (Ref 20) sets out the government's 25-year plan to improve the environment within a generation. The Plan defines 10 goals and provides a framework and vision for how these are to be achieved. The goals include: maximise our resources, minimise our waste. In accordance with the Environment Act 2021 the 25-year plan is to be reviewed and updated every five years; the Environmental Improvement Plan 2023 is the first of these updates. The Environmental Improvement Plan 2023 reinforces the intent of the 25 Year Environment Plan and sets out the progress made against all 10 goals, the specific targets and commitments made in relation to each goal, and the government's plan to continue to deliver these targets and the overarching goals. The 25 Year Environment Plan and the Environmental Improvement Plan 2023 highlight the government's support for the reduction in the UK's carbon footprint; protection and enhancement of the natural environment; and ensuring land is managed with environmental gains.

Our Waste, Our Resources, A Strategy for England 2018

6.1.14 The Strategy for England (Ref 72) will help the government to meet the commitments outlined in the 25 Year Plan and "sets out how we will preserve our stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. At the same time we will minimise the damage caused to our natural environment by reducing and managing waste safely and carefully, and by tackling waste crime." The strategy combines actions to be taken now and commitments for the coming years. Key targets and milestones and targets, which could be relevant to The Proposed Development, include:

a. Roll out of a deposit return scheme;

b. Legislation for mandatory separate food waste collections – by the end of March 2026;

c. 75% recycling rate for packaging (subject to consultation);

d. 65% recycling rate for municipal solid waste – 2035; and

e. Municipal waste to landfill 10% or less – 2035.

The Waste Prevention Programme for England: Maximising Resources, Minimising Waste 2023

6.1.15 The Waste Prevention Programme (Ref 73) builds on and embeds strategic principle 2 from the Our Waste, Our Resources Strategy, to prevent waste from occurring in the first place and manage it better when it does. The goal is for a circular economy approach which retains products and materials in circulation for as long as possible and at their highest value.

National Policy Statements

6.1.16 The relevant NPS requirements, together with an indication of where in the ES the information provided to address these requirements, are provided in **Table 11**. NPS EN-3 and EN-5 do not contain specific requirements relevant to the materials and waste assessment for this Proposed Development. Therefore, **Table 11** only lists relevant NPS requirements from NPS EN-1.

Table 11: Relevant NPS EN-1 requirements for the Materials and Waste Assessment

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
Paragraph 5.15.1	Government policy on hazardous and non-hazardous waste is intended to protect human health and the environment by producing less waste and by using it as a resource wherever possible. Where this is not possible, waste management regulation ensures that waste is disposed of in a way that is least damaging to the environment and to human health.	Waste management is considered in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**. A Site Waste Management Plan (SWMP) will be produced by the contractor prior to construction.
Paragraph 5.15.2	Sustainable waste management is implemented through the "waste hierarchy", which sets out the priorities that must be applied when managing waste: • prevention; • preparing for reuse; • recycling; • other recovery, including energy recovery; and • disposal.	Further details of materials and waste management have been provided in a **Framework CEMP, [EN010154/APP/7.7] OEMP [EN010154/APP/7.7] and DEMP [EN010154/APP/7.9]**; which is submitted as part of the DCO application. An assessment of the impact of the waste arising from development on the capacity of waste management facilities (specifically landfill capacity as per the IEMA Guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach (Ref 76) to deal with other waste arising in the area for at least five years of operation is considered in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**.
Paragraph 5.15.4	All large infrastructure projects are likely to generate hazardous and non-hazardous waste. The EA's Environmental Permitting (EP) regime incorporates operational waste management requirements for certain activities. When an applicant applies to the EA for an Environmental Permit, the EA will require the application to demonstrate that processes are in place to meet all relevant EP requirements.	
Paragraph 5.15.3	Disposal of waste should only be considered where other waste management options are not available or where it is the best overall environmental outcome.	

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
Paragraph 5.15.4	All large infrastructure projects are likely to generate hazardous and non-hazardous waste. The EP regime incorporates operational waste management requirements for certain activities. When an applicant applies to the EA for an environmental permit, the EA will require the application to demonstrate that processes are in place to meet all relevant EP requirements.	
Paragraph 5.15.8	The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a report that sets out the sustainable. management of waste and use of resources throughout any relevant demolition, excavation and construction activities. The arrangements described and a report setting out the sustainable management of waste and use of resources should include information on how re-use and recycling will be maximised in addition to the proposed waste recovery and disposal system for all waste generated by the development. They should also include an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation.	
Paragraph 5.15.13	The Secretary of State should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. It should be satisfied that: any such waste will be properly managed, both on-site and off-site; the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and	

Relevant NPS EN-1 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.	
Paragraph 5.15.16	Where necessary, the Secretary of State should use requirements or obligations to ensure that appropriate measures for waste management are applied. The IPC may wish to include a condition on revision of waste management plans at reasonable intervals when giving consent.	
Paragraph 5.15.18	Where The Proposed Development will be subject to the Environmental Permitting regime, waste management arrangements during operations will be covered by the permit and the considerations set out in Section 4.12 (Pollution control and other environmental regulatory regimes) will apply.	

National Planning Policy Framework

6.1.17 The relevant NPPF (Ref 4) paragraphs, together with an indication of where in the ES, the information is provided to address these requirements, are provided in **Table 12** below.

National Guidance

National Planning Policy Guidance (NPPG) for Waste (Ref 74) and Minerals (Ref 75)

6.1.18 Published to provide more in-depth guidance to the NPPF. The NPPG aims to make planning guidance more accessible and ensures that the guidance is kept up to date.

IEMA Guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach (Ref 76)

6.1.19 The document offers guidance and recommendations for EIA practitioners and stakeholders concerned with the impacts and effects of materials and waste on the environment. The guidance provides considerations for screening, scoping, consultation, assessment and subsequent reporting and monitoring.

Contaminated Land: Applications in Real Environments (CL:AIRE) Definition of Waste: Development Industry Code of Practice (DoW CoP) (Ref 77)

6.1.20 The DoW CoP provides a process which enables the reuse of excavated materials on-site or their movement between sites. Use of the DoW CoP supports the sustainable and cost-effective development of land. It can provide an alternative to Environmental Permits or Waste Exemptions.

Waste and Resources Action Programme (WRAP) Designing Out Waste: A Design Team Guide for Civil Engineering (Ref 78)

6.1.21 The guide outlines the case for taking action to designing out waste, provides a detailed explanation of the key principles that designers can use during the design process and how these principles can be applied to civil engineering and building projects to maximise opportunities to reduce construction waste and use materials more efficiently. It gives examples of technical solutions and how, in practice, designers have helped achieve significant waste reductions.

Waste Duty of Care Code of Practice (Ref 79)

6.1.22 The code of practice sets out practical guidance on how to meet the waste duty of care requirements. It was issued under section 34(7) of EPA (Ref 63) in relation to the duty of care set out in Section 34(1) of that Act.

6.1.23 This code of practice applies to those that import, produce, carry, keep, treat, dispose of or, as a dealer or broker have control of, certain waste in England or Wales.

6.1.24 Failure to comply with the duty of care is an offence with no upper limit on the courts' power to fine. In some instances a fixed penalty notice may be issued for failure to comply with the duty of care in place of prosecution. The code of practice is admissible as evidence in legal proceedings for Section 34(1) offences and its rules must be taken into account where relevant to questions raised in the case.

Applying the Waste Hierarchy (Ref 80)

6.1.25 This guidance was produced under regulation 15(1) of the Waste (England and Wales) Regulations 2011 (Ref 60) and any person subject to the regulation 12 duty in relation to the waste hierarchy must have regard to it. The guidance is for any business or public body which generates, handles or treats waste. It sets out:

a. What the waste hierarchy is;

b. How it works for a range of common materials and products;

c. What businesses and public bodies need to do; and

d. Key questions and ideas for dealing with waste in line with the hierarchy.

Solar Power Europe Lifecycle Quality Best Practice Guidance

6.1.26 The Solar Power Lifecycle Quality Best Practice Guidance (Ref 81) focuses on ensuring quality assurance throughout the entire lifecycle of solar projects. It emphasises the importance of due diligence, risk management, and standardising key terms and stakeholder roles across different phases, including Engineering, Procurement, and Construction (EPC), Operation and Maintenance (OM), and Asset Management. This guidance aims to enhance the technical and economic performance of solar systems by promoting best practices and continuous improvement. The guidance includes a section on Health, Safety, Security and Environment (HSSE) in which waste is considered.

UK Battery Strategy

6.1.27 The UK Battery Strategy (Ref 82) aims to establish a globally competitive battery supply chain by 2030, supporting economic prosperity and the transition to net zero. It focuses on sustainable battery design, manufacturing, and use, backed by over £2 billion in new capital and research & development funding for the automotive sector. The strategy emphasises innovation, resilience in manufacturing supply chains, and the development of a sustainable battery industry. It also highlights the importance of a thriving battery innovation ecosystem and aims to position the UK as a world leader in this field. The strategy includes a section on Circular Economy in which battery waste and recycling is considered.

Solar Supply Chains: Sustainability Issues and Action

6.1.28 Solar Supply Chains: Sustainability Issues and Action (Ref 83) by Solar Energy UK addresses the key sustainability challenges facing solar supply chains, such as responsible sourcing, environmental impact, etc. The guidance promotes sustainability best practices and outlines actionable steps for organisations to ensure responsible investment in solar projects.

Local Policy

6.1.29 **Table 13** below contains the local policy which is relevant to the assessment of materials and waste for the Proposed Development.

Table 12: Relevant NPPF requirements for the material and waste assessment

Relevant NPPF paragraph reference	Requirement of the NPPF	Where this is addressed in the ES
Paragraph 8c	There is an emphasis to minimise waste, to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.	Waste management is considered in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**. Further details of materials and waste management have been provided in a **Framework CEMP, [EN010154/APP/7.7] OEMP [EN010154/APP/7.7] and DEMP [EN010154/APP/7.9]**; which is submitted as part of the DCO application.
Paragraph 223	Facilitating the sustainable use of minerals by taking account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source minerals supplies indigenously.	Impacts on Mineral Safeguarding Areas are not assessed in a materials and waste assessment, in accordance with the IEMA Guidance. **Chapter 12: Socio-economics and Land Use** of the ES **[EN010154/APP/6.1]** covers this aspect, a Minerals Safeguarding Assessment is provided within **Appendix 12-C** of this ES **[EN010154/APP/6.3]**.

Table 13: Relevant local policy for materials and waste

Document	Requirement of the policy	Where this is addressed in the ES
Central Lincolnshire Local Plan (Adopted April 2023)	**Policy S10: Supporting a Circular Economy** The Joint Committee is aware of the high energy and material use consumed on a daily basis, and, consequently, is fully supportive of the principles of a circular economy. Accordingly, and to complement any policies set out in the Minerals and Waste Development Plan, proposals will be supported, in principle, which demonstrate their compatibility with, or the furthering of, a strong circular economy in the local area (which could include cross-border activity elsewhere in Lincolnshire). Policy S10 aims to support development proposals which will contribute to the delivery of circular economy principles. Examples of such proposals include: • Proposals which have been designed to reduce material demands and enable building materials, components and products to be disassembled and re-used at the end of their useful life; • Proposals which incorporate sustainable waste management onsite; • Proposals which make specific provision for the storage and collection of materials for recycling and/ or reuse; and • Proposals for the colocation of two or more businesses/services for the purpose of sharing resources or maximising use of waste products.	Overarching waste management strategy including applying the waste hierarchy and designing out waste as per circular principles is covered in: **Volume 1, Chapter 14: Other Environmental Topics [EN010154/APP/6.1]** and the Framework CEMP, OEMP and DEMP.

Document	Requirement of the policy	Where this is addressed in the ES
	Policy S14: Renewable Energy Decommissioning renewable energy infrastructure Decommissioning renewable energy infrastructure 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 DCO Site will be protected or enhanced further, and how the materials to be removed would, to a practical degree, be re-used or recycled. **Policy S53: Design and Amenity** Provide adequate storage, waste, servicing and utilities for the use proposed. 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. 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; Use high quality materials which are durable and ensure buildings and spaces are adaptive.	
Lincolnshire Minerals and Waste	**Policy M11: Safeguarding of Mineral Resources**	There are no allocated/safeguarded mineral sites within the Proposed Development Boundary. The Materials and waste

Document	Requirement of the policy	Where this is addressed in the ES
Local Plan (adopted June 2016)	Applications for non-minerals development in a minerals safeguarding area must be accompanied by a Minerals Assessment. Planning permission will be granted for development within a Minerals Safeguarding Area provided that it would not sterilise mineral resources within the Mineral Safeguarding Areas or prevent future minerals extraction on neighbouring land. **Policy M12: Safeguarding of Existing Mineral Sites and Associated Minerals Infrastructure** Mineral sites (excluding dormant sites) and associated infrastructure that supports the supply of minerals in the County will be safeguarded against development that would unnecessarily sterilise the sites and infrastructure or prejudice or jeopardise their use by creating incompatible land uses nearby. **Policy W8: Safeguarding Waste Management Sites** The County Council will seek to safeguard existing and allocated waste management facilities from redevelopment to a non-waste use and/ or the encroachment of incompatible development unless: • alternative provision in the vicinity can be made in accordance with the Development Plan; or • it can be demonstrated that there is no longer a need for a waste facility at that location.	assessment (IEMA Guidance) methodology only takes into account safeguarded mineral sites. Mineral Safeguarding Areas are covered in **Appendix 12-C: Minerals Assessment Report [EN010154/APP/6.3]**. There are no allocated/safeguarded waste sites within the Proposed Development Boundary.

7. Telecommunications and Utilities

7.1.1 There is no legislation, policy or guidance considered relevant to the assessment of telecommunications, television reception and utilities insofar as these matters relate to the Proposed Development.

8. Electric and Electromagnetic Fields

National Legislation

8.1.1 Regulation 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 5) requires that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the likely significant direct and indirect effects of the Proposed Development on the population and health.

8.1.2 The Control of Electromagnetic Fields at Work Regulations 2016 (Ref 84) sets out the duties of employers in relation to controlling the risks to employees for, Electric and Magnetic Fields (EMF). This includes a requirement to assess employees' potential exposure to EMFs with reference to action levels (ALs) and exposure limit values (ELVs).

National Policy

National Policy Statements

8.1.3 The EIA takes account of the following National Policy Statements (NPSs), designated in January 2024, which have effect in relation to the Proposed Development and provide a framework for decision making by the Secretary of State:

a. Overarching National Policy Statement for Energy (EN-1) (November 2023) (Ref 1),

b. National Policy Statement for Renewable Energy Infrastructure (EN-3) (November 2023) (Ref 2), and

c. National Policy Statement for Electricity Networks Infrastructure (EN-5) (November 2023) (Ref 3).

8.1.4 The NPSs set out the Government's energy policy, the need for new infrastructure and guidance for determining an application for a DCO. The NPSs include specific criteria and issues which should be covered by the Applicants' assessments of the effects of their scheme, and how the decision maker should consider these impacts.

8.1.5 The relevant NPS requirements, together with an indication of where in the ES the information provided to address these requirements, are provided in **Table 14**. NPS EN-1 and EN-3 do not contain requirements relevant to the assessment of electric and magnetic fields for this Proposed Development. Therefore, **Table 14** only lists relevant NPS requirements from NPS EN-5.

Table 14: Relevant NPS EN-5 requirements for the Materials and Waste Assessment

Relevant NPS EN-5 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
Paragraph 2.10.11	The applicant should consider the following factors: a. height, position, insulation and protection (electrical or mechanical as appropriate) measures subject to ensuring compliance with the Electricity Safety, Quality and Continuity Regulations 2002; b. that optimal phasing of high voltage overhead power lines is introduced wherever possible and practicable in accordance with the Code of Practice to minimise EMFs; and c. any new advice emerging from the Department of Health and Social Care relating to government policy for EMF exposure guidelines	The Proposed Development design will ensure compliance with Electricity Safety, Quality and Continuity Regulations 2002 (Ref 84), however, this is not specifically addressed within the ES. As set out in **Chapter 3: The Proposed Development** of this ES **[EN010154/APP/6.1]**, the assets associated with the Proposed Development would be fully compliant with the relevant Government policy. Additionally, as outlined in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**, all the EMF produced would be below the relevant exposure limits.
Paragraph 2.10.12	Where it can be shown that the line will comply with the current public exposure guidelines and the policy on phasing, no further mitigation should be necessary.	As outlined in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]** all the EMF produced would be below the relevant exposure limits.
Paragraph 2.10.13	Where EMF exposure is within the relevant public exposure guidelines, re-routeing a proposed overhead line purely on the basis of EMF exposure or undergrounding a line solely to further reduce the level	As set out in **Chapter 3: The Proposed Development [EN010154/APP/6.1]**, the majority of assets associated with the Proposed Development with potential to produce EMF will be underground. Additionally, as outlined in **Chapter 14: Other**

Relevant NPS EN-5 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	of EMF exposure are unlikely to be proportionate mitigation measures	**Environmental Topics [EN010154/APP/6.1]**, all the EMF produced would be below the relevant exposure limits.
Paragraph 2.11.9	This NPS does not repeat the detail of the ICNIRP 1998 guidelines on restrictions or reference levels. The government has developed with the electricity industry a Code of Practice, 'Power Lines: Demonstrating compliance with EMF public exposure guidelines – a voluntary Code of Practice', published in February 2011 that specifies the evidence acceptable to show compliance with ICNIRP 1998 guidelines and is also in line with the terms of the 1999 EU Council Recommendation on EMF exposure.	Noted, the ICNIRP 1998 guidelines are considered in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**and it is concluded that all the EMF produced would be below the relevant exposure limits.
Paragraph 2.11.11	Industry currently applies optimal phasing to 275kV and 400kV overhead lines voluntarily wherever operationally possible, which helps to minimise the effects of EMF. The government has developed with industry a voluntary Code of Practice, 'Optimum Phasing of high voltage double-circuit Power Lines – A Voluntary Code of Practice', published in March 2012, that defines the	As set out in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**, all the EMF produced would be below the relevant exposure limits.

Relevant NPS EN-5 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	circumstances where industry can and will optimally phase lines with a voltage of 132kV and above.	
Paragraph 2.11.12	Where the applicant cannot demonstrate that the line will be compliant with the Electricity Safety, Quality and Continuity Regulations 2002, with the exposure guidelines as specified in the Code of Practice on compliance, and with the policy on phasing as specified in the Code of Practice on optimal phasing then the Secretary of State should not grant consent.	The Proposed Development design will ensure compliance with Electricity Safety, Quality and Continuity Regulations 2002 (Ref 84), however, this is not specifically addressed within the ES. As set out in **Chapter 3: The Proposed Development [EN010154/APP/6.1]**, the assets associated with the Proposed Development would be fully compliant with the relevant Government policy. Additionally, as outlined in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**, all the EMF produced would be below the relevant exposure limits.
Paragraph 2.11.13	Undergrounding of a line would reduce the level of EMFs experienced, but high magnetic field levels may still occur immediately above the cable. It is the government's policy that power lines should not be undergrounded solely for the purpose of reducing exposure to EMFs	Noted, as set out in **Chapter 3: The Proposed Development [EN010154/APP/6.1]**, the assets associated with the Proposed Development that are located underground are not solely for the purpose of reducing exposure to EMFs. Additionally, **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]** concludes that all the EMF produced would be below the relevant exposure limits
Paragraph 2.11.14	In order to avoid unacceptable adverse impacts of EMFs from electricity network infrastructure on aviation, the	As set out in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**, the DCO Site is not within the

Relevant NPS EN-5 paragraph reference	Requirement of the NPS	Where this is addressed in the ES
	Secretary of State will take account of statutory technical safeguarding zones defined in accordance with Planning Circular 01/03, or any successor, when considering recommendations for DCO applications. More detail on this issue can be found in section 5.5 of EN-1.	safeguarding zone of any safeguarded civil aerodrome as listed on annex 3 of the Planning Circular 01/03. Therefore, the levels of EMF experienced by potential aviation receptors is considered to be negligible.
Paragraph 2.11.15	Where a statutory consultee on the safeguarding of technical facilities identifies a risk that the EMF effect of electricity network infrastructure would compromise the effective and safe operation of such facilities, the potential impact and siting and design alternatives will need to have been fully considered as part of the application.	The Proposed Development design will ensure compliance with Electricity Safety, Quality and Continuity Regulations 2002 (Ref 84). As set out in **Chapter 3: The Proposed Development [EN010154/APP/6.1]**, the assets associated with the Proposed Development would be fully compliant with relevant Government policy. Additionally, as outlined in **Chapter 14: Other Environmental Topics [EN010154/APP/6.1]**, all the EMF produced would be below the relevant exposure limits.

National Planning Policy Framework

8.1.6 There are no relevant NPPF paragraphs for electric and electromagnetic fields.

Local Policy

8.1.7 There are no relevant local policy provisions in relation to EMF.

Guidance

8.1.8 The assessment has also considered:

a. Department of Energy and Climate Change (DECC) (2012). Power Lines: Demonstrating Compliance with EMF public exposure guidelines (Ref 85);

b. National Grid (2015). Undergrounding high voltage electricity transmission lines (Ref 86);

c. Energy Networks Association (2012). Electric and Magnetic Fields: The Facts (Ref 87);

d. Energy Networks Association (2017). Electric and Magnetic Fields: The Facts (Ref 88);

e. International Commission on Non-Ionizing Radiation Protection (ICNIRP) (1998). Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300GHz) (Ref 89);

f. ICNIRP (2020). Guidelines for limiting exposure to Electromagnetic Fields (100kHz to 300GHz) (Ref 90); and

g. Department of Transport (2002) The Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) Direction (updated 2016) (0).

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Ref 2 Department for Energy Security & Net Zero (2023) National Policy Statement for Renewable Energy Infrastructure (EN-3). Available at: https://assets.publishing.service.gov.uk/media/65a7889996a5ec000d731aba/nps-renewable-energy-infrastructure-en3.pdf

Ref 3 Department for Energy Security & Net Zero (2023) National Policy Statement for Electricity Networks Infrastructure (EN-5). Available at: https://assets.publishing.service.gov.uk/media/65a78a5496a5ec000d731abb/nps-electricity-networks-infrastructure-en5.pdf

Ref 4 Ministry of Housing, Communities and Local Government (2024) National Planning Policy Framework. Available at: https://www.gov.uk/government/publications/national-planning-policy-framework-2

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Ref 9 H.M Government (1972). European Communities Act 1972. Available at: https://www.legislation.gov.uk/ukpga/1972/68/contents

Ref 10 European Union (2001). Clean Air For Europe (CAFE) Programme: Towards a Thematic Strategy for Air Quality. Available at: https://www.eea.europa.eu/themes/air/links/research-projects/clean-air-for-europe-programme-cafe

Ref 11 Council of the European Union (2008). Directive 2008/50/EC on Ambient Air Quality and Cleaner Air for Europe. Available at: https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32008L0050

Ref 12 Council of European Communities (1999). First Daughter Directive on Limit Values for Sulphur Dioxide, Nitrogen Dioxide and Oxides of Nitrogen, Particulate Matter and Lead in Ambient Air, 1999/30/EC. Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31999L0030

Ref 13 Council of European Communities (2000). Second Daughter Directive on Limit Values for Benzene and Carbon Monoxide in Ambient Air, 2000/69/EC. Available at: http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32000L0069

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Ref 15 Council of the European Union (1997). Directive 97/101/EC: Council Decision of 27 January 1997 establishing a reciprocal exchange of information and data from networks and individual stations measuring ambient air pollution within the Member States. Available at: http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A31997D0101

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Ref 20 H.M Government (2023). Environmental Improvement Plan 2023. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1133967/environmental-improvement-plan-2023.pdf

Ref 21 H.M. Government, “The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023,” His Majesty’s Stationery Office, 2023.

Ref 22 Department for Environment, Food & Rural Affairs (DEFRA) (2023). The air quality strategy for England. Available at: https://www.gov.uk/government/publications/the-air-quality-strategy-for-england

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