Meridian Solar Farm

EN010169

Volume 6

Environmental Statement

6.3 ES Appendix 16-1: Other Environmental Topics Legislation, Policy and Guidance

APFP Regulation 5(2)(a)

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

March 2026

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1. Introduction

1.1. Purpose of this Appendix

1.1.1. This Environmental Statement (ES) appendix identifies and describes the legislation, policy and guidance considered relevant to the assessment of the likely significant effects of Meridian Solar Farm (hereafter referred to as 'the Scheme') with regards to other environmental topics, including electric and magnetic fields (EMF), glint and glare, major accidents and disasters, and materials and waste. Policy is considered at both national and local levels.

1.1.2. This appendix does not assess the Scheme against legislation, policy and guidance, instead the purpose of considering legislation, policy and guidance in the EIA is twofold:

- To identify legislation, policy and guidance that could influence the sensitivity of receptors (and therefore the significance of effects) and any requirements for mitigation; and
- To identify legislation, policy and guidance that could influence the methodology of the EIA and signposting where this is dealt with in the ES. For example, a policy may require the assessment of an impact or the use of a specific methodology.

1.1.3. Instead, policy compliance is assessed within the **Planning Statement** (Doc Ref. 7.1).

1.1.4. The following sections identify and describe the legislation, policy and supporting guidance considered specifically relevant to the other environmental topic assessments, including EMF, glint and glare, major accidents and disasters, and materials and waste, which have been taken into account in preparing **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1).

2. Electric and Magnetic Fields

2.1.1. The following legislation, policy and guidance has been identified as relevant to the assessment of electric and magnetic fields.

2.2. Legislation

2.2.1. Regulation 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017[1] 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 Scheme on the population and health. Electromagnetic fields have the potential to impact on health and, therefore, have been considered within the ES.

2.2.2. The Control of Electromagnetic Fields at Work Regulations 2016[2] sets out the duties of employers in relation to controlling the risks to employees from EMFs. This includes a requirement to assess employees' potential exposure to EMFs with reference to action levels and exposure limit values. Compliance with this legislation will ensure that there are no significant effects on the health of the construction and operational workforce of the Scheme, and as such, an assessment of impacts on these receptors has been scoped out.

2.3. National Policy Statements

2.3.1. The EIA has been undertaken with reference to the following National Policy Statements (NPSs) which are relevant to the Scheme:

- Overarching National Policy Statement for Energy (NPS EN-1)[3];
- National Policy Statement for Renewable Energy (NPS EN-3)[4]; and

[1] The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: https://www.legislation.gov.uk/uksi/2017/572/data.pdf. [Accessed 15/09/2025]
[2] HM Government (2002). Electricity Safety, Quality and Continuity Regulations 2002. Available at: https://www.legislation.gov.uk/uksi/2002/2665/contents/made [Accessed 13 October 2025]
[3] DESNZ (2025). Overarching NPS for Energy (NPS EN-1). Available at: https://assets.publishing.service.gov.uk/media/695d1015f41883f4e50ed9ab/overarching-national-policy-statement-for-energy-en-1-web-accessible.pdf [Accessed 7 January 2026]
[4] DESNZ (2025). NPS for Renewable Energy Infrastructure (NPS EN-3). Available at: https://assets.publishing.service.gov.uk/media/695d1368b5c46330350ed9a2/national-policy-statement-for-renewable-energy-infrastructure-en-3-web-accessible.pdf [Accessed 7 January 2026]

- National Policy Statement for Electricity Networks Infrastructure (NPS EN-5)[5].

2.3.2. The NPSs set out the Government's energy policy for the 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 applicants should cover when assessing the effects of their Scheme, and how the Secretary of State should consider these impacts and any mitigation measures applied.

2.3.3. The relevant NPS requirements for EMFs are provided in Table 2-1, along with an indication of where in the ES this information can be sourced.

[5] DESNZ (2025). NPS for Electricity Networks (NPS EN-5). Available at: https://assets.publishing.service.gov.uk/media/695d12e1b5c46330350ed9a1/national-policy-statement-for-electricity-networks-infrastructure-en-5-web-accessible.pdf [Accessed 7 January 2026]

Table 2-1: Relevant NPS Policy for Electric and Magnetic Fields

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
Overarching NPS for Energy EN-1		
The Overarching NPS for Energy EN-1 does not contain provisions specific to EMFs within the context of the Scheme.		
NPS for Renewable Energy EN-3		
The NPS for Renewable Energy EN-3 does not contain provisions specific to EMFs within the context of the Scheme.		
NPS for Electricity Networks Infrastructure EN-5		
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 Scheme design will ensure compliance with Electricity Safety, Quality and Continuity Regulations 2002[6] and the assets associated with the Scheme will be fully compliant with the relevant Government policy. Additionally, the EMF levels resulting from the Scheme would be below the relevant 1998 International Commission on the Non-Ionizing Radiation Protection (ICNIRP) reference levels. Further information is provided within the **EMF Compliance Assessment** (Doc Ref. 7.8) and **ES Chapter 16: Other Environmental Topics,** Section 16.3 Electric and Magnetic Fields (Doc Ref. 6.1).

[6] HM Government (2002). Electricity Safety, Quality and Continuity Regulations 2002. Available at: https://www.legislation.gov.uk/uksi/2002/2665/contents/made [Accessed 13 October 2025]

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
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.	EMF levels resulting from the Scheme would be below the relevant 1998 ICNIRP reference levels. Further information is provided within the **EMF Compliance Assessment** (Doc Ref. 7.8) and **ES Chapter 16: Other Environmental Topics,** Section 16.3 Electric and Magnetic Fields (Doc Ref. 6.1).
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 of EMF exposure are unlikely to be proportionate mitigation measures.	EMF levels resulting from the Scheme would be below the relevant 1998 ICNIRP reference levels. Further information is provided within the **EMF Compliance Assessment** (Doc Ref. 7.8) and **ES Chapter 16: Other Environmental Topics,** Section 16.3 Electric and Magnetic Fields (Doc Ref. 6.1).
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	EMF levels resulting from the Scheme would be below the relevant 1998 ICNIRP reference levels. Further information is provided within the **EMF Compliance Assessment** (Doc Ref. 7.8) and **ES Chapter 16: Other Environmental Topics,** Section 16.3 Electric and Magnetic Fields (Doc Ref. 6.1).

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
	of the 1999 EU Council Recommendation on EMF exposure.	
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 circumstances where industry can and will optimally phase lines with a voltage of 132kV and above.	The Scheme proposes a single-circuit 400kV overhead line and, therefore, the guidance on optimal phasing is not applicable to the Scheme.
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	The Scheme design will ensure compliance with Electricity Safety, Quality and Continuity Regulations 2002[7] and the assets associated with the Scheme will be fully compliant with the relevant Government policy. The Scheme proposes a single-circuit 400kV overhead line and, therefore, the guidance on optimal phasing is not

[7] HM Government (2002). Electricity Safety, Quality and Continuity Regulations 2002. Available at: https://www.legislation.gov.uk/uksi/2002/2665/contents/made [Accessed 13 October 2025]

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
	Practice on optimal phasing then the Secretary of State should not grant consent.	applicable to the Scheme. Additionally, the EMF levels resulting from the Scheme would be below the relevant 1998 ICNIRP reference levels. Further information is provided within the **EMF Compliance Assessment** (Doc Ref. 7.8) and **ES Chapter 16: Other Environmental Topics,** Section 16.3 Electric and Magnetic Fields (Doc Ref. 6.1).
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.	EMF levels resulting from the Scheme would be below the relevant 1998 ICNIRP reference levels. Further information is provided within the **EMF Compliance Assessment** (Doc Ref. 7.8) and **ES Chapter 16: Other Environmental Topics,** Section 16.3 Electric and Magnetic Fields (Doc Ref. 6.1).
2.11.14	In order to avoid unacceptable adverse impacts of EMFs from electricity network infrastructure on communication, navigation and surveillance infrastructure, the 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	As set out in **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1), the Order Limits are not within the 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, including their communication, navigation and surveillance infrastructure, is considered to be negligible.

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
	issue can be found in section 5.5 of EN-1.	
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.	No concerns regarding the safeguarding of technical facilities due to EMFs have been raised during pre-application consultation with statutory consultees (refer to the **Consultation Report** (Doc Ref. 5.1)). EMFs are assessed within Section 16.3: Electric and Magnetic Fields of **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1), based on information provided within the **EMF Compliance Assessment** (Doc Ref. 7.8).

2.4. National Planning Policy Framework[8]

2.4.1. The National Planning Policy Framework (NPPF) outlines the Government's planning policies for England and provides guidance on their implementation. Paragraph 5 outlines that while the NPPF does not contain specific policies for Nationally Significant Infrastructure Projects (NSIPs), the NPPF is still relevant when considering the determination of DCOs. As a result, the EIA is taking the NPPF into account.

2.4.2. The NPPF does not contain provisions specific to EMFs within the context of the Scheme.

[8] National Planning Policy Framework (2025). Available at: https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf [Accessed 10 October 2025]

2.5. Other National Policies and Guidance

2.5.1. The assessment of EMFs has considered the following guidance, as referenced in the **EMF Compliance Assessment** (Doc Ref. 7.8):

- Department of Energy and Climate Change (DECC) (2012). Power Lines: Demonstrating Compliance with EMF public exposure guidelines[9]; and
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) (1998). Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300GHz)[10].

2.6. Local Policy and Guidance

2.6.1. There are no relevant local policy provisions in relation to EMFs.

3. Glint and Glare

3.1.1. The following legislation, policy and guidance has been identified as relevant to the assessment of glint and glare.

3.2. Legislation

3.2.1. There are no national legislation provisions specific to glint and glare within the context of the Scheme.

3.3. National Policy Statements

3.3.1. The relevant NPS requirements for glint and glare are provided in Table 3-1, along with an indication of where in the ES this information can be sourced.

[9] Department of Energy and Climate Change (DECC) (2012). Power Lines: Demonstrating Compliance with EMF public exposure guidelines. Available at: https://assets.publishing.service.gov.uk/media/5a796799ed915d07d35b53 97/1256-code-practice-emf-public-exp-guidelines.pdf [Accessed 13 October 2025]

[10] International Commission on Non-Ionizing Radiation Protection (ICNIRP) (1998). Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz). Available at: https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf [Accessed 13 October 2025]

Table 3-1: Relevant NPS Policy for Glint and Glare

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
Overarching NPS for Energy EN-1[3]		
5.5.38	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.	Impacts on aerodromes from the potential glint and glare generated by the Scheme has been assessed within **ES Chapter 16: Other Environmental Topics, Section 16.4 Glint and Glare** (Doc Ref. 6.1) and **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3).
5.5.40	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 glint and glare assessment, consultation has been undertaken regarding any aerodrome that may have potential to be affected by the Scheme. See **ES Chapter 16: Other Environmental Topics, Section 16.4 Glint and Glare** (Doc Ref. 6.1).
5.5.41	Any assessment of aviation or other defence interests should include potential impacts of The Proposed Development upon the operation of CNS infrastructure, Instrument Flight Procedures, flight patterns (both civil and military), generation of weather warnings and forecasts, other defence assets and aerodrome operational procedures. It should also assess the	This is addressed in **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3) and a summary is presented in **ES Chapter 16: Other Environmental Topics, Section 16.4 Glint and Glare** (Doc Ref. 6.1).

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
	cumulative effects of the project with other relevant projects in relation to aviation and defence.	
5.5.51	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 assessment of the proposal on aviation, NSWWS or defence interests has been carried out.	This is addressed in **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3) and a summary is presented in **ES Chapter 16: Other Environmental Topics, Section 16.4 Glint and Glare** (Doc Ref. 6.1).
5.5.63	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.	As set out in **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3) and **ES Chapter 16: Other Environmental Topics, Section 16.4 Glint and Glare** (Doc Ref. 6.1), there are no likely significant effects on aerodromes as a result of glint and glare from the Scheme.
NPS for Renewable Energy EN-3[4]		

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
2.10.95	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.	Potential glint and glare receptors have been qualitatively identified and assessed within **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3).
2.10.96	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 have been considered within **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3)
2.10.97	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.	Regard has been had to panel type when completing **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3). The proposed panels are fixed south-facing, no tracking panels are proposed.
2.10.98	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 within **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3).

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
2.10.126	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 specified angle of maximum reflection attenuation for the lifetime of the permission.	Solar PV Panels used as part of the Scheme will include anti-glare coating as standard, as set out within the **Design Parameters** (Doc Ref. 7.4).
2.10.127	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 **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3), which takes into account the final layout of the Scheme and the existing and proposed planting. No new landscaping planting is specifically required to mitigate effects from glint and glare.
2.10.128	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.	A worst-case has been assumed for each receptor in **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3). No change to the angle of the panels is considered to be required to mitigate effects.

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
2.10.150	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 **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3).
2.10.151	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 weight to claims of aviation interference because of glint and glare from solar farms.	Aviation impacts have been considered within **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3).
NPS for Electricity Networks Infrastructure EN-5[5]		
The NPS for Electricity Networks Infrastructure EN-5 does not contain provisions specific to glint and glare within the context of the Scheme.		

3.4. National Planning Policy Framework

3.4.1. The NPPF does not contain provisions specific to glint and glare within the context of the Scheme.

3.5. Other National Policies and Guidance

National Planning Policy Guidance on Renewable and Low Carbon Energy (UK)[11]

3.5.1. Paragraph 013 (Reference ID: 5-013-20150327) sets out planning considerations that relate to large scale ground-mounted solar PV farms. This determines that the deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscapes. However, the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively. Considerations to be taken into account by local planning authorities are *"The proposal's visual impact, the effect on landscape of glint and glare and on neighbouring uses and aircraft safety"* and *"The extent to which there may be additional impacts if solar arrays follow the daily movement of the sun."* Landscape and visual impacts are assessed in **ES Chapter 12: Landscape and Visual** (Doc Ref. 6.1), and glint and glare are considered in Section 16.4 of **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1) and **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3).

Planning Guidance for the Development of Large-Scale Ground Mounted Solar PV Systems[12]

3.5.2. As outlined within the BRE document 'Planning Guidance for the Development of Large-Scale Ground Mounted Solar PV Systems':

"*Glint may be produced as a direct reflection of the sun in the surface of the solar PV panel. It may be the source of the visual issues regarding viewer distraction. Glare is a continuous source of brightness, relative to diffused lighting. This is not a direct*

[11] National Planning Policy Guidance on Renewable and Low Carbon Energy (UK). Available at: https://www.gov.uk/guidance/renewable-and-low-carbon-energy [Accessed 13 October 2025]

[12] BRE - Planning Guidance for the Development of Large-Scale Ground Mounted Solar PV Systems. Available at: https://files.bregroup.com/solar/KN5524_Planning_Guidance_reduced.pdf [Accessed 13 October 2025]

reflection of the sun, but rather a reflection of the bright sky around the sun. Glare is significantly less intense than glint.

Solar PV panels are designed to absorb, not reflect, irradiation. However, the sensitivities associated with glint and glare, and the landscape/ visual impact and the potential impact on aircraft safety, should be a consideration. In some instances, it may be necessary to seek a glint and glare assessment as part of a planning application. This may be particularly important if 'tracking' panels are proposed as these may cause differential diurnal and/or seasonal impacts.

The potential for solar PV panels, frames and supports to have a combined reflective quality should be assessed. This assessment needs to consider the likely reflective capacity of all of the materials used in the construction of the solar PV farm."

3.5.3. **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3) has taken into account impacts upon nearby homes, motorists, and aviation receptors. Due to assuming complete coverage in the area where solar panels are located within the Solar Development Area, glint and glare impacts from frames and supports are considered within the assessment.

The Air Navigation Order 2016[13]

3.5.4. There is limited guidance on the assessment of glint and glare from solar farms with regards to aviation safety. The Civil Aviation Authority (CAA) has published interim guidance on 'Solar Photovoltaic Systems' and intend to undertake a review of the potential impacts of solar PV developments upon aviation, however, this is yet to be published. Though the guidance was cancelled and removed from the CAA website, it is still relevant to the assessment of glint and glare from solar farms in relation to aviation safety.

3.5.5. The interim guidance identified the key safety issues with regards to aviation, including *"glare, dazzling pilots leading them to confuse reflections with aeronautical lights."* It is outlined that solar farm developers should be aware of the requirements to comply with the Air Navigation Order (ANO), published in 2016 and amended in 2022. In particular, developers should be cognisant of the following articles of the ANO[13], including:

[13] CAA (2016) Air Navigation: The Order and Regulations. Available at https://www.caa.co.uk/general-aviation/the-ga-unit/air-navigation-order-2016/ [Accessed 13 October 2025]

- **Article 240** – Endangering safety of an aircraft – *"A person must not recklessly or negligently act in a manner likely to endanger an aircraft, or any person in an aircraft."*
- **Article 224** - Lights liable to endanger – *"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 or from landing at an aerodrome; or

  b) by reason of its liability to be mistaken for an aeronautical ground light liable to endanger aircraft."
- **Article 225** – Lights which dazzle or distract – *"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."*

3.5.6. Relevant studies generally agree there is potential for glint and glare from photovoltaic panels to cause a hazard or nuisance for surrounding receptors, but that the intensity of such reflections is similar to that emanating from still water. This is considerably lower than for other manmade materials such as glass, steel or white concrete. Further information is provided in Annex Y of **ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3).

CAA – CAP738: Safeguarding of Aerodromes 3rd Edition[14]

3.5.7. In 2003, the CAA first introduced the CAP738 document to help provide advice and guidance to ensure aerodrome safeguarding. Subsequently, there have been two updates to this document in 2006 and 2020.

3.5.8. The latest edition of CAP738 outlines that the purpose of the document is to protect an aerodrome and to ensure safe operation, specifically stating: *"Its purpose is to protect: Aircraft from the risk of glint and glare e.g. solar panels."*

3.5.9. Within the section named as 'Appendix C – Solar Photovoltaic Cells' the following is stated:

"Policy 1. *In 2010 the CAA published interim guidance on Solar Photovoltaic Cells (SPCs). At that time, it was agreed that we would review our policy based on research carried out by the Federal Aviation Authorities (FAA) in the United States, in addition to reviewing guidance issued by other National Aviation Authorities. New*

[14] Civil Aviation Authority (2020). CAP738 – Safeguarding of Aerodromes 3rd Edition. Available at: https://www.caa.co.uk/our-work/publications/documents/content/cap-738/ [Accessed 13 October 2025]

information and field experience, particularly with respect to compatibility and glare, has resulted in the FAA reviewing its original document 'Technical Guidance for Evaluating Selected Solar Technologies on Airports', which is likely to be subject to change, see link; https://www.federalregister.gov/documents/2013/10/23/2013-24729/interimpolicy-faa-review-of-solar-energy-system-projects-on-federally-obligated-airports

2. In the United Kingdom there has been a further increase in SPV cells, including some located close to aerodrome boundaries; to date the CAA has not received any detrimental comments or issues of glare at these established sites. Whilst this early indication is encouraging, those responsible for safeguarding should remain vigilant to the possibility."

3.5.10. In summary, the above is stating that to date, there has not been any complications on airfields due to glare originating from solar farms across the UK.

US Federal Aviation Administration Policy

3.5.11. The US Federal Aviation Administration (FAA) in their Solar Guide (Federal Aviation Authority, 2010)[15] incorporates a chapter on the impact and assessment of glint from solar panels. It concludes that (although subject to revision):

"...evidence suggests that either significant glare is not occurring during times of operation or if glare is occurring, it is not a negative effect and is a minor part of the landscape to which pilots and tower personnel are exposed."

3.5.12. The interim policy (Federal Register, 2013)[16] demands that an ocular impact assessment must be assessed at 1-minute intervals from when the sun rises above the horizon until the sun sets below the horizon. Specifically, the developer must use the 'Solar Glare Hazard Analysis Tool' (SGHAT) tool specifically and reference its results as this was developed by the FAA and Sandia National Laboratories as a standard and approved methodology for assessing potential impacts on aviation interests, although it notes other assessment methods may be considered. The SGHAT tool has since been

[15] FAA (2010), Technical Guidance for Evaluating Selected Solar Technologies on Airports. Available at https://www.faa.gov/sites/faa.gov/files/airports/environmental/FAA-Airport-Solar-Guide-2018.pdf [Accessed 22 November 2025]

[16] FAA (2013), Interim Policy, FAA Review of Solar Energy System Projects on Federally Obligated Airports. Available at https://www.federalregister.gov/documents/2013/10/23/2013-24729/interim-policy-faa-review-of-solar-energy-system-projects-on-federally-obligated-airports [Accessed 22 November 2025]

licensed to a private organisation who were also involved in its development and it is the software model used in this assessment.

3.5.13. Crucially, the policy provides a quantitative threshold that is lacking in the English guidance. This outlines that a solar development will not automatically receive an objection on glint grounds if low intensity glint is visible to pilots on final approach. In other words, low intensity glint with a low potential to form a temporary after-image (Green Glare) would be considered acceptable under US guidance. Due to the lack of legislation and guidance within England, this US document has been utilised as guidance for this report, which is accepted as best practice in the UK in the absence of quantitative guidance.

3.5.14. The FAA guidance states that for a solar PV development to obtain FAA approval or to receive no objection, the following two criteria must be met:

- No potential for glint or glare in the existing or planned Air Traffic Control Tower (ATCT); and
- No potential for glare (glint) or "low potential for after-image" (Green Glare) along the final approach path for any existing or future runway landing thresholds (including planned or interim phases), as shown by the approved layout plan (ALP). The final approach path is defined as 2 miles from 50 feet above the landing threshold using a standard 3-degree glide path.

3.5.15. The geometric analysis included later in this report, which defines the extent and time at which glint may occur, is required by the FAA as the methodology to be used when assessing glint and glare impacts on aviation receptors. This report follows the methodology required by the FAA as it offers the most robust assessment method currently available.

FAA Policy: Review of Solar Energy Systems Projects on Federally - Obligated Airports[17]

3.5.16. The FAA updated its Interim Policy from 2013 as part of a commitment to *"update policies and procedures as part of an iterative process as new information and technologies become available."* The main development regarding glint and glare since the Interim Policy is the following:

[17] FAA (2021). FAA Policy: Review of Solar Energy Systems Projects on Federally – Obligated Airports. Available at: https://www.federalregister.gov/documents/2021/05/11/2021-09862/federal-aviation-administration-policy-review-of-solar-energy-system-projects-on-federally-obligated [Accessed 13 October 2025]

"Initially, FAA believed that solar energy systems could introduce a novel glint and glare effect to pilots on final approach. FAA has subsequently concluded that in most cases, the glint and glare from solar energy systems to pilots on final approach is similar to glint and glare pilots routinely experience from water bodies, glass-façade buildings, parking lots, and similar features. However, FAA has continued to receive reports of potential glint and glare from on-airport solar energy systems on personnel working in ATCT cabs."

3.5.17. This is outlining that solar panels are similar to nuisances that are already caused by other existing infrastructure, such as car parks, glass buildings and water bodies. Furthermore, the ATCT has been outlined as the key receptor to be assessed when determining Glint and Glare impacts from a solar farm.

3.5.18. Again, in respect of an absence of UK guidance, this is used as the best practice when assessing aviation receptors.

3.6. Local Policy and Guidance

3.6.1. Local policy and guidance relevant to the climate change assessment comprise:

- South East Lincolnshire Local Plan (SELLP) 2011-2036[18].

3.6.2. The relevant considerations are summarised within Table 3-2.

[18] Lincolnshire County Council (2019) South East Lincolnshire Local Plan 2011-2036. Available at: https://southeastlincslocalplan.org/media/21941/South-East-Lincolnshire-Local-Plan-2011-2036/pdf/Local-Plan-text-March 2019.pdf?m=1720710748483 [Accessed 10 October 2025]

Table 3-2: Relevant Local Policy and Guidance with respect to Glint and Glare

Relevant Document	Relevant Policies	Location of information provided to address this
South East Lincolnshire Local Plan (SELLP) 2011-2036	**Policy 31: Climate Change and Renewable and Low Carbon Energy** B. Renewable Energy With the exception of Wind Energy the development of renewable energy facilities, associated infrastructure and the integration of decentralised technologies on existing or proposed structures will be permitted provided, individually, or cumulatively, there would be no significant harm to: [...] 2. residential amenity in respect of: noise, fumes, odour, vibration, shadow flicker, sunlight reflection, broadcast interference, traffic; 3. highway safety (including public rights of way); [...] 5. aviation and radar safety; [...]	**ES Appendix 16-2: Glint and Glare Assessment** (Doc Ref. 6.3) has tested that Policy 31 is adhered to so that there are no unacceptable glint and glare impacts.

4. Major Accidents and Disasters

4.1.1. The following legislation, policy and guidance has been identified as relevant to the assessment of major accidents and disasters.

4.2. Legislation

The Civil Contingencies Act (CCA) 2004 Regulations[19]

4.2.1. Whilst the Civil Contingencies Act (CCA) 2004 (Contingency Planning) Regulations 2005 does not make any reference to EIA, it is noted that the Act and regulations establish a statutory framework of roles and responsibilities for those involved in emergency preparation and response at the local level. This includes emergency powers that might be necessary to deal with the effects of serious emergencies. The CCA places a duty on the local responders to have an accurate understanding of the risks they face in light of local circumstances and priorities through a risk assessment and emergency planning process. As such, similarities can be drawn from the requirements of the EIA Regulations and the CCA in assessing and minimising risk for major accidents and disasters. Therefore, the ES considers the Scheme within the context of risks identified on the local risk registers established under the CCA.

The Control of Major Accident Hazard Regulations 2015[20]

4.2.2. The Control of Major Accident Hazard (COMAH) Regulations 2015 "*aims to prevent and mitigate the effects of major accidents involving dangerous substances which can cause serious damage/harm to people and/or the environment. COMAH treats risks to the environment as seriously as those to people*"[20]. While the Scheme is not subject to the COMAH Regulations, the key points in relation to general duties for safety reporting, emergency plans and public information have been considered.

[19] The Civil Contingencies Act (CCA) 2004 Regulations. Available at: https://www.legislation.gov.uk/uksi/2005/2042/contents/made [Accessed 22 November 2025]

[20] *The Control of Major Accident Hazards Regulations 2015*. Available at: https://www.legislation.gov.uk/uksi/2015/483/made/data.pdf. [Accessed 15/10/2025]

Construction (Design and Management) Regulations 2015[21]

4.2.3. The Construction (Design and Management) Regulations 2015 (CDM Regulations) outline duties on clients, designers and contractors to ensure health and safety is considered during construction related activities during construction, operational and decommissioning phases. This includes planning, design, construction, maintenance and decommissioning works.

The Regulatory Reform (Fire Safety) Order 2005[22]

4.2.4. The Regulatory Reform (Fire Safety) Order 2005 provides a framework for the regulation of fire safety in all non-domestic premises, including workplaces and commercial properties within England and Wales. Key provisions include the duties to undertake and record a fire risk assessment and implement and maintain general fire precautions.

4.3. National Policy Statements

4.3.1. The relevant NPS requirements for major accidents and disasters are provided in Table 4-1, along with an indication of where in the ES this information can be sourced.

[21] Construction (Design and Management) Regulations 2015. Available at: The Construction (Design and Management) Regulations 2015 - HSE [Accessed 15/10/2025]

[22] *The Regulatory Reform (Fire Safety) Order 2005.* Available at: https://www.legislation.gov.uk/uksi/2005/1541/data.pdf. [Accessed 15/10/2025]

Table 4-1: Relevant NPS Policy for Major Accidents and Disasters

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
Overarching NPS for Energy EN-1[3]		
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 Scheme is not subject to the COMAH Regulations.
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 (**ES Appendix 1-2: EIA Scoping Opinion** (Doc Ref. 6.3)). As a prescribed

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
		consultation body, the HSE was also consulted during non-statutory, statutory and targeted consultation (refer to **Consultation Report** (Doc Ref. 5.1)). A summary of the relevant comments in relation to major accidents and disasters is provided within **ES Chapter 16: Other Environmental Topics**, Section 16.5: Major Accidents and Disasters (Doc Ref. 6.1).
NPS for Renewable Energy EN-3[4]		
The NPS for Renewable Energy EN-3 does not contain provisions specific to major accidents and disasters within the context of the Scheme.		
NPS for Electricity Networks Infrastructure EN-5[5]		
The NPS for Electricity Networks Infrastructure EN-5 does not contain provisions specific to major accidents and disasters within the context of the Scheme. However, it outlines the importance of maintaining public and occupational safety when applying the criteria for good design. Paragraph 2.4.3 outlines that the SoS should, alongside having regard to the desirability of good design, consider that *"networks infrastructure must in the first instance be safe and secure"*. Major accidents and disasters are considered within Section 16.5 of **ES Chapter 16: Other Environmental Topics** (Doc Ref. 6.1).		

4.4. National Planning Policy Framework

4.4.1. The NPPF does not contain provisions specific to major accidents and disasters within the context of the Scheme. However, whilst not specific to energy development, Paragraph 102 outlines that planning policies and decisions *"should promote public safety and take into account wider security and defence requirement by:*

- *anticipating and addressing possible malicious threats and other hazards (whether natural or man-made), 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. The safety of children and other vulnerable users in proximity to open water, railways and other potential hazards should be considered in planning and assessing proposals for development; and*
- *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."*

4.4.2. Threats and hazards with regards to security and safety have been considered within **ES Appendix 16-3: Long List of Major Accidents and Disasters** (Doc Ref. 6.3), with any relevant risks scoped in for further assessment within **ES Chapter 16: Other Environmental Topics, Section 16-5: Major Accidents and Disasters** (Doc Ref. 6.1).

4.5. Other National Policies and Guidance

Construction Industry Research and Information Association (CIRIA) (2009) C681:2009: Unexploded Ordnance (UXO) A Guide for the Construction Industry[23]

4.5.1. CIRIA 'C681:2009: Unexploded Ordnance (UXO) A Guide for the Construction Industry' (2009) guidance outlines best practice construction risk management processes to adopt in relation to UXO risk.

ISEP (formerly IEMA) (2020) Major Accidents and Disasters in EIA: A Primer[24]

4.5.2. ISEP (formerly IEMA) (2020) Major Accidents and Disasters in EIA: A Primer provides guidance on the key concepts and definitions of the topic, as well as an initial introduction to methodology that can be adopted for assessing major accidents and disasters based on current practice within the UK.

4.6. Local Policy and Guidance

4.6.1. Local policy and guidance relevant to the climate change assessment comprise:

- South East Lincolnshire Local Plan (SELLP) 2011-2036[25].

4.6.2. The South East Lincolnshire Local Plan (SELLP) 2011-2036 does not include provisions specific to major accidents and disasters, though Policy 3 (Design of New Development) outlines that development proposals should demonstrate how crime prevention and community safety will be secured. Policy 30 (Pollution) outlines that development proposals will not be permitted where they would lead to unacceptable adverse impacts upon the health and safety of the public. Policy 31 (Climate Change and Renewable and Low Carbon Energy) outlines that the development of renewable energy and associated infrastructure will be permitted provided that individually, or cumulatively, there would no significant harm to highway safety (including Public Rights of

[23] CIRIA (2009) *C681:2009: Unexploded Ordnance (UXO) A Guide for the Construction Industry*. Available at: https://www.ciria.org/ItemDetail?iProductcode=C681&Category=BOOK. [Accessed 10 October 2025]

[24] IEMA (2020) *Major Accidents and Disasters in EIA: A Primer*. Available at: https://www.iema.net/media/brbdeibt/j27374_iema_major_accidents__disasters_final-1.pdf. [Accessed 10 October 2025]

[25] Lincolnshire County Council (2019) South East Lincolnshire Local Plan 2011-2036. Available at: https://southeastlincslocalplan.org/media/21941/South-East-Lincolnshire-Local-Plan-2011-2036/pdf/Local-Plan-text-March 2019.pdf?m=1720710748483 [Accessed 10 October 2025]

Way) and aviation and radar safety. Relevant threats and hazards have been considered within **ES Appendix 16-3: Long List of Major Accidents and Disasters** (Doc Ref. 6.3), with any relevant risks scoped in for further assessment within **ES Chapter 16: Other Environmental Topics, Section 16-5: Major Accidents and Disasters** (Doc Ref. 6.1).

5. Materials and Waste

5.1. Legislation

Waste Framework Directive[26]

5.1.1. The Waste Framework Directive (2008/98/EC) establishes the overarching legal framework for waste management across the European Union and has been adopted into UK law. It defines key waste management concepts, including the waste hierarchy, polluter pays principle, and extended producer responsibility. The directive aims to prevent waste, promote recycling, and ensure safe disposal while minimising environmental and health impacts. It also sets targets for recycling and recovery, requiring member states to establish waste management plans and programmes.

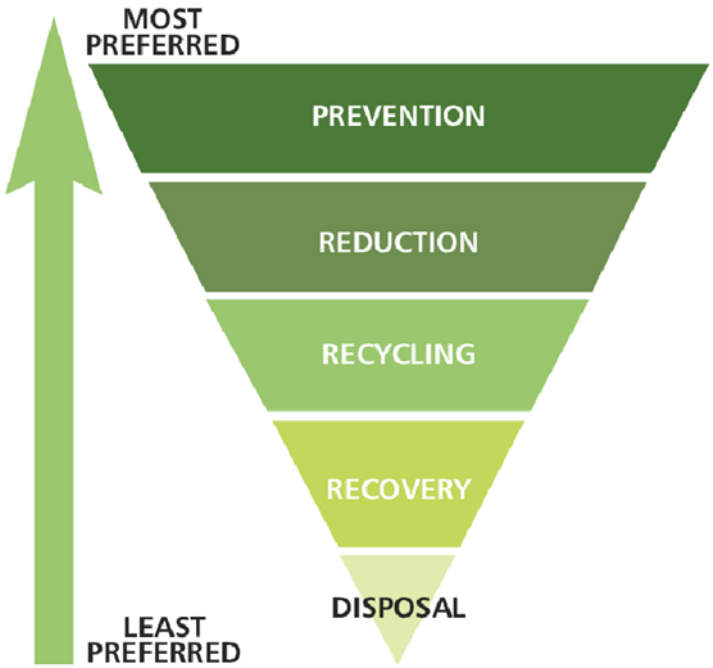
5.1.2. The Directive definition includes any substance or object that is discarded for disposal or that has not been subject to acceptable recovery (including reuse and recycling). Where waste is disposed of, resources are lost, and the potential for indirect impacts exists (e.g. atmospheric emissions, pollution of water bodies, and visual impact).

5.1.3. The framework requires waste prevention programmes and waste management plans to be produced that apply the waste hierarchy (shown in Plate 5-1).

5.1.4. This hierarchy will be applied throughout the lifetime of the Scheme, during the construction, operation, and decommissioning phases.

[26] European Parliament and the Council (2008). *Directive 2008/98/EC of the European Parliament and of the Council*. Available at: https://www.legislation.gov.uk/eudr/2008/98/data.pdf. [Accessed 25 September 2025]

Plate 5-1: The Waste Hierarchy



The Waste (England and Wales) Regulations 2011[27]

5.1.5. The Waste (England and Wales) Regulations 2011 implemented the Waste Framework Directive in England and Wales, reinforcing the waste hierarchy as a legal duty for businesses and local authorities. They mandate waste producers to apply the hierarchy when managing waste and require waste transfer notes to include a declaration of compliance. The regulations also introduce the concept of separate waste collection to improve recycling and resource efficiency.

5.1.6. In The Waste (Miscellaneous Amendments) (EU Exit) Regulations 2019[28], the regulations were updated to outline waste law operations post-Brexit, as well as the update of terminology and legal references to align to UK Waste and Environmental law.

[27] *The Waste (England and Wales) Regulations 2011*. Available at: https://www.legislation.gov.uk/uksi/2011/988/data.pdf. [Accessed 25 September 2025]

[28] HM Government (2019). *The Waste (Miscellaneous Amendments) (EU Exit) Regulations 2019*. Available at: https://www.legislation.gov.uk/uksi/2019/620/made. [Accessed 25 September 2025]

Environmental Protection Act 1990[29]

5.1.7. The Environmental Protection Act 1990[29] provides the legal foundation for waste management and pollution control in the UK. It establishes duty of care obligations for waste producers, regulating the handling, storage, and disposal of waste. The Act also introduced Integrated Pollution Control (IPC), criminal offences for illegal waste disposal, and contaminated land regulations to protect human health and the environment.

Environmental Permitting (England and Wales) Regulations 2016[30]

5.1.8. The Environmental Permitting (England and Wales) Regulations 2016[30] streamline the environmental permitting system, ensuring that businesses engaged in waste management, emissions, and industrial processes operate within strict environmental controls. They consolidate multiple permitting regimes, covering activities such as landfills, waste treatment, and water discharge, requiring operators to comply with permit conditions to minimise environmental harm.

The Hazardous Waste Regulations (England and Wales) 2005 (amended 2016)[31]

5.1.9. The Hazardous Waste Regulations (England and Wales) 2005 (amended 2016)[31]govern the management of hazardous waste, ensuring its safe handling, storage, transportation, and disposal to prevent harm to human health and the environment. They introduce waste classification, consignment note tracking, and record-keeping requirements for businesses handling hazardous substances. The 2016 amendments removed the requirement for premises registration while maintaining stringent control measures.

Environment Act 2021[32]

5.1.10. The Environment Act 2021 is a landmark piece of legislation aimed at enhancing environmental protection post-Brexit. It introduces legally binding

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[29] *Environmental Protection Act 1990*. Available at: https://www.legislation.gov.uk/ukpga/1990/43/data.pdf. [Accessed 25 September 2025]

[30] *Environmental Permitting (England and Wales) Regulations 2016*. Available at: https://www.legislation.gov.uk/uksi/2016/1154/data.pdf. [Accessed 25 September 2025]

[31] *The Hazardous Waste (England and Wales) (Amendment) Regulations 2016*. Available at: https://www.legislation.gov.uk/uksi/2016/336/data.pdf. [Accessed 25 September 2025]

[32] *Environment Act 2021*. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents.[Accessed 25 September 2025]

targets for air quality, biodiversity, water, and waste reduction, strengthening resource efficiency and circular economy principles. The Act establishes Extended Producer Responsibility (EPR), deposit return schemes, and requirements for separate waste collection, supporting the UK's transition to a low-waste, sustainable economy.

The Waste Electrical and Electronic Equipment Regulations 2013[33]

5.1.11. The Waste Electrical and Electronic Equipment Regulations 2013 implement the EU Waste Electrical and Electronic Equipment (WEEE) Directive in the UK, requiring manufacturers and retailers of electrical and electronic equipment to finance the collection, treatment, and recycling of end-of-life products. The aim is to reduce electronic waste, promote recycling and reuse, and ensure hazardous substances in WEEE are managed safely. Businesses must register as producers, comply with collection and disposal obligations, and meet recycling targets to reduce landfill waste.

The Waste Batteries and Accumulators Regulations 2009[34]

5.1.12. The Waste Batteries and Accumulators Regulations 2009 establish a comprehensive framework for the collection, treatment, and recycling of batteries in the UK, aligning with the EU Battery Directive, including those used in Battery Energy Storage Systems (BESS) for solar farms. The regulations mandate proper disposal and recycling to minimise environmental harm, with producers responsible for funding waste management. By restricting hazardous substances like cadmium and mercury, the rules ensure safer, more sustainable energy storage solutions. Compliance with these regulations supports the long-term viability of solar farms by promoting responsible end-of-life management of BESS.

The Waste Batteries and Accumulators (Amendment) Regulations 2015[35]

5.1.13. These regulations amended the UK's existing regulations on battery waste management to align with EU Directive 2013/56/EU. They refine waste

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33 *The Waste Electrical and Electronic Equipment Regulations 2013*. Available at: https://www.legislation.gov.uk/uksi/2013/3113. [Accessed 25 September 2025]

34 *The Waste Batteries and Accumulators Regulations 2009*. Available at: https://www.legislation.gov.uk/uksi/2009/890. [Accessed 25 September 2025]

35 *The Waste Batteries and Accumulators (Amendment) Regulations 2015*. Available at: https://www.legislation.gov.uk/uksi/2015/1935. [Accessed 25 September 2025]

management rules for large-scale battery storage. The amendments, emphasise the responsible collection, recycling, and disposal of batteries, ensuring that end-of-life energy storage systems do not contribute to environmental harm. These regulations also promote design improvements that facilitate easier battery removal and recycling, supporting the sustainability of solar energy infrastructure.

5.2. National Policy Statements

5.2.1. The relevant NPS requirements for materials and waste are provided in Table 5-1, along with an indication of where in the ES this information can be sourced.

Table 5-1: Relevant NPS Policy for Materials and Waste

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
Overarching NPS for Energy EN-1[3]		
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 **ES Chapter 16: Other Environmental Topics, Section 16.6: Materials and Waste** (Doc Ref. 6.1). A Site Waste Management Plan will be produced by the contractor prior to construction, in accordance with the **Outline Site Waste Management Plan (OSWMP)** (Doc Ref. 7.19) submitted with the DCO Application. Further details of how materials and waste would be managed have been provided in the **Outline Construction Environmental Management Plan (OCEMP)** (Doc Ref. 7.10), **Outline Operational Environmental Management Plan (OOEMP)** (Doc Ref. 7.11), and **Outline Decommissioning Environmental Management Plan (ODEMP)** (Doc Ref. 7.12) which are submitted as part of the DCO Application.
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	

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
	• Disposal.	An assessment of the impact of the waste arising from Scheme on the capacity of waste management facilities (specifically landfill capacity as per the ISEP (formerly IEMA) Guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach to deal with other waste arising in the area for at least five years of operation is considered in **ES Chapter 16: Other Environmental Topics, Section 16.6: Materials and Waste** (Doc Ref. 6.1). Mineral Safeguarding Areas have been considered in **ES Chapter 14: Socio Economics and Land Use** (Doc Ref. 6.1).
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.	
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.	
5.15.7	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.	

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
5.15.8	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.	
5.15.9	The applicant must consider the Circular Economy and how to ensure that their project aligns with the government's circular economy ambitions. In Wales applicants are encouraged to refer to 'Towards Zero Waste: Our Waste Strategy for Wales'.	
5.15.10	If the applicant's assessment includes dredged material, the assessment should also include other uses of such material before disposal to sea,	

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
	for example through re-use in the construction process.	
5.15.11	The UK is committed to transitioning to a circular economy, a future where resources are kept in use for longer, and waste is reduced; we accelerate the path to net zero, we see investment in critical infrastructure and green jobs, our economy prospers, and nature thrives. Where possible, applicants are encouraged to source materials from recycled or reused sources and use low carbon materials, sustainable sources and local suppliers. Construction best practices should be used to ensure that material is reused or recycled onsite where possible.	
5.15.12	Applicants are also encouraged to prepare a construction materials management plan to inform the use of construction best practices in relation to storing materials in an adequate and protected place on site to prevent waste, or degeneration of valuable materials, for example, from accidental damage or excessive weathering.	

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
	The use of Building Information Management tools (BIM or similar) to record the materials used in construction can help to reduce waste and realise further value in future decommissioning of facilities, by identifying materials that can be recycled or reused.	
5.15.13 & 5.15.14	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	

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
	deal with other waste arisings in the area; and • 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.	
5.15.15 & 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 Secretary of State may wish to include a condition on revision of waste management plans at reasonable intervals when giving consent.	
5.15.17	Where the project 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.	

Relevant NPS Paragraph	Requirement of the NPS	Location of information provided to address this
NPS for Renewable Energy EN-3[4]		
The NPS for Renewable Energy EN-3 complements the Overarching NPS for Energy EN-1 by offering technology-specific planning guidance for significant renewable energy projects, including biomass, solar PV, and offshore wind. Recognising the anticipated doubling of electricity demand by 2050, it underscores the essential role of renewable energy in achieving net-zero targets and meeting the sixth carbon budget commitments. EN-3 reinforces the need for sustainable waste management practices in line with the waste hierarchy, as outlined in Paragraph 3.7.2.		
NPS for Electricity Networks Infrastructure EN-5[5]		
The NPS for Electricity Networks Infrastructure EN-5 does not include any relevant requirements with regards to materials and waste.		

5.3. National Planning Policy Framework

5.3.1. Relevant NPPF requirements relating to materials and waste, along with an indication of where the information is located within the ES to address these requirements, are provided in Table 5-2.

Table 5-2: Relevant NPPF Requirements for Materials and Waste

Relevant NPPF Paragraph	Requirement of the NPPF	Location of information provided to address this
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 **ES Chapter 16: Other Environmental Topics, Section 16.6: Materials and Waste** (Doc Ref. 6.1). Further details of materials and waste management have been provided in the **OCEMP** (Doc Ref. 7.10), **OOEMP** (Doc Ref. 7.11), **ODEMP** (Doc Ref. 7.12) and **OSWMP** (Doc Ref. 7.19) which are submitted as part of the DCO Application.
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.	**ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1) considers impacts on Mineral Safeguarding Areas.

5.4. Other National Policies and Guidance

National Planning Policy for Waste[36]

5.4.1. The National Planning Policy for Waste provides detailed policies to guide waste management planning in England. It aims to ensure waste is managed in ways that protect human health and the environment, promoting sustainable development and resource efficiency. This policy should be read alongside the National Planning Policy Framework and other relevant documents to inform local planning authorities in their waste management responsibilities.

DEFRA Waste Management Plan for England 2021[37]

5.4.2. The DEFRA Waste Management Plan for England 2021 outlines the government's strategy for waste management, aiming to minimise waste and promote resource efficiency. It includes commitments to double resource productivity by 2050 and emphasises the importance of moving towards a circular economy.

DEFRA A Green Future; 25 Year Environment Plan[38]

5.4.3. DEFRA's 'A Green Future: Our 25 Year Environment Plan' sets out goals for improving the environment within a generation. It details how the government will work with communities and businesses to achieve a cleaner, greener country, focusing on areas such as clean air, water, biodiversity, and resource efficiency.

DEFRA Environmental Improvement Plan 2023[39]

5.4.4. The DEFRA Environmental Improvement Plan 2023 builds upon the 25 Year Environment Plan, outlining specific actions to enhance the natural

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[36] Department for Communities and Local Government (2014). *National Planning Policy for Waste.* Available at: https://assets.publishing.service.gov.uk/media/5a7ef594e5274a2e8ab4946c/141015_National_Planning_Policy_for_Waste.pdf. [Accessed 25 September 2025]

[37] Department for Environment, Food and Rural Affairs (DEFRA) (2021). *Waste Management Plan for England*. Available at: https://assets.publishing.service.gov.uk/media/60103f71d3bf7f05bc42d294/waste-management-plan-for-england-2021.pdf. [Accessed 25 September 2025]

[38] DEFRA (2018). *A Green Future: Our 25 Year Plan to Improve the Environment*. Available at: https://assets.publishing.service.gov.uk/media/5ab3a67840f0b65bb584297e/25-year-environment-plan.pdf. [Accessed 25 September 2025]

[39] DEFRA (2023). *Environmental Improvement Plan 2023*. Available at: https://assets.publishing.service.gov.uk/media/64a6d9c1c531eb000c64fffa/environmental-improvement-plan-2023.pdf. [Accessed 25 September 2025]

environment. It emphasises collaboration with landowners, communities, and businesses to restore nature, reduce pollution, and increase prosperity, setting interim targets to measure progress.

DEFRA Our Waste, Our Resources, A Strategy for England[40]

5.4.5. DEFRA's 'Our Waste, Our Resources: A Strategy for England' presents a comprehensive approach to resource management and waste reduction. It focuses on minimising waste, promoting resource efficiency, and transitioning to a circular economy, aiming to preserve material resources and reduce environmental impacts.

The Waste Prevention Programme for England: Maximising Resources, Minimising Waste 2023[41]

5.4.6. The Waste Prevention Programme 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.

Solar Roadmap United Kingdom Powered by Solar 2025[42]

5.4.7. This roadmap supports the UK's core ambition to increase solar capacity from 18GW to 45–47GW by 2030, whilst enabling energy independence, bill reduction, and climate action. From a waste perspective, it supports the upscaling of innovative technologies and improved grid capacity and connections, which is likely to reduce the impact of solar farm material footprint in the near future. Appendix 1 Action Table[43] outlines Action 70 Recycling "*The UK Government and industry will hold a roundtable bringing*

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[40] DEFRA and the Environment Agency (2018). *Our waste, our resources: a strategy for England.* Available at: https://assets.publishing.service.gov.uk/media/5c18f11740f0b60bbee0d827/resources-waste-strategy-dec-2018.pdf. [Accessed 25 September 2025]

[41] DEFRA (2023). *The Waste Prevention Programme for England: Maximising Resources, Minimising Waste 2023*. Available at: https://www.gov.uk/government/publications/waste-prevention-programme-for-england-maximising-resources-minimising-waste. [Accessed 25 September 2025]

[42] DESNZ (2025). *Solar roadmap: United Kingdom Powered by Solar*. Available at: https://assets.publishing.service.gov.uk/media/685d6e483e6b7941f4e00afb/35.87_DESNZ_UK_Solar_Roadmap_final.pdf [Accessed 25 September 2025]

[43] Department for Energy Security and Net Zero, Policy Paper - Appendix 1 Action Table (2025). Available at: https://www.gov.uk/government/publications/solar-roadmap/appendix-1-action-table#:~:text=The%20UK%20Government%20and%20industry%20will%20hold,likely%20availability%20of%20current%20conventional%20and%20emerging. [Accessed 29 October 2025].

together academia, the solar industry, waste sector and relevant government departments and organisations to gain a greater understanding of the decommissioning dates for current UK solar panels and likely availability of current conventional and emerging innovative solar panel recycling practices."

ISEP (formerly IEMA) (2020) Guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach[44]

5.4.8. The ISEP (formerly IEMA) (2020) 'Guide to Materials and Waste in Environmental Impact Assessment' offers guidance for practitioners on assessing the environmental impacts of materials and waste. It provides considerations for screening, scoping, consultation, assessment, reporting, and monitoring, promoting a proportionate approach to Environmental Impact Assessment.

Guidance on Applying the Waste Hierarchy[45]

5.4.9. The DEFRA (2011) Guidance on applying the Waste Hierarchy provides a framework for prioritising waste management practices in line with environmental sustainability principles. It emphasises the five-step waste hierarchy, ranking waste prevention as the most preferred option, followed by reuse, recycling, recovery, and disposal as the least desirable. The guidance explains the legal obligations under the Waste (England and Wales) Regulations 2011, ensuring that businesses and waste operators take all reasonable measures to manage waste according to the hierarchy. It also includes sector-specific advice, clarifications on exemptions, and practical examples to support compliance while promoting resource efficiency and environmental protection.

DEFRA (2018) Waste Duty of Care: Code of Practice[46]

5.4.10. DEFRA's 'Waste Duty of Care: Code of Practice' outlines the legal responsibilities of individuals and organisations involved in waste management.

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[44] Institute of Environmental Management and Assessment (IEMA), now the Institute of Sustainability and Environmental Professionals (ISEP) (2020). *IEMA guide to: Materials and Waste in Environmental Impact Assessment*. Available at: https://www.iema.net/media/0t5fwyhj/iema-materials-and-waste-in-eia-march-2020.pdf. [Accessed 25 September 2025]

[45] DEFRA (2011). *Guidance on applying the Waste Hierarchy*. Available at: https://assets.publishing.service.gov.uk/media/5a795abde5274a2acd18c223/pb13530-waste-hierarchy-guidance.pdf. [Accessed 25 September 2025]

[46] DEFRA and the Environment Agency (2018). *Waste Duty of Care Code of Practice*. Available at: https://assets.publishing.service.gov.uk/media/6274d74bd3bf7f5e3ade6090/Waste_duty_of_care_code_of_practice.pdf. [Accessed 25 September 2025]

It provides guidance on ensuring waste is handled safely and legally, preventing harm to human health and the environment, and emphasising the importance of proper documentation and transfer procedures.

Solar Power Europe Lifecycle Quality Best Practice Guidelines[47]

5.4.11. The Lifecycle Quality Best Practice Guidelines 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[48]

5.4.12. The UK Battery Strategy 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[49]

5.4.13. The 'Solar Supply Chains: Sustainability Issues and Action' by Solar Energy UK addresses the key sustainability challenges facing solar supply chains, such as responsible sourcing, environmental impact, etc. The guidance promotes

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47 Solar Power Europe (2015). *Lifecycle Quality Best Practice Guidelines*. Available at: https://www.solarpowereurope.org/insights/thematic-reports/lifecycle-quality-best-practice-guidelines-version-1-0. [Accessed 25 September 2025]

48 Department for Business and Trade (2023). *UK Battery Strategy*. Available at: https://www.gov.uk/government/publications/uk-battery-strategy. [Accessed 25 September 2025]

49 Solar Energy UK (2025). *Solar Supply Chains: Sustainability Issues and Action*. Available at: https://solarenergyuk.org/wp-content/uploads/2025/03/Supply-Chain-Briefing-2.pdf. [Accessed 25 September 2025]

sustainability best practices and outlines actionable steps for organisations to ensure responsible investment in solar projects.

5.5. Local Policy and Guidance

5.5.1. Local policy and guidance relevant to the materials and waste assessment comprise:

- South East Lincolnshire Local Plan[50]; and
- Lincolnshire Minerals and Waste Local Plan, June 2016[51].

5.5.2. The relevant considerations are summarised within Table 5-3.

[50] South East Lincolnshire (2019). *South East Lincolnshire Local Plan*. Available at: https://southeastlincslocalplan.org/media/21941/South-East-Lincolnshire-Local-Plan-2011-2036/pdf/Local-Plan-text-March-2019.pdf?m=1720710748483 [Accessed 23 October 2025]

[51] Lincolnshire County Council (2016). *Lincolnshire Minerals and Waste Local Plan*. Available at: https://www.lincolnshire.gov.uk/planning/minerals-waste. [Accessed 25 September 2025]

Table 5-3: Relevant Local Policy and Guidance with respect to Materials and Waste

Relevant Document	Relevant Policies	Location of information provided to address this
South East Lincolnshire Local Plan	**Policy 2: Development Management** Proposals requiring planning permission for development will be permitted provided that sustainable development considerations are met, specifically in relation to: 3. maximising the use of sustainable materials and resources and; 9. impact on the potential loss of sand and gravel mineral resources. Criterion 3 seeks to ensure that development would not be wasteful in its use of energy or in its depletion of natural resources (e.g. groundwater supplies). Policy 3 provides more detailed guidance with regard to waste minimisation, utilising renewable energy, reducing water consumption and the sustainable use of existing materials on site (e.g. reuse of excavated materials for landscaping or raising ground levels). Criterion 9 of the policy also has implications for the good use of natural resources in that the Plan Area has two Sand and	Overarching materials and waste management strategy including using sustainable materials and applying the waste hierarchy and designing out waste is covered in **ES Chapter 16: Other Environmental Topics, Section 16.6: Materials and Waste** (Doc Ref. 6.1), the **OCEMP** (Doc Ref. 7.10), **OOEMP** (Doc Ref. 7.11), and **ODEMP** (Doc Ref. 7.12) and **OSWMP** (Doc Ref. 7.19). The materials and waste assessment methodology, in accordance with ISEP guidance, only takes into account safeguarded mineral sites, such as quarries. Mineral Safeguarding Areas are covered in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1). There are no allocated/safeguarded mineral sites within the Order Limits.

Relevant Document	Relevant Policies	Location of information provided to address this
	Gravel Safeguarding Areas identified in the Lincolnshire Minerals and Waste Local Plan (June 2016). **Policy 3: Design of New Development** 5. the provision of facilities for the storage of refuse/recycling bins, storage and/or parking of bicycles and layout of car parking; and 13. the use of locally sourced building materials, minimising the use of water and minimising land take, to protect best and most versatile soils.	
Lincolnshire Minerals and Waste Local Plan, June 2016	**Policy M11: Safeguarding of Mineral Resources** 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.	The materials and waste assessment methodology, in accordance with ISEP guidance, only takes into account safeguarded mineral sites, such as quarries. Mineral Safeguarding Areas are covered in **ES Chapter 14: Socio-Economics and Land Use** (Doc Ref. 6.1). There are no allocated/safeguarded mineral or waste sites within the Order Limits.

Relevant Document	Relevant Policies	Location of information provided to address this
	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.	