Tween Bridge Solar Farm

Environmental Statement
Chapter 5: Policy and Legislative Context

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

APFP Regulation 5(2)(a)

Document Reference: 6.1.5

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Revision 1

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5. Policy and Legislative Context

5.1. Introduction

5.1.1. This chapter of the ES sets out an overview of the relevant planning policy and legislative context relevant to the Environmental Impact Assessment (EIA) process and the Environmental Statement (ES), against which the Scheme will be determined.

5.1.2. The ES does not consider the planning balance of the Scheme in line with planning policy. Instead, this is set out in the **Planning Statement [Document Reference 5.5]** and **Policy Compliance Document [Document Reference 5.5.1]** which are submitted as part of the Development Consent Order (DCO) Application.

5.1.3. The purpose of considering planning policy in this ES is twofold:

- To identify policies that could influence the sensitivity of receptors, and therefore the significance of effects, and any requirements for mitigation; and
- To identify planning policies that could influence the methodology of the EIA. For example, a planning policy might require the assessment of an impact or the use of a specific methodology

5.1.4. This Chapter should be read in conjunction with the ES Environmental Aspect Chapters (**ES Chapter 6-17 [Document Reference 6.1.6-6.1.17]** of this ES which address the policies that relate specifically to each of the disciplines.

5.2. NSIP Legislative Context

5.2.1. By virtue of its potential generating capacity, which stands at over 50MW, the Scheme constitutes a Nationally Significant Infrastructure Project (NSIP). Therefore, instead of applying to the local authority for planning permission, RWE as 'Applicant' must apply to the Planning Inspectorate on behalf of the Secretary of State (SoS) for a DCO. The process for applying for a DCO is set out in the Planning Act 2008[1] **[Ref. 5-1]**

[1] The Scheme constitutes a Nationally Significant Infrastructure Project (NSIP) by virtue of section 14 (1)(a) and section 15 of the Act which includes within the definition of an NSIP any onshore electricity generating station in England of 50 Megawatt capacity or more. Under section 31 of the Act a development consent order (DCO) is required to develop a NSIP. Under section 37 of the Act this can only be granted if an application is made to the Secretary of State (SoS) in accordance with the requirements listed in that section.

5.2.2. The Planning Act 2008 introduced a new system for consulting on, applying for, examining and determining NSIPs as defined by Section 14 of the Planning Act 2008. A non-exhaustive list of the main legislative and procedural requirements relating to NSIPs are presented within the following:

- The Planning Act 2008;
- The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (the APFP Regulations**) [Ref. 5-2]**;
- The Infrastructure Planning (Examination Procedure) Rules 2010 **[Ref. 5-3]**;
- Infrastructure Planning (Interested Parties and Miscellaneous Prescribed Provisions) Regulations 2015 **[Ref. 5-4]** ; and

5.2.3. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') **[Ref. 5-5]**.

5.2.4. Under Section 104 of the Planning Act 2008, the SoS is directed to determine a DCO application with regard to the relevant National Policy Statement (NPS), the local impact report, matters prescribed in relation to the Scheme and any other matters regarded by the SoS as important and relevant. Following their designation on 17 January 2024, there are three NPSs which are considered to be 'relevant NPS' under Section 104 of the Planning Act 2008.

- Overarching NPS for energy (NPS EN-1) **[Ref. 5-6];**
- NPS for renewable energy infrastructure (NPS EN-3) **[Ref. 5-7]**; and
- NPS for electricity networks infrastructure (NPS EN-5) **[Ref. 5-8]**.

5.2.5. It is considered that other national and local planning policy may be regarded by the SoS as 'important and relevant' to the Scheme.

5.3. National Policy Statements

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

5.3.1. The National Policy Statement for Energy (EN-1) sets out the national policy for energy infrastructure, which encompasses renewable energy schemes generating more than 50MW. NPS EN-1 is part of a suite of national policy statements issued by the SoS for Energy Security and Net Zero and ratified by Parliament. It has effect in combination with the relevant technology specific

NPS, National Policy for Renewable Energy Infrastructure (EN-3), and together they provide the primary basis for consenting by the SoS. The SoS has the power to appoint an Examining Authority of Planning Inspector(s) responsible for examining the application and recommending a decision on the DCO application to the SoS. The DCO application will be determined by the SoS.

5.3.2. NPS EN-1 is divided into five parts. Part 1 of this NPS sets out the background context to the NPSs, including the scope of NPS EN-1 and geographical coverage.

5.3.3. Part 2 has been updated to reflect the Government policy on energy and energy infrastructure development.

- Paragraph 2.1.1 discusses how *"The Energy White Paper, published in December 2020, outlined a strategy to transform the energy system, tackling emissions while continuing to ensure secure and reliable supply, and affordable bills for households and businesses. This was built on by the Net Zero Strategy, published in October 2021, which set out a long-term plan for the economy-wide transition to net zero that will take place over the next three decades. The British Energy Security Strategy, published in April 2022, and the Growth Plan of 23 September 2022 further reinforced ambitions and the importance of addressing our underlying vulnerability to international oil and gas prices and reducing our dependence on imported oil and gas. Powering Up Britain, published in March 2023, set out how government will enhance our country's energy security, seize the economic opportunities of the transition, and deliver on our net zero commitments"*.

- Paragraph 2.1.3 states *"To produce the energy required for the UK and ensure it can be transported to where it is needed, a significant amount of infrastructure is needed at both local and national scale. High quality infrastructure is crucial for economic growth, boosting productivity and competitiveness"*

- Paragraph 2.1.4 identifies how "*The National Infrastructure Strategy (NIS) committed to boosting growth and productivity across the whole of the UK, levelling up and strengthening the Union through investment in rural areas, towns, and cities, from major national projects to local priorities. It also committed to government putting the UK on the path to meeting its net zero emissions target by 2050 by taking steps to decarbonise the UK's power networks which together account for over two-thirds of the UK emissions – and take steps to adapt to the risks posed by climate change."*

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

- Paragraph 2.2.1 discusses how "*in June 2019, the UK became the first major economy to legislate for a 2050 net zero Greenhouse Gases ('GHG') emissions target through the Climate Change Act 2008 (2050 Target Amendment) Order 2019. In December 2020, the UK communicated its Nationally Determined Contributions to reduce GHG emissions by at least 68 per cent from 1990 levels by 2030. In April 2021, the government legislated for the sixth carbon budget (CB6), which requires the UK to reduce GHG emissions by 78 per cent by 2035 compared to 1990 levels.*"

- Paragraph 2.3.3 identifies how there is a need for a '*step change*' in the decarbonisation of the UK's energy system in order to meet net zero by 2050.

- Paragraph 2.3.4 re-emphasises how a significant amount of new energy infrastructure is required, both large and small-scale, in order to meet the net zero target.

- Paragraph 2.3.5 acknowledges how the energy system is dominated by fossil fuel, accounting for c. 76% of energy supply in 2020. The Government recognises how we need to dramatically increase the volume of energy supplied from low carbon sources and reduce the amount provided by fossil fuels.

- Paragraph 2.6.1 states "*The government's wider objectives for energy infrastructure include contributing to sustainable development and ensuring that our energy infrastructure is safe.*"

- Paragraph 2.6.3 identifies how *"The planning framework set out in this NPS and the suite of energy NPSs takes full account of the objective of contributing to the achievement of sustainable development and this has been tested through the Appraisal of Sustainability."*

5.3.4. Part three of NPS EN-1 explains "*why the Government sees a need for a significant amount of new large-scale energy infrastructure to meet its energy objectives and why the Government considers that the need for such infrastructure is urgent*".

- Paragraph 3.1.2 identifies *how "it will not be possible to develop the necessary amounts of such infrastructure without some significant residual*

adverse impacts. These effects will be minimised by the application of policy set out in Parts 4 and 5 of this NPS. See also Part 2 of each technology specific NPS".

- Paragraph 3.2.6 states *"The Secretary of State should assess all applications for development consent for the types of infrastructure covered by this NPS on the basis that the government has demonstrated that there is a need for those types of infrastructure, which is urgent, as described for each of them in this Part."*

- Paragraph 3.2.7 goes on to state *"In addition, the Secretary of State has determined that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008."*

- Through paragraph 3.3.20, the government recognises how solar is a low cost way of generating electricity, and their analysis shows that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed of predominantly of wind and solar.

- Paragraph 3.3.25 identifies how "*storage also has a key role to play in achieving net zero and providing flexibility to the energy system, so that high volumes of low carbon power, heat and transport can be integrated*."

- Paragraph 3.3.58 sates *"Given the urgent need for new electricity infrastructure and the time it takes for electricity NSIPs to move from design conception to operation, there is an urgent need for new (and particularly low carbon) electricity NSIPs to be brought forward as soon as possible, given the crucial role of electricity as the UK decarbonises its economy."*

5.3.5. Part 4 of NPS EN-1, sets out the general policies for the submission and assessment of applications relating to energy infrastructure. Paragraph 4.1.5 provides guidance on weighing the adverse impacts of a project against its benefits, and states how *"its potential benefits including its contribution to meeting the need for energy infrastructure, job creation, reduction of geographical disparities, environmental enhancements, and any long-term or wider benefits;* [and] *its potential adverse impacts, including on the environment, and including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce, mitigate or compensate for any adverse impacts, following the mitigation hierarchy"* should be taken into account by the SoS.

- Paragraph 4.1.10 states *"The policy set out in this NPS and the technology specific energy NPSs is intended to provide greater clarity around existing policy and practice of the Secretary of State in considering applications for nationally significant energy infrastructure, (or therefore the "benchmark" for what is, or is not, an acceptable nationally significant energy development)."*

- Through paragraph 4.1.19, the NPS EN-1 emphasises how developers should carry out early engagement with stakeholders and before the formal pre-application stage.

5.3.6. Section 4.3 deals with the environmental considerations which apply and paragraph 4.3.1 and footnote 102 of that paragraph, states how the current legislation on environmental assessment [2] will continue to apply until the government introduces new legislation to replace the existing EU-generated system for Environmental Impact Assessments with a domestic framework of environmental assessments.

- Paragraph 4.3.2 states how *"The Regulations specifically refer to effects on population, human health, biodiversity, land, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them."*

- Paragraph 4.3.3 states that the *"The Regulations require an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, transboundary, short, medium, and long-term, permanent and temporary, positive and negative effects at all stages of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects."*

- Paragraph 4.3.4 states *"To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. This information could include matters such as employment, equality, biodiversity net gain, community cohesion, health and well-being."*

[2] The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations)

- Paragraph 4.3.10 identifies how the applicant must provide information proportionate to the scale of the project ensuring the information is sufficient to meet the requirements of the EIA Regulations.

- Paragraphs 4.3.11 and 4.3.12 identifies how it may not be possible for all aspects of the development to be settled in precise details and where this is the case this should be explained where details are yet to be finalised. Paragraph 4.3.12 goes on to say that where some details are still to be finalised, the ES should assess the likely worst-case environmental, social and economic effects of the proposed development. This is also known as the application of the 'Rochdale Envelope' approach. **ES Chapter 3 Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]** details the approach to the Scheme's parameters.

- Paragraph 4.3.15 states *"Applicants are obliged to include in their ES, information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility."* **ES Chapter 3 Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]** details the reasonable alternatives for the Scheme.

- Paragraph 4.3.23 states how "*the SoS should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development*."

- Paragraph 4.3.24 goes on to state how "*the Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals."*

- Paragraph 4.3.25 states that alternatives not discussed by the applicant should only be considered to the extent that the SoS thinks they are both important and relevant to the decision.

- Paragraphs 4.11.1 to 4.11.13 dal with the network connection. Paragraph 4.11.8 states *"On some occasions it may not be possible to coordinate applications. For example, different elements of a project may have different lead-in times*

and be undertaken by different legal entities subject to different commercial and regulatory frameworks (for example grid companies operate within OFGEM controls) making it inefficient from a delivery perspective to submit one application. Applicants may therefore decide to submit separate applications for each element. Where this is the case, the applicant should include information on the other elements and explain the reasons for the separate application confirming that there are no obvious reasons for why other elements are likely to be refused".

5.3.7. Part 5 of the NPS EN-1 considers the generic impacts that arise from the development of all types of energy infrastructure that are covered by the energy NPSs. The salient matters are listed in **Table 5-1.**

Table 5-1: NPS EN-1 Generic Impacts to consider for renewable developments

Topic	Commentary
Air quality and emissions	Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the construction, operation and decommissioning phases of the proposed project as part of the ES. The ES should describe: existing air quality levels and the relative change in air quality from existing levels; any significant air emissions, their mitigation 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. **ES Chapter 14 Air Quality and Greenhouse Gases [Document Reference 6.2.14]** details the assessments undertaken in regard to air quality and emissions.
Greenhouse gas emission	All proposals for energy infrastructure projects should include a Greenhouse Gas (GHG) assessment as part of their ES. This should include: A whole life GHG assessment showing construction, operational and decommissioning GHG impacts, including

	impacts from change of land use; An explanation of the steps that have been taken to drive down the climate change impacts at each of those stages; Measurement of embodied GHG impact from the construction stage; How reduction in energy demand and consumption during operation has been prioritised in comparison with other measures; How operational emissions have been reduced as much as possible through the application of best available techniques for that type of technology; Calculation of operational energy consumption and associated carbon emissions; Whether and how any residual GHG emissions will be (voluntarily) offset or removed using a recognised framework; Where there are residual emissions, the level of emissions and the impact of those on national and international efforts to limit climate change, both alone and where relevant in combination with other developments at a regional or national level, or sector level, if sectoral targets are developed. **ES Chapter 14 Air Quality and Greenhouse Gases [Document Reference 6.2.14]** details the assessments undertaken in regard to greenhouse gas emissions. Cumulative effects are considered through **ES Chapter 16 Cumulative Effects [Document Reference 6.2.17.**
Biodiversity and geological conservation	Where the development is subject to EIA, the applicant should ensure that the ES clearly sets out any effects on internationally, nationally, and locally designated sites of ecological or geological conservation importance (including those outside England), on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity, including irreplaceable habitats. Applicants should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests. Applicants should consider wider ecosystem services and benefits of natural capital when designing enhancement measures.

	The design of energy NSIP proposals will need to consider the movement of mobile/migratory species such as birds, fish and marine and terrestrial mammals and their potential to interact with infrastructure. As energy infrastructure could occur anywhere within England and Wales, both inland and onshore and offshore, the potential to affect mobile and migratory species across the UK and more widely across Europe (transboundary effects) requires consideration, depending on the location of development. The applicant should seek the advice of the appropriate Statutory Nature Conservation Body (SNCB) and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether an Appropriate Assessment (AA) under the Conservation of Habitats and Species Regulations 2017 **[Ref 5-22]** is required. Applicants can request and agree 'Evidence Plans' with SNCBs, which is a way to record upfront the information the applicant needs to supply with its application, so that the Habitat Regulation Assessments (HRA) can be efficiently carried out. If an AA is required, the applicant must provide the Secretary of State with such information as may reasonably be required to enable the Secretary of State to conduct the AA. This should include information on any mitigation measures that are proposed to minimise or avoid likely significant effects. Applicants should include measures to mitigate fully the direct and indirect effects of development on ancient woodland, ancient and veteran trees or other irreplaceable habitats during both construction and operational phase. Applicants should consider any reasonable opportunities to maximise the restoration, creation, and enhancement of wider biodiversity, and the protection and restoration of the ability of habitats to store or sequester carbon. Consideration should be given to improvements to, and impacts on, habitats and species in, around and beyond developments, for wider ecosystem services and natural capital benefits, beyond those under protection and identified as being of principal importance.

	ES Chapter 7 Ecology and Nature Conservation [Document Reference 6.2.7] details the assessments undertaken in regard to biodiversity and geological conservation. Cumulative effects are considered through **ES Chapter 16 Cumulative effects [Document Reference 6.2.17** A **Report to Inform Habitat Regulations Assessment [Document Reference 5.3]** is provided with the DCO application so that a HRA can be efficiently carried out.
Civil and limitary aviation	The SoS should be satisfied that the effects on meteorological radars, civil and military aerodromes, aviation technical sites and other defence assets have been addressed by the applicant and that any necessary assessment of the proposal on aviation or defence interests has been carried out. **ES Appendix 16.1 & 6.2– Glint and Glare Assessment [Document Reference 6.3.16.1 & 6.3.16.2]** assess glint and glare effects in relation to aviation interests.
Dust, odour, artificial lighting, smoke, stream and insect infestation	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 during the construction, operation and decommissioning phases. In particular, the assessment provided by the applicant should describe: the type, quantity and timing of emissions; 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. The applicant is advised to consult the relevant local planning authority and, where appropriate, the Environment Agency (EA) about the scope and methodology of the assessment. A range of documents submitted with and accompanying the ES assess the above factors including the **Outline Construction Environmental Management Plan [Document Reference 7.1], ES Chapter 7 Ecology and Nature Conservation [Document Reference 6.2.7], ES**

	Chapter 13 Noise and Vibration [Document Reference 6.2.13] and **ES Chapter 14 Air Quality and Greenhouse Gases [Document Reference 6.2.14].**
Flood risk	A site-specific flood risk assessment should be provided for all energy projects in Flood Zones 2 and 3 in England. An assessment should accompany all proposals involving: sites of 1 hectare or more; land which has been identified by the EA or (Natural Resource Wales) NRW as having critical drainage problems; land identified (for example in a local authority strategic flood risk assessment) as being at increased flood risk in future; land that may be subject to other sources of flooding (for example surface water); where the EA, Lead Local Flood Authority, Internal Drainage Board or other body have indicated that there may be drainage problems. The assessment should identify and assess the risks of all forms of flooding to and from the project and demonstrate how these flood risks will be managed, taking climate change into account. The minimum requirements for Flood Risk Assessments (FRA) are that they should: (i) Be proportionate to the risk and appropriate to the scale, nature and location of the project; consider the risk of flooding arising from the project in addition to the risk of flooding to the project; take the impacts of climate change into account, across a range of climate scenarios, clearly stating the development lifetime over which the assessment has been made; (ii) be undertaken by competent people, as early as possible in the process of preparing the proposal; consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure and exceedance; consider the vulnerability of those using the site, including arrangements for safe access and escape; consider and quantify the different types of flooding (whether from natural and human sources and including joint and cumulative effects) and

	include information on flood likelihood, speed-of-onset, depth, velocity, hazard and duration; (iii) identify and secure opportunities to reduce the causes and impacts of flooding overall, making as much use as possible of natural flood management techniques as part of an integrated approach to flood risk management; (iv) consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes; include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that these risks can be safely managed, ensuring people will not be exposed to hazardous flooding; consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems. Drainage information should include: (i) a description of the existing surface water drainage arrangements for the site (ii) Set out (approximately) the existing rates and volumes of surface water run-off generated by the site. Detail the proposals for restricting discharge rates (iii) Set out proposals for managing and discharging surface water from the site using sustainable drainage systems and accounting for the predicted impacts of climate change. If sustainable drainage systems have been rejected, present clear evidence of why their inclusion would be inappropriate; (iv) Demonstrate how the hierarchy of drainage options has been followed. (v) Explain and justify why the types of SuDS and method of discharge have been selected and why they are considered appropriate.

	(vi) Explain how sustainable drainage systems have been integrated with other aspects of the development such as open space or green infrastructure, so as to ensure an efficient use of the site (vii) Describe the multifunctional benefits the sustainable drainage system will provide (viii) Set out which opportunities to reduce the causes and impacts of flooding have been identified and included as part of the proposed sustainable drainage system (ix) Explain how run-off from the completed development will be prevented from causing an impact elsewhere (x) Explain how the sustainable drainage system been designed to facilitate maintenance and, where relevant, adoption. Set out plans for ensuring an acceptable standard of operation and maintenance throughout the lifetime of the development. Details should also be provide for: measures that will be included to ensure the development will be safe and remain operational during a flooding event throughout the development's lifetime without increasing flood risk elsewhere; identify and secure opportunities to reduce the causes and impacts of flooding overall during the period of construction; and be supported by appropriate data and information, including historical information on previous events. **ES Appendix 10.1 – Flood Risk Assessment [Document Reference 6.3.10.1]** is submitted with the DCO application and contains a surface water drainage strategy for the Scheme.
Historic environment	The applicant should undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA and describe these along with how the mitigation hierarchy has been applied in the ES. This should include consideration of heritage assets above, at, and below the surface of the ground. Consideration will also need to be

	given to the possible impacts, including cumulative, on the wider historic environment. The assessment should include reference to any historic landscape or seascape character assessment and associated studies as a means of assessing impacts relevant to the proposed project. As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development, including any contribution made by their setting. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum, the applicant should have consulted the relevant Historic Environment Record and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact. Where a site on which development is proposed includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, accurate representative visualisations may be necessary to explain the impact. Where there is a high probability (based on an adequate assessment) that a development site may include, as yet undiscovered heritage assets with archaeological interest, the SoS will consider requirements to ensure appropriate procedures are in place for the identification and treatment of such assets discovered during construction. The SoS should give considerable importance and weight to the desirability of preserving all heritage assets. Any harm or loss of significance of a designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification. **ES Chapter 8 Cultural Heritage and Archaeology [Document Reference 6.2.8]** and supporting technical

	appendices details and assesses the historic environment of the Scheme.
Landscape and visual	The applicant should carry out a landscape and visual impact assessment and report it in the ES, including cumulative effects. Several guides have been produced to assist in addressing landscape issues. The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England. The applicant should consider landscape and visual matters in the early stages of siting and design, where site choices and design principles are being established. This will allow the applicant to demonstrate in the ES how negative effects have been minimised and opportunities for creating positive benefits or enhancement have been recognised and incorporated into the design, delivery and operation of the scheme. The assessment should include the effects on landscape components and character during construction and operation. For projects which may affect a National Park, The Broads or an AONBs the assessment should include effects on the natural beauty and special qualities of these areas. The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on dark skies, local amenity, and nature conservation. The assessment should also address the landscape and visual effects of noise and light pollution, and other emissions from construction and operational activities on residential amenity and on sensitive locations, receptors and views, how these will be minimised. Applicants should consider how landscapes can be enhanced using landscape management plans, as this will

	help to enhance environmental assets where they contribute to landscape and townscape quality. In considering visual effects it may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on equally sensitive receptors. This may assist the SoS in judging the weight they should give to the assessed visual impacts of the proposed development. **ES Chapter 6 Landscape and Visual Impact [Document Reference 6.2.6]** and supporting technical appendices details and assesses the landscape and visual impact of the Scheme.
Land use	The ES should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan. The assessment should be proportionate to the scale of the preferred scheme and its likely impacts on such receptors. For developments on previously developed land, the applicant should ensure that they have considered the risk posed by land contamination and how it is proposed to address this. Applicants will need to consult the local community on their proposals to build on existing open space, sports or recreational buildings and land. Taking account of the consultations, applicants should consider providing new or additional open space including green and blue infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal. When considering proposals for green infrastructure, applicants should refer to the Green Infrastructure Framework. Applicants should use any up-to-date local authority assessment or, if there is none, provide an independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements. During any pre-application discussions with

	the applicant the LPA should identify any concerns it has about the impacts of the application on land use, having regard to the development plan and relevant applications and including, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements. Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5). 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. 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. An **Outline Soil Management Plan [Document Reference 7.9], ES Chapter 15 Agriculture Circumstances [Document Reference 6.2.15]** and supporting technical appendices details and assesses the land use impact of the Scheme.
Noise and vibration	Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment: (i) a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive, low frequency or temporal characteristics of the noise (ii) identification of noise sensitive receptors and noise sensitive areas that may be affected (iii) the characteristics of the existing noise environment (iv) a prediction of how the noise environment will change with the proposed development: in the shorter term, such as during the construction period;

	in the longer term, during the operating life of the infrastructure; and, at particular times of the day, evening and night (and weekends) as appropriate, and at different times of year (v) an assessment of the effect of predicted changes in the noise environment on any noise-sensitive receptors, including an assessment of any likely impact on health and well-being where appropriate, particularly among those disadvantaged by other factors who are often disproportionately affected by noise-sensitive areas (vi) if likely to cause disturbance, an assessment of the effect of underwater or subterranean noise (vii) all reasonable steps taken to mitigate and minimise potential adverse effects on health and quality of life **ES Chapter 13 Noise and Vibration [Document Reference 6.2.13**] and supporting technical appendices details and assesses the noise and vibration impact of the Scheme.
Socio-economic impacts	Where the construction, operation and decommissioning of the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES The applicant's assessment should consider all relevant socio-economic impacts, which may include: (i) the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to Net Zero (ii) the contribution to the development of low-carbon industries at the local and regional level as well as nationally (iii) the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities

	(iv) any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains (v) effects on tourism (vi) the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development. (vii) cumulative effects - if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region. The SoS should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that the SoS considers to be both relevant and important to its decision. The SoS may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence). **ES Chapter 11 Socio Economics [Document Reference 6.2.11**] and supporting technical appendices details and assesses the socio economics impact of the Scheme.
Traffic and Transport	If a project is likely to have significant transport implications, the applicant's ES should include a transport appraisal. Applicants should consult with National Highways and Highways Authorities as appropriate on the assessment and mitigation to inform the application to be submitted.

	The applicant should prepare a travel plan including demand management and monitoring measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by active, public and shared transport to: • reduce the need for parking associated with the proposal • contribute to decarbonisation of the transport network • improve user travel options by offering genuine modal choice The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports). If additional transport infrastructure is needed or proposed, it should always include good quality walking, wheeling and cycle routes, and associated facilities (changing/storage etc.) needed to enhance active transport provision The SoS should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision. An **Outline Construction Traffic Management Plan [Document Reference 7.7], ES Chapter 12 Transport and Access [Document Reference 6.2.12]** and supporting technical appendices details and assesses the transport and traffic impact of the Scheme.
Resource and waste management	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 relevant construction activities. 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. Applicants are also encouraged to use construction best practices in relation to storing materials in an adequate and protected place on site to prevent waste, for example, from damage or vandalism. The use of Building Information Management tools (or similar) to record the materials used in construction can help to reduce waste in future decommissioning of facilities, by identifying materials that can be recycled or reused. **ES Chapter 16 Other Environmental Topics [Document Reference 6.2.16]** includes a section on waste where management of waste is detailed and assessed. In addition, the **Outline Construction Environmental Management Plan [Document Reference 7.1]** and **Outline Decommissioning Environmental Management Plan [Document Reference 7.3]** are submitted securing the management of waste.
Water quality and resources	Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment, and how this might change due to the impact of climate change on rainfall patterns and consequently water availability across the water environment, as part of the ES or equivalent. The ES should in particular describe: (i) the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges (ii) existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies

	and reference to Abstraction Licensing Strategies) and also demonstrate how proposals minimise the use of water resources and water consumption in the first instance (iii) existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics (iv) any impacts of the proposed project on water bodies or protected areas (including shellfish protected areas) under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 **[Ref. 5-21]** and source protection zones (SPZs) around potable groundwater abstractions (v) how climate change could impact any of the above in the future (vi) any cumulative effects **ES Chapter 10 Water Resources [Document Reference 6.2.10]** and supporting technical appendices details and assesses the water quality and resources impact of the Scheme**.** Cumulative effects are considered through **ES Chapter 16 Cumulative effects [Document Reference 6.2.17]** and climate change impacts are addressed within the **ES Appendix 16.4 Climate Change Adaptation Assessment [Document Reference 6.3.16.4].**

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

5.3.8. NPS EN-3 specifically deals with renewable energy and taken together with the Overarching National Policy Statement for Energy (EN-1), provides the primary policy for decisions by the SoS on applications they receive for nationally significant renewable energy infrastructure.

5.3.9. Section 2.10 of NPS EN-3 specifically relates to solar photovoltaic generation, the salient points are summarised below.

- Paragraph 2.10.9 states how solar is a key part of government strategy for low-cost decarbonising in the energy sector.
- Paragraph 2.10.10 identifies how solar also has an important role in delivering government's goal for greater energy independence, with a five-fold increase in solar expected by 2035.
- Paragraph 2.10.14 confirms how solar can be built quickly.
- Paragraph 2.10.16 identifies how ancillary infrastructure can typically include energy storage.

5.3.10. Paragraphs 2.10.18 to 2.10.28 sets out factors influencing site selection and design, the key points are summarised in **Table 5-2.** These are considered further in **ES Chapter 3 Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]** of this ES as to how they have informed the location and design of the Scheme and the factors and technical considerations influencing site selection.

Table 5-2: NPS EN-3 factors influencing design of solar

Topic	Commentary
Irradiance and site topography	Irradiance will be a key consideration for the applicant in identifying a potential site as the amount of electricity generated on site is directly affected by irradiance levels. Irradiance of a site will in turn be affected by surrounding topography, with an uncovered or exposed site of good elevation and favourable south-facing aspect more likely to increase year-round irradiance levels. This in turn affects the carbon emission savings and the commercial viability of the site. In order to maximise irradiance, applicants may choose a site and design its layout with variable and diverse panel types and aspects, and panel arrays may also follow the movement of the sun in order further to maximise the solar resource.
Network Connections	The connection voltage, availability of network capacity, and the distance from the solar farm to the existing network can have a significant effect on the commercial feasibility of a development proposal. To maximise existing grid infrastructure, minimise disruption to existing local community infrastructure or biodiversity and

	reduce overall costs, applicants may choose a site based on nearby available grid export capacity. Where this is the case, applicants should consider the cumulative impacts of situating a solar farm in proximity to other energy generating stations and infrastructure.
Proximity to dwelling	Utility-scale solar farms are large sites that may have a significant zone of visual influence. The two main impact issues that determine distances to sensitive receptors are therefore likely to be visual amenity and glint and glare.
Agriculture land classification and land type	While land type should not be a predominating factor in determining the suitability of the site location applicants should, where possible, utilise suitable previously developed land, brownfield land, contaminated land and industrial land. Where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land avoiding the use of "Best and Most Versatile" agricultural land where possible. 'Best and Most Versatile agricultural land is defined as land in grades 1, 2 and 3a of the Agricultural Land Classification. Whilst the development of ground mounted solar arrays is not prohibited on Best and Most Versatile agricultural land, or sites designated for their natural beauty, or recognised for ecological or archaeological importance, the impacts of such are expected to be considered It is recognised that at this scale, it is likely that applicants' developments will use some agricultural land. Applicants should explain their choice of site, noting the preference for development to be on suitable brownfield, industrial and low and medium grade agricultural land. Where sited on agricultural land, consideration may be given as to whether the proposal allows for continued agricultural use and/or can be co-located with other functions (for example, onshore wind generation, storage, hydrogen electrolysers) to maximise the efficiency of land use. Applicants are encouraged to develop and implement a Soil Resources and Management Plan which could help to use and manage soils sustainably and minimise adverse impacts on soil health and potential land contamination. This should be in line with the ambition set out in the Environmental

	Improvement Plan to bring at least 40% of England's agricultural soils into sustainable management by 2028 and increase this up to 60% by 2030.
Accessibility	Applicants will need to consider the suitability of the access routes to the proposed site for both the construction and operation of the solar farm with the former likely to raise more issues. Applications should include the full extent of the access routes necessary for operation and maintenance and an assessment of their effects.
Public Rights of Way	Public rights of way may need to be temporarily closed or diverted to enable construction, however, applicants should keep, as far as is practicable and safe, all public rights of way that cross the proposed development site open during construction and protect users where a public right of way borders or crosses the site. Applicants are encouraged to design the layout and appearance of the site to ensure continued recreational use of public rights of way, where possible during construction, and in particular during operation of the site. Applicants should consider and maximise opportunities to facilitate enhancements to the public rights of way and the adoption of new public rights of way through site layout and design of access.
Security and lighting	Security of the site is a key consideration for developers. Applicants may wish to consider not only the availability of natural defences such as steep gradients, hedging and rivers but also perimeter security measures such as fencing, electronic security, CCTV and lighting, with the measures proposed on a site-specific basis. Applicants should assess the visual impact of these security measures, as well as the impacts on local residents, including for example issues relating to intrusion from CCTV and light pollution in the vicinity of the site. Applicants should consider the need to minimise the impact on the landscape and the visual impact of security measures.
Network connection	To maximise existing grid infrastructure, minimise disruption to existing local community infrastructure or biodiversity and

	reduce overall costs applicants may choose a site based on nearby available grid export capacity. Where this is the case, applicants should consider the cumulative impacts of situating a solar farm in proximity to other energy generating stations and infrastructure.

5.3.11. Paragraphs 2.10.49 to 2.10.126 sets out technical considerations for schemes, these are summarised in **Table 5-3**.

Table 5-3: NPS EN-3 technical considerations for solar schemes

Technical Consideration	Commentary
Capacity of a site	For the purposes of Section 15 of the Planning Act 2008, the maximum combined capacity of the installed inverters (measured in alternating current (AC)) should be used for the purposes of determining solar site capacity. AC installed export capacity should not be seen as an appropriate tool to constrain the impacts of a solar farm. Applicants should use other measurements, such as panel size, total area and percentage of ground cover to set the maximum extent of development when determining the planning impacts of an application. The installed generating capacity of a solar farm will decline over time in correlation with the reduction in panel array efficiency. There is a range of sources of degradation that developers need to consider when deciding on a solar panel technology to be used. Applicants may account for this by overplanting solar panel arrays.
Site layout design, and appearance	Applicants will consider several factors when considering the design and layout of sites, including proximity to available grid capacity to accommodate the scale of generation, orientation, topography, previous land–use, and ability to mitigate environmental impacts and flood risk. For a solar farm to generate electricity efficiently the panel array spacing should seek to maximise the potential power output of the site. The type, spacing and aspect of panel arrays will depend on the physical characteristics of the site such as site elevation.

	In terms of design and layout, applicants may favour a south-facing arrangement of panels to maximise output although other orientations may be chosen. For example, an east-west layout, whilst likely to result in reduced output compared to south-facing panels on a panel-by-panel basis, may allow for a greater density of panels to compensate and therefore for generation to be spread more evenly throughout the day. It is likely that underground and overhead cabling will be required to connect the electrical assets of the site, such as from the substation to the panel arrays or storage facilities. In the case of underground cabling, applicants are expected to provide a method statement describing cable trench design, installation methodology, as well as details of the operation and maintenance regime.
Project lifetime	Applicants should consider the design life of solar panel efficiency over time when determining the period for which consent is required. An upper limit of 40 years is typical, although applicants may seek consent without a time-period or for differing time-periods of operation. Time limited consent, where granted, is described as temporary because there is a finite period for which it exists, after which the project would cease to have consent and therefore must seek to extend the period of consent or be decommissioned and removed.
Decommissioning	Solar panels can be decommissioned relatively easily and cheaply. The nature and extent of decommissioning of a site can vary. Generally, it is expected that the panel arrays and mounting structures will be decommissioned, and underground cabling dug out to ensure that prior use of the site can continue. Applicants should set out what would be decommissioned and removed from the site at the end of the operational life of the generating station, considering instances where it may be less harmful for the ecology of the site to keep or retain certain types of infrastructure, for example underground cabling, and where there may be socio-economic benefits in retaining site infrastructure after the

	operational life, such as retaining pathways through the site or a site substation.
Flexibility in the project detail	In many cases, not all aspects of the proposal may have been settled in precise detail at the point of application. Such aspects may include: the type, number and dimensions of the panels; layout and spacing; the type of inverter or transformer; and, whether storage will be installed (with the option to install further panels as a substitute). Applicants should set out a range of options based on different panel numbers, types and layout, with and without storage.

5.3.12. Paragraphs 2.10.73 to 2.10.126 set out relevant factors to be assessed, noting the list is not intended to be exhaustive, provided in **Table 5-4**.

Table 5-4: NPS EN-3 impact considerations for solar schemes

Impacts	Commentary
Biodiversity and ecological conservation	The applicant's ecological assessments should identify any ecological risk from developing on the proposed site. Issues that need assessment may include habitats, ground nesting birds, wintering and migratory birds, bats, dormice, reptiles, great crested newts, water voles and badgers. The applicant should use an advising ecologist during the design process to ensure that adverse impacts are avoided, minimised or mitigated in line with the mitigation hierarchy, and biodiversity enhancements are maximised. Applicants should consider how site boundaries are managed. If any hedges/scrub are to be removed, further surveys may be necessary to account for impacts. Buffer strips between perimeter fencing and hedges may be proposed, and the construction and design of any fencing should account for enabling mammal, reptile and other fauna access into the site if required to do so in the ecological report. Solar farms have the potential to increase the biodiversity value of a site, especially if the land was previously

	intensively managed. In some instances, this can result in significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains which is encouraged. For projects in England, applicants should consider enhancement, management, and monitoring of biodiversity in line with the ambition set out in the Environmental Improvement Plan and any relevant measures and targets, including statutory targets set under the Environment Act 2021 **[Ref. 5-18]** or elsewhere. Applicants should consider whether they need to provide geotechnical and hydrological information (such as identifying the presence of peat at each site) including the risk of landslide to any development work.
Landscape, visual and residential amenity	Solar farms are likely to be in low lying areas of good exposure and as such may have a wider zone of visual influence than other types of onshore energy infrastructure. However, whilst it may be the case that the development covers a significant surface area, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography, the area of a zone of visual influence could be appropriately minimised. The applicant should consider as part of the design, layout, construction, and future maintenance plans how to protect and retain, wherever possible, the growth of vegetation on site boundaries, as well as the growth of existing hedges, established vegetation, including mature trees within boundaries. Applicants should also consider opportunities for individual trees within the boundaries to grow on to maturity.
Glint & glare	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 of the panel. The effect occurs when the solar panel is stationed between or at an angle of the sun and the receptor.

	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. 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.
Cultural Heritage	Where a site on which development is proposed includes, or has the potential to, include heritage assets with archaeological interest, the applicant should submit an appropriate desk-based assessment and, where necessary, a field evaluation. These should be carried out, using expertise where necessary and in consultation with the local planning authority, and should identify archaeological study areas and propose appropriate schemes of investigation, and design measures, to ensure the protection of relevant heritage assets. In some instances, field studies may include investigative work (and may include trial trenching beyond the boundary of the proposed site) to assess the impacts of any ground disturbance, such as proposed cabling, substation foundations or mounting supports for solar panels on archaeological assets. The extent of investigative work should be proportionate to the sensitivity of, and extent of proposed ground disturbance in, the associated study area.
Construction including traffic and transport noise and vibration	Modern solar farms are large sites that are mainly comprised of small structures that can be transported separately and constructed on-site, with developers designating a compound on-site for the delivery and assemblage of the necessary components. Many solar farms will be sited in areas served by a minor road network. Public perception of the construction phase of solar farm will derive mainly from the effects of traffic movements, which is likely to involve smaller vehicles than typical onshore energy infrastructure but may be more voluminous.

	Applicants should assess the various potential routes to the site for delivery of materials and components where the source of the materials is known at the time of the application and select the route that is the most appropriate. Applicants should ensure all sections of roads and bridges on the proposed delivery route can accommodate the weight and volume of the loads and width of vehicles. Where a cumulative impact is likely because multiple energy infrastructure developments are proposing to use a common port and/or access route and pass through the same towns and villages, applicants should include a cumulative transport assessment as part of the ES.

5.3.13. Potential mitigation measures are discussed through paragraphs 2.10.127 to 2.10.144 of NPS EN-3, the salient matters are presented in Table 5.5 below:

Table 5.5 NPS EN-3 potential mitigation measures for solar schemes

Mitigation	Commentary
Agriculture land classification and land type	The Defra Construction code of practice for the sustainable use of soils **[Ref. 5-19]** on construction sites provides guidance on ensuring that damage to soil during construction is mitigated and minimised. Mitigation measures focus on minimising damage to soil that remains in place, and minimising damage to soil being excavated and stockpiled. The measures aim to preserve soil health and soil structure to minimise soil carbon loss and maintain water infiltration and soil biodiversity. Mitigation measures for agricultural soils include use of green cover, multispecies cover crops - especially during the winter- minimising compaction and adding soil organic matter.
Biodiversity and ecological conservation	In England, proposed enhancements should aim to achieve environmental and biodiversity net gain in line with the ambition set out in the Environmental Improvement Plan **[Ref. 5-20]** and any relevant measures and targets, including statutory targets set under the Environment Act 2021 or elsewhere. This might include maintaining or extending existing habitats and potentially creating new important habitats, for example by installing cultivated strips/plots for rare arable plants,

	rough grassland margins, bumble bee plant mixes, and wild bird seed mixes. Applicants are advised to develop an ecological monitoring programme to monitor impacts upon the flora of the site and upon any particular ecological receptors (such as bats and wintering birds). Results of the monitoring will then inform any changes needed to the land management of the site, including, if appropriate, any livestock grazing regime.
Landscape and visual	Applicants should consider the potential to mitigate landscape and visual impacts through, for example, screening with native hedges, trees and woodlands. Applicants should aim to minimise the use and height of security fencing. Where possible applicants should utilise existing features, such as hedges or landscaping, to assist in site security or screen security fencing. Applicants should minimise the use of security lighting. Any lighting should utilise a passive infra-red (PIR) technology and should be designed and installed in a manner which minimises impact.
Glint & glare	Applicants should consider using, and in some cases the SoS 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. Applicants may consider using screening between potentially affected receptors and the reflecting panels to mitigate the effects. 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.
Cultural Heritage	The ability of the applicants to microsite specific elements of the proposed development during the construction phase should be an important consideration by the Secretary of State when assessing the risk of damage to archaeology.

	Where requested by the applicant, the SoS should consider granting consents which allow for the micro-siting within a specified tolerance of elements of the permitted infrastructure so that precise locations can be amended during the construction phase if unforeseen circumstances, such as the discovery of previously unknown archaeology, arise.
Construction	In some cases, the local highway authority may request that the SoS impose controls on the number of vehicle movements to and from the solar farm site in a specified period during its construction and, possibly, on the routeing of such movements particularly by heavy vehicles. Where cumulative effects on the local road network or residential amenity are predicted from multiple solar farm developments, it may be appropriate for applicants for various projects to work together to ensure that the number of abnormal loads and deliveries are minimised, and the timings of deliveries are managed and coordinated to ensure that disruption to residents and other highway users is reasonably minimised. It may also be appropriate for the highway authority to set limits for and coordinate these deliveries through active management of the delivery schedules through the abnormal load approval process. Once consent for a scheme has been granted, applicants should liaise with the relevant local highway authority (or other coordinating body) regarding the start of construction and the broad timing of deliveries. Applicants may need to agree a planning obligation to secure appropriate measures, including restoration of roads and verges.

5.3.14. Factors for the SoS to consider in the decision making process are listed through paragraphs 2.10.145 to 2.10.162 of NPS EN-3, the salient matters are summarised in **Table 5-5**.

Table 5-5: NPS EN-3 Factors for Secretary of State to consider when determining solar schemes

Secretary of State decision making	Commentary
Agricultural land classification	The SoS should take into account the economic and other benefits of the best and most versatile agricultural land. The SoS should ensure that the applicant has put forward appropriate mitigation measures to minimise impacts on soils or soil resources.
Project lifetime and decommissioning	Where the consent for a solar farm is to be time-limited, the DCO should impose a requirement setting that time-limit from the date the solar farm starts to generate electricity. Such a requirement should also secure the decommissioning of the generating station after the expiration of its permitted operation to ensure that inoperative plant is removed after its operational life. The time limited nature of the solar farm, where a time limit is sought as a condition of consent, is likely to be an important consideration for the Secretary of State. The Secretary of State should consider the period of time the applicant is seeking to operate the generating station as well as the extent to which the site will return to its original state when assessing impacts such as landscape and visual effects and potential effects on the settings of heritage assets and nationally designated landscapes.
Biodiversity and ecological conservation	The Secretary of State must consider the worst-case effects in its consideration of the application and consent. Where developments are proposed on peat, to ensure the development will result in minimal disruption to the ecology, or release of CO_2 and that the carbon balance savings of the scheme are maximised, the Secretary of State should be satisfied that the solar farm layout and construction methods have been designed to minimise soil disturbance during construction and maintenance of roads, tracks, and other infrastructure.

Landscape and visual	The Secretary of State will consider the landscape and visual impact of any proposed solar PV farm, taking account of any sensitive visual receptors, and the effect of the development on landscape character, together with the possible cumulative effect with any existing or proposed development.
Glint and glare	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). 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.
Cultural Heritage	Solar farms are generally consented on the basis that they will be time-limited in operation. The Secretary of State should therefore consider the length of time for which consent is sought when considering the impacts of any indirect effect on the historic environment, such as effects on the setting of designated heritage assets.
Construction	Once solar farms are in operation, traffic movements to and from the site are generally very light, in some instances as little as a few visits each month by a light commercial vehicle or car. Should there be a need to replace machine components, this may generate heavier commercial vehicle movements, but these are likely to be infrequent. The Secretary of State is unlikely to give any more than limited weight to traffic and transport noise and vibration impacts from the operational phase of a project.

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

5.3.15. NPS EN-5 should be read in conjunction with NPS EN-1 and NPS EN-3 and is concerned with the impacts and other matters that are specific to electricity networks infrastructure. The policies set out in NPS EN-5 are additional to those on generic impacts set out in NPS EN-1 and do not replace them. Section 1.6 of NPS EN-5 identifies how it relates to infrastructure for electricity lines (whose nominal voltage is expected to be 132kV or above) and whilst it predominantly focuses on above ground electricity lines, paragraph 1.6.4 confirms that it can also apply to other kinds of electricity network infrastructure (including underground cables at any voltage and associated infrastructure such as substations and converter stations) will be covered by this NPS if it constitutes associated development for which consent is sought along with an NSIP such as a generating station.

5.3.16. Section 2.7 of EN-5 considers the holistic approach to planning.

5.3.17. Paragraph 2.7.1 of EN-5 states "EN-1 explains in Section 4.10 that the Planning Act 2008 aims to create a holistic planning regime, such that the cumulative effects of the same project can be considered together. Co-ordinated applications typically bring economic efficiencies and reduced environmental impact." Paragraph 2.7.2 of EN-5 goes on to state (with Applicant's emphasis underlined and in bold) *"Accordingly, the government envisages that, wherever reasonably possible, applications for new generating stations and their related infrastructure should be contained in a single application to the Secretary of State.* ***However, a consolidated approach of this kind may not always be possible, nor represent the most efficient strategy for delivery of new infrastructure"***. Paragraph 2.7.3 of EN-5 states *"This could be, for example, due to the differing lengths of time needed to prepare the applications for submission to the Secretary of State, or because a network application relates to multiple generation projects (which could be onshore or offshore), or because the works involved are strategic reinforcements required for a number of reasons"*. Paragraph 2.7.4 states *"It may also be the case that the networks infrastructure application and the application for a related generating station will of necessity come from different legal entities, or from entities subject to different commercial and regulatory frameworks"*.

5.3.18. Paragraph 2.2.1 states how the SoS should be mindful that the initial and terminating points of new electrical networks infrastructure is not substantially within the control of the applicant. Paragraph 2.2.2 identifies how siting is determined by the location of new generating stations or other infrastructure

requiring connection to the network, and/or system capacity and resilience requirements determined by the Electricity System Operator.

5.3.19. Paragraph 2.2.5 sets out that applicants retain control in managing the identification of routing and site selection between the identified initiating and terminating points or within the development zone.

5.4. National Planning Policy Framework (December 2024)

5.4.1. The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these are to be applied in relation to the determination of planning applications made under the Town and Country Planning Act 1990. The NPPF was published in 2012 and updated most recently in December 2024.

5.4.2. Paragraph 5 of the NPPF states that the NPPF does not contain specific policies for NSIPs, which are to be determined in accordance with the decision-making framework set out in the Planning Act 2008 and relevant NPSs for nationally significant infrastructure. However, in determining NSIPs, the SoS can take account of any other matters that are considered both important and relevant, which may include the NPPF.

5.4.3. Paragraph 7 of the National Planning Policy Framework (the Framework) identifies how the purpose of the planning system is to contribute to the achievement of sustainable development, including the provision of supporting infrastructure in a sustainable manner. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

5.4.4. Paragraph 8 of the Framework identifies how the planning system has three overarching objectives towards achieving sustainable development. The Framework states how these objectives are interdependent and need to be pursued in mutually supportive ways so that opportunities can be taken to secure net gains across each of the different objectives.

5.4.5. The three overarching objectives are listed as:

- 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;

- 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 well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

- an environmental objective – 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.

5.4.6. Paragraph 9 advises how these overarching objectives should be delivered through the preparation and implementation of plans and the application of policies in the Framework. Paragraph 10 states *"So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development"*.

5.4.7. Paragraph 15 of the Framework sets out how the planning system should be genuinely plan-led. It goes on to state how succinct and up-to-date plans should provide a positive vision for the future of each and provide a framework for assessing the economic, social and environmental priorities. Paragraph 16 sets out how plans should be prepared with the objective of contributing to the achievement of sustainable development. Paragraph 20 identifies how, in line with the presumption on favour of sustainable development, plans should make sufficient provision for the provision of infrastructure and energy.

5.4.8. The identification and delivery of energy schemes is therefore acknowledged by the Framework as one of the strategic policies that contributes towards achieving the presumption on favour of sustainable development. Paragraph 85 confirms the Government's commitment to supporting sustainable economic growth and states (inter alia) "*Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future*".

5.4.9. Paragraph 88, supporting a prosperous rural economy, states how planning decisions should enable the sustainable growth of all types of businesses in the

rural areas, and the development and diversification of agricultural and other land-based rural businesses.

5.4.10. Paragraph 125 encourages multiple benefits from rural land, including taking opportunities to achieve net environmental gains such as development that would enable new habitat creation or improve access to the countryside.

5.4.11. Paragraph 161 sets out that the planning system should support the transition to net zero by 2050 and take full account of all climate impacts including overheating, water scarcity, storm and flood risks and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

5.4.12. Section 14 of the Framework relates to meeting the challenge of climate change, flooding and coastal change. Paragraph 165 of the Framework sets out the planning policy perspective with regards to increasing the use and supply of renewable and low carbon energy. Through the paragraph, Government requires the decision maker to:

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

5.4.13. Section 15 of the Framework relates to conservation and enhancement of the natural environment. Paragraph 187 highlights that new development should be prevented from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability. It identifies how decisions should provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. Footnote 65 states *"Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality"*. Annex 2 of the Framework provides a glossary of terms and defines 'best and

most versatile agricultural land' as land in grades 1, 2 and 3a of the Agricultural Land Classification.

5.4.14. Section 16 is concerned with 'Conserving and enhancing the historic environment'. It identifies heritage assets as 'an irreplaceable resource' and notes that they should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations. Paragraph 212 of the Framework states that where development proposals are likely to affect a designated heritages asset, great weight should be given to the asset's conservation and paragraph 213 goes on to say that "*any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting) should require clear and convincing justification*".

5.4.15. Overall, the Framework confirms that the primary objective of development management is to foster the delivery of sustainable development, not to hinder or prevent it. Decision makers should approach development management decisions positively - looking for solutions rather than problems so that applications can be approved wherever it is practical to do so.

National Planning Practice Guidance

5.4.16. On 6 March 2014, the then Department for Communities and Local Government (DCLG) (now Ministry of Housing, Communities and Local Government, MHCLG) launched the planning practice guidance web-based resource to support the NPPF. The National Planning Practice Guidance (NPPG) provides guidance across a range of topic areas, including in relation to environmental topic areas relevant to the EIA process such as, climate change (which advises how to identify suitable mitigation and adaptation measures in the planning process to address the impacts of climate change).

5.4.17. The NPSs provide the predominant policy context; whilst noting that the ES has had regard to NPPF and NPPG, where any inconsistencies may exist between them and the relevant NPSs, it is policies within the latter that prevail.

5.5. Local Planning Policy

5.5.1. The Planning Act 2008 does not incorporate Section 38(6) of the Planning and Compulsory Purchase Act 2004, which provides the principal basis in legislation for the determination of planning applications under the Town and Country Planning Act 1990, namely that they must be determined in accordance with the statutory development plan unless material considerations indicate otherwise.

Applications for development consent made under the Planning Act 2008 are determined as set out above.

5.5.2. Paragraph 4.1.12 of NPS EN-1 acknowledges that the policies outlined in Development Plan documents and other Local Development Framework documents may hold significance and relevance in the decision-making process. However, in cases where conflicts arise, this paragraph reaffirms Section 104(3) of the Planning Act 2008 which requires that the NPS takes precedence for the purpose of the SoS's planning decision-making. The local development plan is not therefore the starting point for the consideration of an application for development consent. Nevertheless, local policy has been considered throughout the EIA process where relevant.

The Development Plan

5.5.3. **Table 5-6** outlines the local development plan documents that are under consideration during the EIA process. Where relevant, emerging policy documents are also listed.

Table 5-6: Local Development Plans

Authority	Development Plan
City of Doncaster Council	• Doncaster Local Plan 2015 to 2035 (adopted 23 September 2021) **[Ref. 5-9]** • The Barnsley, Doncaster and Rotherham Joint Waste Plan (adopted March 2012) **[Ref. 5-10]** • Thorne-Moorends Neighbourhood Plan **[Ref. 5-11]** – The Thorne and Moorends Town Council published their draft Neighbourhood Plan for 6 week consultation in October 2016. At its Full Council Meeting on 14 February 2023, the members resolved to progress the Neighbourhood Plan but acknowledged it would first be essential to secure funding to support evidence base, predominantly in relation to flood risk and housing needs.
North Lincolnshire Council	• The North Lincolnshire Local Development Framework: o The Core Strategy (adopted June 2011) **[Ref. 5-12]** o Housing and Employment Land Allocations Development Plan Document (adopted March 2016) **[Ref. 5-13]**

	○ Lincolnshire Lakes Area Action Plan Development Plan Document (adopted May 2016) **[Ref. 5-14]** ○ SuDS and Flood Risk Guidance Document (April 2017) **[Ref. 5-15]** ○ Planning for Renewable Energy Development Supplementary Planning Document (November 2011) **[Ref. 5-16]** ○ Planning for Solar Photovoltaic Developments Supplementary Planning Document (January 2016) **[Ref. 5-17]** ○ Saved policies of the 2003 Local Plan (May 2003) **[Ref. 5-23]** North Lincolnshire Council are preparing a new single Local Plan and they expect to publish a draft plan for consultation during Winter 2025 / 2026.

5.6. References

- Ref. 5-1: HMSO (2008) The Planning Act 2008.
- Ref. 5-2: HMSO (2009) Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
- Ref. 5-3: HMSO (2015) Infrastructure Planning (Interested Parties and Miscellaneous Prescribed Provisions) Regulations 2015
- Ref. 5-4: HMSO (2010) The Infrastructure Planning (Examination Procedure) Rules 2010
- Ref. 5-5: HMSO (2017) The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- Ref. 5-6: Department for Energy Security and Net Zero (2023) Overarching National Policy Statement for Energy (EN-1)
- Ref. 5-7: Department for Energy Security and Net Zero (2023) National Policy Statement for Renewable Energy Infrastructure (EN-3)
- Ref. 5-8: Department for Energy Security and Net Zero (2023) National Policy Statement for Electricity Networks Infrastructure
- Ref.5-9: Doncaster Council (2021) Doncaster Local Plan 2015 to 2035 (adopted 23 September 2021)
- Ref.5-10: Doncaster Council (2012) The Barnsley, Doncaster and Rotherham Joint Waste Plan (adopted March 2012)
- Ref.5-11: Thorne & Moorends Town Council (2012) Thorne-Moorends Neighbourhood Plan up to 2032
- Ref.5-12: North Lincolnshire Council (2011) The North Lincolnshire Local Development Framework: The Core Strategy (adopted June 2011)
- Ref.5-13: North Lincolnshire Council (2016) The North Lincolnshire Local Development Framework: Housing and Employment Land Allocations Development Plan Document (adopted March 2016)
- Ref. 5-14: North Lincolnshire Council (2016) The North Lincolnshire Local Development Framework: Lincolnshire Lakes Area Action Plan Development Plan Document (adopted May 2016)

- Ref. 5-15: North Lincolnshire Council (2016) The North Lincolnshire Local Development Framework: SuDS and Flood Risk Guidance Document (April 2017)
- Ref 5.16: North Lincolnshire Council (2011) The North Lincolnshire Local Development Framework: Planning for Renewable Energy Development Supplementary Planning Document (November 2011)
- Ref. 5-17: North Lincolnshire Council (2016) The North Lincolnshire Local Development Framework: Planning for Solar Photovoltaic Developments Supplementary Planning Document (January 2016)
- Ref. 5-18: UK Public General Acts (2021) Environmental Act 2021
- Ref. 5-19: Department for Environment, Food & Rural Affairs (2011) Guidance - Code of practice for the sustainable use of soils on construction sites (last updated June 2018)
- Ref. 5-20: Department for Environment, Food & Rural Affairs (2023) Corporate Report -Environmental Improvement Plan 2023 (last updated February 2023)
- Ref. 5-21: UK Statutory Instruments (2017) The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- Ref. 5-22: UK Statutory Instruments (2017) The Conservation of Habitats and Species Regulations 2017
- Ref. 5-23: North Lincolnshire Council (2003) The North Lincolnshire Local Plan (May 2003)