RWE

Tween Bridge Solar Farm

5.5 Planning Statement

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

APFP Regulation 5(2)(q)

Document Reference: 5.5

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Revision 1

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Acronyms

Acronym	Description
AIL	Abnormal Indivisible Loads
ALC	Agricultural Land Classification
APFP Regulation	Applications: Prescribed Forms and Procedure
AQMA	Air Quality Management Area
AR	Allocation Round
BESS	Battery Energy Storage System
BMV	Best and Most Versatile Land
BNG	Biodiversity Net Gain
CB6	Sixth Carbon Budget
CCA 2008	Climate Change Act 2008
CCC	Climate Change Committee
CCGT	Combined Cycle Gas Turbine
CCTV	Closed-Circuit Television
CEMP	Construction Ecological Management Plan
CfD	Contracts for Difference
CLWS	Candidate Local Wildlife Site
CNP	Critical National Priority

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CO_2	Carbon Dioxide
COMAH Regulations	Control of Major Accident Hazards Regulations 2015
DAD	Design Approach Document
dB	Decibel
DCO	Development Consent Order
DEMP	Decommissioning Environmental Management Plan
DESNZ	Department of Energy Security and Net Zero
eCMP	Ecological Construction Management Plan
EIA	Environmental Impact Assessment
ES	Environmental Statement
FRA	Flood Risk Assessment
GHG	Greenhouse Gas
GVA	Gross Value Added
GW	Gigawatt
ha	Hectare
HGV	Heavy Goods Vehicle
Hon	Honourable
HRA	Habitats Regulations Assessment

HSC	Hazardous Substances Consent
IEMA	Institute of Environmental Management and Assessment
km	kilometre
kV	kilovolt
kWh	Kilowatt hour
LEMP	Outline Landscape Ecological Management Plan
LEMP	Landscape and Ecology Management Plan
LGV	Large Goods Vehicle
LLFA	Lead Local Flood Authority
LNR	Local Nature Reserve
LOAEL	Lowest Observed Adverse Effect Level
LVIA	Landscape and Visual Impact Assessment
LWS	Local Wildlife Site
MCZ	Marine Conservation Zone
mm	Millimetre
MP	Member of Parliament
MtCO2e	Million tonnes of carbon dioxide equivalent
MW	Megawatt
MWh	Megawatt hour

NCSC	National Cyber Security Centre
NESO	National Electricity System Operator Limited
NETS	National Electricity Transmission System
NGESO	National Grid Electricity System Operator Limited
NGET	National Grid Electricity Transmission
NIS	National Infrastructure Strategy
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
NPS	National Policy Statements
NPS	National Policy Statement
NPS EN-1	National Policy Statement for Energy 2023
NPS EN-3	National Policy Statement for Renewable Energy 2023
NPS EN-5	National Policy Statement for Electricity Networks Infrastructure 2023
NPSA	National Protective Security Authority
NSIP	Nationally Significant Infrastructure Project
OEMP	Operational Environmental Management Plan
ONS	Office for National Statistics
PA 2008	Planning Act 2008

PRoW	Public Right of Way
PV	photovoltaic
Rt	Right
SAC	Special Area of Conservation
SCESP	Supply Chain, Employment and Skills Plan
SoS	Secretary of State
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
UK	United Kingdom
WFD	Water Framework Directive

Glossary

Term	Definition
132 kV Substation	The seven onsite substations that step up the voltage from 33kV to 132kV. They form part of the Scheme and will be delivered by RWE.
Access Tracks	The tracks within the Order limits constructed to provide access around the Scheme.
AOD (Above Ordnance Datum)	Baseline standard for measuring height usually measured in metres AOD (mAOD)
Applicant	RWE Renewables UK Solar and Storage Limited

Application	The Application for a Development Consent Order made to the Secretary of State under Section 37 of the 2008 Act in respect of the Authorised Development, required pursuant to Section 31 of the 2008 Act because the Authorised Development comprises an NSIP under Section 14(1)(a) and Section 15 of the 2008 Act by virtue of it comprising a generating station in England of 50 Megawatts electrical capacity or more. Application may be referred to as the 'DCO Application', and the terms are interchangeable.
Associated Development	Defined under s.115(2) of the 2008 Act as development which is associated with the principal development and that has a direct relationship with it. Associated Development should either support the construction or operation of the principal development or help address its impacts. It should not be an aim in itself but should be subordinate to the principal development. In regard to this Application, 'Associated Development' in summary includes: enclosure and boundary treatment, site preparation and clearance works, security and monitoring infrastructure, landscaping and biodiversity measures including planting, drainage and irrigation works, utilities connection works, works to maintain and repair streets and access roads, signage and earthworks, works for the provision of security and monitoring measures, temporary footpath diversions, temporary storage of materials, drilling works, laying down and maintenance of internal access tracks, fencing, and construction of laydown areas. (this list is not exhaustive)
Baseline Conditions	Existing environmental conditions which are described in the Environmental Statement
Battery Energy Storage Systems (BESS)	This comprises battery energy storage units, transformers, inverters, switchgear, power conversion systems, monitoring and control system, heating ventilation and air conditioning, electric cables and fire infrastructure to assist in providing peak generation and grid balancing services to the National Grid.
CCTV	Closed Circuit Television system, used as a security measure.
Construction Compound	A compound including offices, welfare facilities, accommodation facilities, storage and parking for construction of the authorised development and other associated facilities.

Construction Phase	A period of up to 54 months in either a single, consecutive approach or through multiple stages to construct the Scheme. The construction programme is likely to begin in 2028.
Cumulative Effects	The cumulation of effects with other existing and, or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources.
Decommissioning Phase	A period of approximately 24 months within when the Scheme will be decommissioned, post the Operational Phase.
Design Parameters	The design parameters and principles and assessments set out in **Design Approach Document Appendix A: Parameters Document [Document Reference 5.6.1]**
Development Consent Order (DCO)	A Development Consent Order made by the relevant Secretary of State pursuant to the 2008 Act to authorise an NSIP. A DCO does or can incorporate or remove the need for a range of consents which would otherwise be required for a development.
EIA (Environmental Impact Assessment)	Process for identifying the likely significance of environmental effects (beneficial or adverse) arising from a development, by comparing the existing environmental conditions prior to development (the baseline) with the environmental conditions during/following the construction, operational and decommissioning phases of a development should it proceed.
EIA Regulations	Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)
Environmental Statement	Document setting out the findings of an Environmental Impact Assessment
Field Number	Each Land Parcel is made up of a number of referenced fields e.g. A1, B1 etc.
Fixed Solar PV Modules	Solar PV Tables that are mounted to fixed Mounting Structures that face south.

Geographical Information System (GIS)	A system designed to capture, store, manipulate, analyze, manage, and present spatial or geographic data.
Green Infrastructure (GI)	Network of green spaces and watercourses and water bodies that connect rural areas, villages, towns and cities.
Ground-mounted solar PV generating station	This comprises the solar PV modules and mounting structures.
Hectare (ha)	unit of measurement 100m x 100m, or 10,000m2
Hard Standing	Ground surfaced with a hard material suitable for supporting vehicular movement (e.g. tarmac, compacted gravel, concrete).
Heavy Goods Vehicle (HGV)	A commercial vehicle designed to transport goods and materials. In the UK, it's defined as any vehicle with a gross vehicle weight (GVW) exceeding 3,500 kg (3.5 tonnes). This includes a wide range of vehicles like lorries, articulated trucks, and specialized vehicles like fire engines and mobile cranes.
Horizontal Directional Drilling (HDD)	A construction technique whereby a tunnel is drilled under a waterway or other designated area, and a pipeline or other utility is pulled through the drilled underground tunnel.
In-combination effects	The cumulative effect of multiple environmental impacts arising from the Scheme on a specific location or resource that together give rise to greater impacts than the effects in isolation.
Indirect Effects	Effects that result indirectly from the Scheme as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects.
Inverter	Electrical equipment required to convert direct current power generated by the solar panels to alternating current power
Iterative Design Process	The process by which the Scheme's design is amended and improved by successive stages of refinement which respond to growing understanding of environmental issues.

Land Parcels A to E	The Solar PV module areas and all associated infrastructure. The Land Parcels will be connected by a series of underground cables. Land Parcel are identified as follows: • Land Parcel A: Land to the east of Thorne and north of the Stainforth & Keadby Canal. • Land Parcel B: Land to the west of Crowle and north of the Stainforth & Keadby Canal • Land Parcel C: Land south of the Stainforth & Keadby Canal and north of the High Levels Bank (A18). • Land Parcel D: Land south of the High Levels Bank (A18) and north of the Hatfield Moors Nature Reserve. • Land Parcel E: Land south of the High Levels Bank (A18) and north of Sandtoft and the M180.
Magnitude (of effect)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.
Mitigation	Measures including any process, activity, or design to avoid, reduce, or remedy for negative environmental impacts or effects of a development.
Module Mounting Structure	The structure that is fixed to the ground and onto which the Solar PV Modules are attached.
Monitoring	In EIA, 'monitoring' refers to the systematic and ongoing collection of data on the environmental and social effects of a project throughout its various phases (construction, operation and decommissioning).
National Planning Policy Framework	Document setting out the UK Government's planning policies for England and instruction on how they are expected to be applied. It serves as a framework for local plans to ensure sustainable development and provides guidance for planning decision-making. Latest version published in December 2024.
National Planning Practice Guidance	Online resource to support the implementation of the NPPF. The NPPG provides context and practical details and is intended to be read alongside the NPPF, offering further explanation and guidance

	on how to apply the framework's principles in everyday planning practice. It replaces a large volume of previous planning guidance documents and is designed to be easily updated and readily accessible online.
National Policy Statement	National Policy Statements are produced by government. They give reasons for the policy set out in the statement and must include an explanation of how the policy takes account of government policy relating to the mitigation of, and adaptation to, climate change. They comprise the government's objectives for the development of nationally significant infrastructure in a particular sector and state.
NGET 400kV Substation	The NGET 400kV substation that will facilitate the export and import of electricity from the Scheme.
Non-Technical Summary	A document that sets out an overview, in non-technical language, of the main findings of the ES.
NSIP	A Nationally Significant Infrastructure Project (NSIP) is a separate consenting route for major infrastructure projects in the fields of energy, transport, water, wastewater, and waste. NSIPs require development consent from the relevant Secretary of State rather than planning permission from the local planning authority.
Onsite Cabling	33-400kV cabling, which transmits electricity from the Solar PV Modules to the 132 kv Substation(s) and RWE on-site 400kV Substation located within the Scheme.
Order Limits	The limits of the land to which the Application for the DCO relates, within which the development must be carried out and which is required for its construction and operation. Order Limits may be referred to as the 'Site', and the terms are interchangeable.
Ordnance Survey	National mapping agency in the United Kingdom which covers the island of Great Britain
Operational Phase	The period within which the Scheme is operational, following the Construction Phase and following connection and first export to the National Grid, no earlier than 2032.

Outline Battery Safety Management Plan (oBSMP)	A site or project specific plan identifying the measures required to avoid and reduce the risk of fire from battery energy storage systems within the Scheme, as well as how to effectively manage a fire should the event occur.
Outline Construction Environmental Management Plan (oCEMP)	A site or project specific plan designed to ensure best practice and/or appropriate environmental management practices are applied throughout the construction, operation and/or demolition phases of the Scheme.
Outline Construction Traffic Management Plan (oCTMP)	A site or project specific plan detailing construction logistics, construction worker travel that includes information to guide the delivery of material, plant, equipment and staff during the construction phase.
Outline Decommissioning Environmental Management Plan (oDEMP)	A site or project specific plan developed to ensure that appropriate environmental management practices are followed during the decommissioning phase of the Scheme.
Outline Landscape and Ecology Management Plan (oLEMP)	A site or project specific plan setting out the landscape and ecological management actions for the Scheme, outlining how mitigation measures, identified within the Environmental Statement, will be delivered through future landscape works and management.
Outline Operational Environmental Management Plan (oOEMP)	A site or project specific plan setting out specific environmental management and monitoring during the operational phase of the Scheme.
Outline Soil Management Plan (oSMP)	A site or project specific plan identifying the importance and sensitivity of the soil resource at the Scheme and to provide specific guidance to ensure that there is no significant adverse effect on the soil resource as a result of the Scheme. Measures proposed will be considered prior to the commencement of construction works
Outline Supply Chain, Employment and Skills Plan (oSCESP)	A site or project specific plan detailing the supply chain, employment, training and learning opportunities available during the construction and operational phase of the Scheme.

Planning Act 2008 (PA 2008)	A UK law that established a new regime for granting planning permission for major infrastructure projects (NSIPs).
Panel Areas	This comprises ground mounted solar photovoltaic (PV) generating station (solar PV modules and mounting structure), inverters, transformers and switchgear, and low voltage distribution cables, access tracks and ancillary infrastructure works.
Permissive Path	New recreational informal path that the landowner allows the public to use for the operational life of the Scheme.
Planning Inspectorate	The Planning Inspectorate deals with planning appeals, national infrastructure planning applications, examinations of local plans and other planning-related and specialist casework in England. DCO applications are handled by the Planning Inspectorate on behalf of the Secretary of State.
Preliminary Environmental Information Report (PEIR)	Preliminary Environmental Information is defined in the EIA Regulations as: 'information referred to in regulation 14(2) which – (a) has been compiled by the applicant; and (b) is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development). A Preliminary Environmental Information Report (PEIR) for the Scheme was produced in March 2025.
Public Right of Way (PRoW)	Footpath, bridleway or byways over which members of the public have a right to use.
PV String	A row of Solar PV Modules mounted onto the Mounted Structure that are connected to one another to form a PV string which is either connected to a string inverter or a central inverter.
PV Tables	Solar PV Modules mounted onto the Mounting Structure, forming tables, which are then set out in rows.
Receptor	A location, feature (ground, watercourse) or individual (person, plant, bird, animal etc) upon which the effects of a proposed development is assessed, i.e. the receiving environment.

Rochdale Envelope	An approach used in EIA that allows applicants to define a range of parameters within which the development can be built, allowing for flexibility while still ensuring a comprehensive assessment of potential environmental impacts. This is done by assessing the development as if it were operating at its maximum possible parameters, effectively creating a "worst-case scenario" for the EIA.
Residual effect	Those impacts that remain following the implementation of mitigation measures
RWE onsite 400kV Substation	The 400kV substation that is proposed as part of the Scheme and will be built and operated by the Applicant, RWE.
Scheme	A NSIP for areas within the Order Limits that are proposed for the construction, operation, and decommissioning of a ground mounted solar photovoltaic (PV) electricity generation station with a capacity of over 50 Megawatts (MW) and associated development comprising of energy storage and grid connection infrastructure on land approximately 10 kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe. The Scheme encompasses all areas within the Order Limits. Scheme may be referred to as the 'Tween Bridge Solar Farm', and the terms are interchangeable.
Scoping	The process of identifying the issues to be addressed by an EIA. It is a method of ensuring that an EIA focuses on the important issues and avoids those that are considered to be less significant.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.
Significance	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.
Solar PV Modules	A panel comprising a grouping of photovoltaic cells connected to each other and set within a single physical frame. The PV Panel is attached to a Mounting Structure. Solar PV Modules may be referred to as 'PV Module' or 'Solar Panels', and the terms are interchangeable.

Stakeholder	Stakeholders are individuals, groups, or organisations that have an interest or influence in, or are affected by, a proposed project or activity.
Study Area	The area in which a particular assessment or survey targets. The study area will vary depending on the nature of the technical assessment work and individual ES Environmental Aspect Chapters will determine their methodologies the study area spatial extents.
Switchgears	Switchgears are the combination of electrical disconnect switches, fuses or circuit breakers used to control, protect and isolate electrical equipment.
Temporal Scope	In EIA, 'temporal scope' refers to the timeframe during which potential environmental impacts of a project are assessed during the various phases (construction, operation and decommissioning).
Tracker Solar PV Modules	Rotates Solar PV Tables on a single axis to follow the sun's path across the sky, typically from east to west, throughout the day.
Transformers	Transformers control the voltage of the electricity generated across the Scheme before it reaches the primary onsite substations
Works Plan	The plans submitted with the Application known as the **Works Plans [Document Reference 2.3]** and which delineate the work areas for the Scheme.
Zone of Influence (ZoI)	The area for the assessment of combined effects. Zones of Influence (ZoIs) are variable depending on the environmental factor being discussed.

1 Executive Summary

1.1.1. RWE Renewables UK Solar and Storage Ltd (hereafter referred to as the 'Applicant') has prepared this Planning Statement to support an application for a Development Consent Order ('DCO') for Tween Bridge Solar Farm ('the Scheme').

1.1.2. The main element of the Scheme is the construction, operation, maintenance and decommissioning of a ground mounted solar farm with an intended design capacity of over 50 megawatts (MW), and battery energy storage system (BESS) with an export/import connection to the National Grid. Once fully operational, the Scheme will export approximately 800MW of electricity to the National Electricity Transmission System (NETS), whilst also having 400MW of BESS. Flexibility in panel layout design would be required to accommodate expected future technology developments as technology continues to evolve and become more efficient.

1.1.3. The Scheme is a Nationally Significant Infrastructure Project under Section 14(1)(a) and Sections 15(1) and (2) of the Planning Act 2008 as it comprises a generating station in England with a capacity exceeding 50MW.

1.1.4. It therefore requires a Development Consent Order from the Secretary of State (SoS) for the Department for Energy Security and Net Zero. This Planning Statement has been prepared on behalf of the Applicant to support the DCO Application and should be read in conjunction with the other documents submitted with the DCO Application.

2 Introduction

2.1. Introduction

2.1.1. RWE Renewables UK Solar and Storage Ltd (hereafter, the 'Applicant') has commissioned this Planning Statement that forms part of a suite of documents supporting an application under Section 37 of the Planning Act 2008 **[Ref. 1]** to the SoS for the Department of Energy Security and Net Zero (DESNZ) for a Development Consent Order (DCO) for the Tween Bridge Solar Farm (hereafter, the 'Scheme').

2.1.2. The Scheme constitutes a Nationally Significant Infrastructure Project (NSIP) as it comprises the construction of a generating station (section 14 of the Planning Act 2008) in England that does not generate electricity from wind, is not an offshore generating station and has a capacity of more than 50 Megawatts (MW) (section 15(2) of the Planning Act 2008).

2.2. The Applicant

2.2.1. The Applicant is RWE Renewables UK Solar and Storage Limited, a leading solar and battery energy storage developer with one of the largest development pipelines in the UK. The Applicant is a subsidiary of RWE AG, which has more than 125 years of energy expertise, through design, construction, and operation. It is RWE AG's ambition to have a carbon neutral energy portfolio by 2040, providing clean, secure, and affordable energy to millions of households

2.3. The Consenting Process and Nationally Significant Infrastructure Projects

2.3.1. The Scheme represents a significant planning and investment project and is a NSIP. It therefore requires consent under the Planning Act 2008 (PA 2008) **[Ref. 1]** via a DCO. The PA 2008 dictates that the SoS is responsible for determining DCO applications, with the power to appoint the Planning Inspectorate to manage and examine the application. In this role, the Planning Inspectorate will examine the application through an appointed Examining Authority for the Scheme and make a recommendation to the SoS who will then decide whether to make a DCO which authorises the construction, operation, maintenance and decommissioning of the Scheme.

2.3.2. The Planning Act 2008 defines the key stages in the application process for NSIPs. These are summarised below:

- Pre-application – developer notifies and consults the public, statutory consultees and those with an interest in the affected land on its proposed application. Pre-application is typically split into a non-statutory phase of pre-application consultation followed by a statutory phase of pre-application consultation. The non-statutory community consultation for this Scheme was carried out in late 2023 and engagement with consultees continued throughout 2024. Statutory consultation was carried out in March – May 2025.

2.3.3. Submission of DCO application – developer will review the feedback received during consultation and finalise the proposals taking the feedback into account. A DCO application is then submitted to the Planning Inspectorate.

- Acceptance – after the application is submitted, the Planning Inspectorate will have 28 days to decide whether it is suitable for examination.

- Pre-examination – if accepted for examination, the Planning Inspectorate will appoint an Examining Authority and there will be an opportunity for people to register their interest in the application. Anyone registered will be kept informed of the progress of the application by the Planning Inspectorate, including how they can provide comments. The Planning Inspectorate will invite all those registered to a preliminary meeting that will explain the timetable and format of the examination.

- Examination – the examination lasts up to six months. Parties who have registered their interest will be able to take part in the examination and provide their comments to the Examining Authority, in writing and verbally at hearings.

2.3.4. Recommendation and decision – following the examination, the Examining Authority will have three months to make its recommendation on the application to the SoS. The SoS will then have a further three months to make the final decision as to whether consent is to be granted.

2.3.5. Section 5 of this Planning Statement sets out the legislative and policy context for the Scheme. This includes the PA 2008, applicable National Policy Statements (NPS), and other national and local planning policy frameworks which are likely to be considered important and relevant to the determination of the DCO Application.

2.3.6. The following Energy NPSs have effect for decisions by the SoS on applications for energy developments that are nationally significant under the Planning Act 2008 **[Ref. 1]** and are the primary policy basis against which the DCO Application will be determined:

- Overarching National Policy Statement for Energy 2023 (NPS EN-1) (designated in January 2024) **[Ref. 2]**;
- National Policy Statement for Renewable Energy 2023 (NPS EN-3) (designated in January 2024) **[Ref. 3]**; and
- National Policy Statement for Electricity Networks Infrastructure 2023 (NPS EN-5) (designated in January 2024) **[Ref. 4]**.

2.4. Order Limits Location

2.4.1. The Order Limits is located within the Yorkshire and Humber regions. The Scheme straddles the administrative boundaries of Doncaster Council and North Lincolnshire Council. At a local level, the Order Limits is located on land east of Thorne; south of Tween Bridge Moors; west of Crowle; north and northwest of Sandtoft & Sandtoft Industrial Estate; north of Hatfield Moors; and northeast of Hatfield. The Scheme is located on land either side of the M180, High Level Banks (the A18) and the Stainforth and Keadby Canal. The Order Limits extends to approximately 2,414 hectares (ha) (5965 acres) of land, as shown on **ES Figure 1.1 Order Limits [Document Reference 6.4.1.1].**

2.4.2. The Order Limits is made up of five Land Parcels (described as Land Parcels A to E) as shown on **ES Figure 1.2 Land Parcel Plan [Document Reference 6.4.1.2].** Each parcel is further described in **Table 1-1**.

Table 1-1: Land Parcels

Land Parcels	Location of Parcel	Area (hectares)
Land Parcel A	Land to the east of Thorne and north of the Stainforth & Keadby Canal.	569.96

Land Parcel B	Land to the west of Crowle and north of the Stainforth & Keadby Canal.	129.96
Land Parcel C	Land south of the Stainforth & Keadby Canal and north of the High Levels Bank (A18).	351.73
Land Parcel D	Land south of the High Levels Bank (A18) and north of the Hatfield Moors Nature Reserve.	335.83
Land Parcel E	Land south of the High Levels Bank (A18) and north of Sandtoft and the M180.	442.44

2.4.3. To assist with the identification of particular fields within the Order Limits, a breakdown of the Land Parcels into field development parcels within the Order Limits is shown on **ES Figure 1.3 Development Parcel Plan [Document Reference 6.4.1.3].**

2.5. Pre-Application Consultation

2.5.1. The PA 2008 requires applicants for DCOs to carry out formal, statutory pre-application consultation on their proposals. There are several requirements as to how this consultation must be undertaken that are set out in the PA 2008 and related regulations.

2.5.2. To meet these requirements, the Applicant undertook comprehensive pre-application consultation. The pre-application consultation undertaken by the Applicant and feedback from various consultees and the community has served to inform the final design of the Scheme. This is documented and described within the **Consultation Report [Document Reference 5.1]**.

2.6. Applicant's Vision

2.6.1. As described in section 3 of this Planning Statement, the Government expects large scale solar generation to make an important contribution to achieving their objectives for the UK's energy supply. As summarised in paragraph 3.2.1 of NPS EN-1, these objectives include ensuring that the supply of energy always remains secure, reliable, affordable, and enables the UK to transition to a low carbon economy in order to meet its carbon emission reduction commitments.

2.6.2. To support this objective, the Applicant's vision for the Scheme is to deliver a Scheme that seeks to maximise energy yield from the Order Limits whilst minimising adverse effects on the environment and at the same time, taking opportunities to deliver significant local benefits. Good design influences every decision and conservation, and enhancement of the local environment sits at the core of the design approach. Central to this is responding positively to the baseline landscape and the ecosystem services it provides and developing an understanding of what it is that the local community values. The Scheme design principles seek to preserve features of the landscape that contribute to the character and identity of the local area, giving particular consideration to the natural, historic and recreational environment.

2.6.3. The vision for the Scheme was developed by the Applicant and their team by combining the corporate mission and values of the Applicant with their aspirations for the Scheme, whilst reflecting the urgent need for the UK to transition to low carbon energy generation.

2.7. Environmental Statement and Other Supporting Documents

2.7.1. The Scheme constitutes 'EIA development' as defined by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') **[Ref. 5]** which means that an Environmental Impact Assessment (EIA) is required. An Environmental Statement (ES) has been prepared and is submitted with the DCO Application.

2.7.2. The reports, plans and figures that accompany the DCO Application are listed in the **Guide to the Application [Document Reference 1.2]**.

2.8. Structure of this Statement

2.8.1. The remainder of the Planning Statement is structured as follows:

- **Section 3** outlines the components of Scheme along with the Scheme's lifetime and areas of flexibility the Applicant is seeking to secure
- **Section 4** describes the need for the Scheme, highlights the urgent need for renewable energy and details the benefits of the Scheme

- **Section 5** describes the Order Limits (including its surrounding areas), summarises the site selection process and details all relevant planning history within the Order Limits
- **Section 6** provides an overview of the decision-making framework, legislation, and policy context as well as other 'important and relevant' considerations
- **Section 7** provides an assessment of the Scheme against the legislation and policy considered by the Applicant to be 'important and relevant'
- **Section 8** presents the overall planning balance and conclusions of this Planning Statement

3 Scheme Description

3.1. Introduction

3.1.1. This section provides an overview description of the Scheme, including the components of the Scheme, alongside the proposed construction, operation and decommissioning activities. The full description is contained within **ES Volume 1, Chapter 2: Scheme Description [Document Reference 6.1.2]**.

3.2. Overview

3.2.1. Key components of the Scheme are: -

- Ground-mounted solar PV generating station and associated mounting structures,
- On-site supporting equipment including inverters, transformers and switchgear,

3.2.2. A BESS including batteries and associated enclosures, monitoring systems, air conditioning, electrical cable and fire safety infrastructure. The BESS is indicatively split into four separate 100MW compounds. Each 100MW compound would be located next to and connected to one of the seven on-site 132kV Substations,

- Seven on-site 132kV Substation compounds, including transformers, switchgear, circuit breakers, control equipment buildings, control functions, material storage, parking, as well as wider monitoring and maintenance equipment,

3.2.3. Low voltage and 33kV interconnecting cabling to connect and transmit electricity from the solar PV modules, inverters and BESS to one of the seven on-site 132kV Substations,

- RWE on-site 400kV Substation,

3.2.4. Underground 132kV interconnecting cabling to connect the seven on-site 132kV Substations to the RWE on-site 400kV Substation,

3.2.5. Underground 400kV interconnecting cabling from the RWE on-site 400kV substation to the edge of the Order Limits

- Associated infrastructure including access tracks, parking, CCTV, gates and fencing, lighting, drainage infrastructure, storage containers, earthworks, culverts, surface water management, maintenance and welfare facilities, security cabins and any other works identified as necessary to enable the development,

3.2.6. Horizontal Directional Drilling for selected cable works where open trenching or culvert(s) are not possible or appropriate, including the canal, railway and the M180,

- Highways works to facilitate access for construction vehicles, comprising passing places where necessary to ensure that heavy goods vehicles (HGVs) can be safely accommodated amongst existing traffic, new or improved site accesses and visibility splays,

- Environmental mitigation and enhancement measures, including landscaping, habitat management and biodiversity enhancement,

- Permissive pathways and bird viewing gallery, and

- Temporary development during the construction phase of the Scheme including construction compounds, parking, temporary diversions of Public Rights of Way, and temporary access roadways to facilitate access to all parts of the Order Limits.

3.2.7. Subject to obtaining the necessary consents, construction of the Scheme is anticipated to commence in 2028, and to be completed and fully operational in 2032, with phases of capacity coming online from 2029 onward in line with the Applicant's current Grid Connection Agreement (see **Grid Connection Statement [Document Reference 5.8]**).

3.2.8. The Environmental Statement assumes that construction of the Scheme is built out over up to, a 54 month-period (2028 - 2032) in either a single phased approach (development of Land Parcels completed one after another with the potential for breaks between development of Land Parcels) or through multiple phases (development of Land Parcels concurrently). The full Scheme would operate for 40 years. If the NESO Grid Connection date varies, which is not within the Applicants direct control, the timeframe where there could be partial operation of the Scheme could reduce or fail to materialise. In this situation the full

operational Scheme would operate for 40 years from its new grid connection date. In either connection scenario there will be full operational generation for 40 years.

3.2.9. Fully operational, the Scheme would have the potential to provide enough low-carbon energy to meet the equivalent annual electricity needs of over 388,889 average UK homes[1].

3.2.10. Following 40- years of a fully operational Scheme, it is proposed that the Scheme will be decommissioned. This decommissioning with take approximately 24 months and will be in a phased approach.

3.3. Design Principles

3.3.1. Design should be considered as a process and an outcome, and the importance of good design for Nationally Significant Infrastructure Projects (NSIPs) is championed in national policy, including Overarching National Policy Statement for Energy 2023 (NPS EN-1) (designated in January 2024) **[Ref 2-1]** and National Policy Statement for Renewable Energy 2023 (NPS EN-3) (designated in January 2024) **[Ref 2-2],** which set out criteria for achieving good design. Supporting consideration of good design for infrastructure projects, and referred to in the NPS EN-1, the National Infrastructure Commission's 'Design Principles for National Infrastructure' **[Ref 2-3]** identifies the purposes of the design process is to bring together engineering, environmental and creative expertise to shape and deliver a development project. The document notes that: -

> *"Design is as much about process as it is product. Imaginative thinking about design should be embedded at every step of planning and delivery. The principles ensure a good process leads to a good design outcome"*

3.3.2. The Scheme's design principles are set out in the **Design Approach Document (DAD) [Document Reference 5.6].** The DAD set out the vision, context and design response for the Scheme.

[1] This is calculated based on the latest information published in January 2024, which contains 2022 generation data, and assuming an average (mean) annual household consumption of 3.24MWh, based on the 2022 statistics from the Department of Energy Security and Net Zero

3.4. Design Parameters and the Rochdale Envelope

3.4.1. The design of the Scheme has been refined throughout the EIA process. This ES chapter provides an indicative design and construction methodology. It is recognised that parts of the Scheme design and construction methodology, as presented, may be subject to further refinement and optimisation prior to and during construction.

3.4.2. The need for flexibility in design, layout, and technology is acknowledged in the relevant National Policy Statements (NPS EN-1, NPS EN-3 and NPS EN-5) to address uncertainties inherent to a scheme. This is very pertinent to solar and battery development due to the rapid pace of change in technology. For example, as technology advances, it is possible that solar panels and BESS could become more efficient. This in turn could require the micro-siting of panels, BESS units and the associated equipment and infrastructure to reflect such changes, i.e., the final alignments of cabling and the number and location of panels, BESS units, substations, inverters and transformers. Flexibility is also required for the final alignment of the cabling works within the Order Limits. The final detail is secured by requirement(s) in the **draft DCO [Document Reference 3.1]**.

3.4.3. In order to maintain flexibility in the design, the Applicant has used the 'Rochdale Envelope' approach in assessing the impacts of the Scheme within the maximum (or minimum where appropriate) parameters set out in this ES, as detailed in **ES Volume 1, Chapter 4: Approach to EIA [Document Reference 6.1.4].**

3.4.4. The design parameters for each element of the Scheme are detailed within the following sections and the **Design Approach Document Appendix A Parameters Document [Document Reference 5.6.1]**, compliance with which will be secured via a requirement in the DCO**.** These have been used to inform the assessment detailed within this ES.

Works Plans

3.4.5. The **Works Plans [Document Reference 2.3]** show the spatial limits for each work. Works can only be undertaken outside of these limits if it can be demonstrated to the SoS's satisfaction, following consultation with City of Doncaster Council and North Lincolnshire Council that any deviation would not give rise to any materially new or materially different environmental effects in comparison to those reported

in the ES. This is needed to provide some flexibility to the Scheme to adopt to future technical advancements.

Two Indicative Operational Layouts

3.4.6. Two design options for the ground-mounted solar PV generating station are assessed within the ES.

3.4.7. Option 1 is a mixed design with both fixed and tracker panels. In this design the majority of the Scheme will be fixed panels, with areas of tracker panels in the northern and western section of the Order Limits. Option 1 (mixed design) was assessed in the PEIR and considered in the statutory consultation process.

3.4.8. Option 2 is for the entirety of the Scheme to be a fixed panel layout. This option has been developed and assessed to ensure the Applicant has sufficient flexibility to deliver the most appropriate scheme following detailed design and having regard to ongoing technological advancements.

- Option 1 is shown on **Figure 2.2b Indicative Operational Layout Plan (Fixed and Tracker Solar Panel) [Document Reference 6.4.2.2]**
- Option 2 is shown on **Figure 2.2a Indicative Operational Plan (Fixed Solar Panel) [Document Reference 6.4.2.2]**

3.4.9. **ES Figure 2.2 Heights Parameters Zonal Plan [Document Reference 6.4.2.3]** provides the maximum height parameter within each field of the Land Parcels and this has been used to inform the assessment within this ES.

3.4.10. **ES Chapter 2 Scheme Description [Document Reference 6.1.3]** provides a description of the different elements of the Scheme along with the design parameters that have been assessed within this ES. Each environmental factor/topic has assessed the design considered to be the likely worst-case scenario for that discipline to determine the potential for significant effects and identify suitable mitigation measures.

The Applicant's Grid Connection Agreement

3.4.11. The Applicant has a Bilateral Connection Agreement from National Electricity System Operator Limited (NESO) for the connection of Tween Bridge Solar Farm ('the Scheme') to the transmission network. The Applicant originally received a

grid connection offer from National Electricity System Operator Limited (NESO) on 13 December 2021, offering connection to a new National Grid Electricity Transmission (NGET) 400kV Substation with an export capacity of 340MW. That offer was accepted by the Applicant on 27 July 2022. Two subsequent grid connection offers to vary the agreement were received by the Applicant on 27 January 2022 for an additional 250MW and 26 September 2024 for an additional 210MW and were accepted by the Applicant on 26 April 2023 and 25 November 2024, respectively.

3.4.12. The agreement identifies that a new 400kV substation, which is to be consented and delivered separately by NGET, would be required to increase capacity on the network to facilitate delivery of the Scheme, and other potential projects which could be brought forward on the same network (the NGET 400kV substation). The Applicant understands that NGET are in ongoing discussions about the location of that substation with the local planning authority, but certainty on its precise location cannot be provided at this stage.

3.4.13. NGET has commenced their siting process for the NGET 400kV substation, and the exact location of the NGET 400kV substation will not be confirmed until this process is concluded. The final location of the NGET 400kV substation will be dependent on many factors such as technical, design and environmental factors, as well as other factors outside the control of the Applicant. This includes the requirements of NGET, the owners of the national transmission network infrastructure, and their further appraisal and connection considerations. The Applicant notes that the NGET 400kV substation is not just required for the Scheme, it is also required to facilitate the connection of other projects coming forward on the same network.

3.4.14. Following the conclusion of the substation siting work, NGET would then progress a separate consenting process for the NGET 400kV substation and would own and operate the NGET 400kV substation following construction.

3.4.15. A 400kV export connection cable will be required to connect the Scheme to the new NGET 400kV substation ("the 400kV export connection cable"). As the location of the new NGET 400kV substation is not yet known, it is not possible at this stage for the Applicant to identify and assess the potential route options the 400kV export connection cable would take from the RWE on-site 400kV substation to the NGET 400kV substation.

The Applicant's approach to the 400kV export connection cable

3.4.16. As it is not possible for the potential route options for the 400kV export connection cable until the location of the NGET 400kV substation has been confirmed, the 400kV export connection cable does not form part of the Scheme. Whilst the Applicant continues to engage with NGET, there is therefore currently no meaningful information for the Applicant to assess that this export cable connection in the accompanying Environmental Impact Assessment for the Scheme. This approach is consistent with the requirements of the EIA Regulations (see, for example, R (Khan v. London Borough of Sutton ([2014] EWHC 3663 (Admin)).

3.4.17. The exception is that the DCO includes powers for the provision of cables from the RWE on-site 400kV substation to the Order Limits, in order to facilitate a connection at the appropriate point with the remainder of the 400kV export cable to the NGET substation (once the location is confirmed), which has been assessed within the Applicant's Environmental Statement.

3.4.18. The 400kV export connection cable beyond the Order Limits would be progressed via a separate consenting process once the location of the NGET 400kV substation is confirmed. The most appropriate consenting route will be determined at the appropriate stage once NGET have defined the location of the NGET 400kV substation and the cable route options can be established. This, in turn, will ensure that the 400kV export connection cable beyond the Order Limits would be subject to appropriate environmental assessment.

3.4.19. Typically, assets such as 400kV cables at the transmission level are consented, designed, built and operated by NGET as the transmission licence holder. In the scenario where the Applicant was to seek consent for the 400kV export connection cable, there are several options available. Each option would be accompanied by the relevant environmental assessment. They include:

- Utilising on-road cable routes for the section of the 400kV export connection cable beyond the Order Limits, which would be possible under the Applicant's permitted development rights;
- A subsequent planning application under the Town and Country Planning Act 1990 to the relevant local planning authority;

- Pursuing a change to the DCO for the Scheme to include the full extent of the 400kV export connection cable; or

- Submitting a request to the Secretary of State for the 400kV export connection cable to be treated as a project of national significance in its own right, under Section 35 of the Planning Act 2008, in turn allowing a standalone DCO to be sought for the 400kV export connection cable.

3.4.20. The Applicant has proposed a Requirement within Schedule 2 of the Draft DCO [Document Reference 3.1] which will ensure that consent is in place for the 400kV export connection cable prior to commencement of the Scheme, providing certainty that the grid connection will be in place before the DCO is implemented.

Policy support for the Applicant's approach

3.4.21. The Applicant would note that the approach of consenting a grid connection separately from the generating station element of a scheme is not uncommon and there are a number of made DCOs that have taken this approach, including Triton Knoll Offshore Wind Farm, Brecha Forest West Wind Farm and Hinkley Point C Nuclear Power Station. This approach is recognised and provided for within Section 4.11 of the Overarching National Policy Statement (NPS) for Energy (EN-1and paragraphs 2.7.2-2.7.4 of the NPS for Electricity Networks Infrastructure (EN-5).

3.4.22. While paragraph 4.11.7 of EN-1 encourages applications for new generating stations and related infrastructure to be contained in a single application or in separate applications submitted in tandem where possible, paragraph 4.11.8 acknowledges that there will be instances where this is not possible. In such instances, paragraph 4.11.8 states that applicants should explain the reasons for the separate applications, including information on the elements to be consented separately to the extent they are available. Importantly, footnote 160 to paragraph 4.11.8 acknowledges that different levels of information may be available at different times and as such, applicants should take a proportionate approach to what information should be included. .

Summary of justification

3.4.23. The Applicant has explained the reason why the 400kV export connection cable needs to be progressed via a separate application. There is limited information that can be included at this stage, given the point of connection to the

NGET 400kV substation has not yet been defined, however the Applicant has provided an outline of the potential consenting routes above and the Environmental Statement submitted with the DCO Application includes a description of the works involved in the provision of a 400kV export connection cable within the Order Limits.

3.4.24. Due to the limited information available at this stage regarding the route the 400kV export connection cable will take beyond the Order Limits, an assessment of the part of the 400kV export connection cable beyond the Order Limits and the NGET 400kV substation itself is not possible as part of the application. The Applicant notes that there would be a legal requirement that subsequent consent applications for the 400kV export connection cable and the NGET 400kV substation would be subject to their own planning and regulatory processes. This would include consideration of environmental matters. Such assessments would need to include consideration of the cumulative effects of the 400kV export connection cable or the NGET 400kV substation with the Scheme, in addition to the direct, indirect and secondary effects of the 400kV export connection cable or the NGET 400kV substation themselves. The new, aforementioned Requirement included in the Applicant's draft DCO ensures there only works which have been assessed are proposed to be consented by way of this application for development consent.

3.4.25. As required by paragraph 4.11.8 of EN-1, the Applicant confirms that there are no known reasons why the 400kV export connection cable or the NGET 400kV substation cannot be successfully secured through separate consenting processes, which will progress once NGET confirms the location of the point of connection. It will be a matter for the Secretary of State to consider whether they are satisfied the appropriate arrangements are or will be in place at the point of taking a decision on the DCO application for the Scheme, as per paragraph 4.11.12 of EN-1.

3.4.26. Further consideration of the Scheme's compliance with National Policy Statements with regard to the cable route connection is given in section 7.2 of this document.

4 NEEDS FOR AND BENEFITS OF THE SCHEME

4.1. Introduction

4.1.1. This section sets out the need for the Scheme and how it is supported by relevant legislation and national and local policy. This section summarises key points, includes a summary of the benefits of the Scheme and sets out a detailed case for why the Scheme is urgently required, concluding that it will be a critical part of the development of the UK's portfolio of renewable energy generation and required to decarbonise its energy supply both quickly and securely.

4.1.2. This approach reflects NPS EN-1 policy at paragraph 3.3.20 that solar is a key part of the Government's strategy for low-cost decarbonisation of the energy sector, with a secure, reliable, affordable, net zero consistent system in 2050 likely to be composed predominantly of wind and solar. New solar schemes are required to ensure that the UK remains on track to meet its legally binding carbon emissions reduction targets, while enhancing national security of supply.

4.2. Legislation and Strategic Policy Context

4.2.1. Solar generation is a critical part of the UK's strategy to achieve net zero by 2050, a key step towards which is the government's national mission for clean power by 2030.

4.2.2. The Climate Change Act 2008 ('CCA 2008') **[Ref. 7]** legally bound the UK to reduce carbon emissions by at least 80% by 2050, compared to 1990 levels. In June 2019, legislation was passed (the Climate Change Act 2008 (2050 Target Amendment) Order 2019) **[Ref. 8]** to amend the CCA 2008 **[Ref. 7]** to set a new ambitious target requiring the UK to bring all greenhouse gas ('GHG') emissions to net zero (i.e. a 100% reduction) by 2050, compared with the previous target of at least 80% reduction from 1990 levels. UK electricity demand is expected to double by 2050. Decarbonisation requires the electrification of energy which is currently sourced from fossil fuels (including gas, petrol, and diesel), and the UK's pathway to achieving 'net zero' by 2050 must involve wider transitions outside of the power sector, including decarbonising transport, industry, agriculture, and homes. The development of large-scale solar in the UK will provide an essential diversity to the UK's low-carbon generation portfolio, working with other technologies to deliver security of supply and value to UK consumers. The Department for Energy Security

and Net Zero Energy Trends January to March 2025 [Ref. 37] noted how UK energy production fell 2 per cent on last year whilst final consumption increased by 3 per cent on last year.

4.2.3. The British Energy Security Strategy (April 2022) **[Ref. 9]** set an ambition of 70GW of solar by 2035. Mission Zero **[Ref.10]**, published in January 2023 by Rt Hon Chris Skidmore MP, Chair of the Government's Independent Review of net zero, finds that "*The benefits of net zero will outweigh the costs*" and that "*This is too important to get wrong*". Mission Zero recommends the "*Full-scale deployment of solar… to harness one of the cheapest forms of energy, increase our energy independence and deliver up to 70GW of British solar generation by 2035*". The Government's Powering Up Britain strategy (updated April 2023) **[Ref. 11]** concludes that an acceleration of the deployment of renewables is critical to the delivery of the Government's plans: "*Our goal is to develop up to 50GW of offshore wind by 2030 and to quintuple our solar power by 2035*", noting that 14GW of solar was already installed in the UK at the time of writing the report.

4.2.4. The current Labour government made major commitments to the delivery of clean energy in its election manifesto **[Ref. 12]**, including to achieve "*Clean Power by 2030*". The manifesto's energy commitments include: -

- Triple solar power by 2030
- Invest in carbon capture and storage
- Embrace the future of energy production and storage, and
- Increase local power generation and partner with energy companies, local authorities to install thousands of clean power projects.

4.2.5. In December 2024 the Government published a policy paper entitled The Clean Power 2030 Action Plan which, amongst other things, outlines the government's steps to achieving Clean Power by 2030 and outlines a government ambition for 45-47 GW of solar power by 2030.

4.2.6. Solar generation is a critical element of the plan to decarbonise the UK electricity sector with urgency and is already a leading low-cost generation technology in the UK. The national need for solar generation is urgent, and the capacity required is

significantly greater than the capacity of projects currently understood to be in development.

4.3. National Planning Policy Context

4.3.1. The DCO Application is to be determined in accordance with Section 104 of the PA 2008 **[Ref. 1]** because solar photovoltaic energy generation with supporting BESS is a technology included within the current relevant Energy NPSs; NPS EN-1, NPS EN-3 and NPS EN-5. Section 104 of the PA 2008 **[Ref. 1]** makes clear that where an NPS exists relating to the type of development applied for, the SoS must have regard to it as a relevant NPS and must decide the application in accordance with that NPS. As outlined in Section 1.3 of this Planning Statement, the NPSs relevant to the Scheme are NPS EN-1, NPS EN-3 and NPS EN-5 and therefore apply as 'relevant' NPSs under Section 104 of the PA 2008 **[Ref. 1]**.

4.3.2. Paragraph 2.3.3 of NPS EN-1 summarises the Government's objectives for the energy system are "*to ensure our supply of energy always remains secure, reliable, affordable, and consistent with meeting our target to cut GHG emissions to net zero by 2050, including through delivery of our carbon budgets and Nationally Determined Contribution. This will require a step change in the decarbonisation of our energy system*".

4.3.3. NPS EN-1 establishes a critical national priority (CNP) for nationally significant low-carbon infrastructure, the definition of which includes solar PV. Similarly EN-3 paragraph 3.10.7 confirms that BESS are included within CNP as supporting infrastructure for renewables like solar and recognised as essential for grid balancing and system flexibility, which are explicit EN-1 priorities for a resilient and decarbonised energy system,.

4.3.4. The urgent national need for energy generating infrastructure is set out in both NPS EN-1 and NPS EN-3 and is of primary importance to the determination of the Scheme. Paragraph 3.3.63 of NPS EN-1 states that: "*The urgent need for CNP Infrastructure to achieving our energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. Government strongly supports the delivery of CNP Infrastructure and it should be progressed as quickly as possible*".

4.3.5. Paragraph 2.10.9 of NPS EN-3 provides support for solar development in England and Wales stating that the government has "*committed to sustained growth in solar capacity to ensure that we are on a pathway that allows us to meet net zero emissions by 2050. As such solar is a key part of the government's strategy for low-cost decarbonisation of the energy sector*". Paragraph 2.10.10 goes on to re-iterate the contribution that solar generation is expected to make to achieving net zero targets and the energy security goals set out in the British Energy Security Strategy, of "*a five-fold increase in combined ground and rooftop solar deployment by 2035 (up to 70GW)*" **[Ref. 9]**.

4.3.6. Paragraph 2.2.3 of NPS EN-5 explains that "*significant amounts of new electricity networks infrastructure is required*". Paragraph 2.2.2 acknowledges that the siting of new electricity transmission infrastructure 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*".

4.3.7. The Scheme will contribute to the three national energy policy aims:

• Net zero and the importance of urgently deploying low-carbon generation assets at scale;

• Security of supply (geographically and technologically diverse supplies); and

• Affordability and reducing exposure to volatile international markets.

4.4. Local Policy Context

4.4.1. In 2019 both City of Doncaster Council and North Lincolnshire Council separately declared a climate emergency in line with the national government.

4.4.2. City of Doncaster Council have developed an Environmental & Sustainability Strategy 2020-2030 **[Ref. 15]** to address this emergency. A key target is to achieve net zero carbon emissions by 2040.

4.4.3. North Lincolnshire Council has also developed a climate change strategy called "*A Green Future*" [**Ref. 16]** and includes a Climate Action Plan with 40 aims across nine priority categories. North Lincolnshire Council is also committed to achieving net zero carbon emissions by 2030.

4.5. Security of Supply

4.5.1. Paragraph 3.3.1 of NPS EN-1 explains that the Government needs to ensure there is sufficient electricity to always meet demand, with a margin that accommodates unexpectedly high demand and to mitigate risks. It continues in paragraph 3.3.2 that "*the larger the margin, the more resilient the system will be in dealing with unexpected events, and consequently the lower the risk of a supply interruption*".

4.5.2. Paragraph 3.3.19 of NPS EN-1 identifies the benefits of having a diverse mix of all types of power generation, reducing dependency on any one type of generation or one source of fuel or power, which helps to ensure the security of supply. Paragraph 3.3.19 states, "*Given the changing nature of the energy landscape, we need a diverse mix of electricity infrastructure to come forward so that we can deliver a secure, reliable, affordable, and net zero consistent system during the transition to 2050 for a wide range of demand, decarbonisation, and technology scenarios.*"

4.5.3. While individual renewable energy generation assets can be variable in terms of output due to seasonal conditions, this is mitigated through the development of a portfolio which consists of different renewable technologies across a diverse geographical area. A large portfolio of interconnected assets from as broad a range as possible of technologies and geography helps to deliver security of supply.

4.5.4. The **Grid Connection Statement [Document Reference 5.8]**) sets out how the Scheme would connect to the NETS via a new NGET 400kV Substation which is being consented and delivered separately by NGET. By being connected to the transmission system, large-scale solar generation can and will play an important role in the resilience of the Great Britain electricity system from an adequacy and system operation perspective. This is because the transmission system is able to efficiently transfer bulk power from where it is in abundance to where it is needed. This connection means that it will be required to play its part in helping National Grid Electricity System Operator Limited (NGESO) manage the national electricity system.

4.6. Affordability

4.6.1. Paragraph 3.3.13 of NPS EN-1 states "*The Net Zero Strategy sets out the government's ambition for increasing the deployment of low carbon energy infrastructure consistent with delivering our carbon budgets and the 2050 net*

zero target. This made clear the commitment that the cost of the transition to net zero should be fair and affordable".

4.6.2. Paragraph 3.3.14 of NPS EN-1 continues, "*…Government will work to ensure there are market frameworks which promote effective competition and deliver an affordable, secure, and reliable energy system and government support for specific technologies and projects will be dependent on clear value for money for consumers and taxpayers*".

4.6.3. Paragraph 3.3.20 of NPS EN-1 confirms that "*Wind and solar are the lowest cost ways of generating electricity, helping reduce costs and providing a clean and secure source of electricity supply (as they are not reliant on fuel for generation). Our analysis shows that a secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar*".

4.6.4. As a result of technological advances, solar power is already among the cheapest forms of electricity generation in the UK and Government forecasts indicate that costs will continue to reduce in the future. Year-on-year cost reductions have made solar technology progressively more attractive compared with many other forms of electricity generation, promoting the commercial rationality for the UK to prioritise the development of solar capacity.

4.6.5. Scale of development is an important factor and maximising the generating capacity of schemes improves their economic efficiency, bringing power to market at the lowest cost possible. It is shown that larger schemes deliver more quickly and at a lower unit cost than multiple independent schemes which make up the same total capacity.

4.6.6. The Scheme will be a substantial infrastructure asset which, if consented, will deliver large amounts of cheap, secure and low-carbon electricity which will help the UK achieve its Sixth Carbon Budget commitments and stay on track to achieve net zero by 2050. Maximising the capacity of generation in the proposed location for the Scheme represents a significant and commercially rational step forward in the fight against the global climate emergency.

4.7. Decarbonisation

4.7.1. Electricity meets a significant proportion of the UK's overall energy needs, and NPS EN-1 paragraph 3.3.1 confirms the reliance on electricity is likely to increase as the UK moves towards its 2050 GHG emission reduction goals.

4.7.2. Without a rapid increase in the supply of low-carbon electricity, the urgent requirement to decarbonise other sectors (as will be required to meet future Carbon Budgets) is unlikely to be achieved.

4.7.3. Solar generation is increasing in both scale and importance within emerging government policy. Not only for the benefits it delivers to decarbonisation, but also because of the need for secure and affordable energy supplies. As noted above, this is reinforced by the new government's ambition to triple solar capacity by 2030, alongside doubling onshore wind and quadrupling offshore wind.

4.7.4. To deliver the government's ambition, the equivalent of approximately one large scale solar scheme would need to be switched on each and every month between August 2024 and 2030.

4.7.5. Schemes which make use of existing grid infrastructure are valuable to help deliver the government's ambition to deliver Clean Power by 2030. It is important to continue to bring forward schemes with connection dates in the 2030s to meet future growth in electricity demand and in case Clean Power by 2030 is not achieved.

4.7.6. The Scheme will, if consented, make an important and significant contribution towards achieving the government's current targets.

4.8. Summary of Need Case

4.8.1. Section 3 of EN-1 includes assessments of the need for new major renewable electricity infrastructure, as well as the need for different types of electricity infrastructure, such as electricity storage. Paragraph 2.1.6 of EN-3 accordingly clarifies that 'the SoS should act on the basis that the need for infrastructure covered by this NPS has been demonstrated.'

4.8.2. Notwithstanding that the need for large-scale solar development, as well as electricity storagehas been demonstrated by the NPS, this Planning Statement sets out a detailed case for why the Scheme is urgently required. In conclusion the Scheme will be a critical part of the UK's portfolio of renewable energy generation

and supporting infrastructure required to decarbonise its energy supply both quickly and securely, whilst providing grid balancing and system flexibility.

4.8.3. This part of the Planning Statement reflects the adopted Government policy that solar is a key part of the Government's strategy for low-cost decarbonisation of the energy sector. Large scale solar projects, such as this Scheme, are required to ensure that the UK remains on track to meet its legally binding carbon emissions reduction targets, while enhancing national security of supply.

4.8.4. In conclusion, the meaningful and timely contributions offered by the Scheme to UK decarbonisation and security of supply, while helping lower bills for consumers throughout its operational life will be critical on the path to net zero.

4.9. Benefits of the Scheme

Increasing Renewable Energy Generation - Generation of 800MW of renewable energy and subsequent reduction in carbon emissions

4.9.1. The Scheme will deliver approximately 800 MW of low-carbon and low-cost domestic solar electricity generation capacity connecting to the NETS. In addition to meeting the urgent national need for secure and affordable low-carbon energy infrastructure the Scheme will deliver wider benefits to the environment and the local community.

4.9.2. The vision and project design principles described in the **Design Approach Document [Document Reference 5.6]** and summarised in section 2 of this Planning Statement have shaped the design of the Scheme to date, to ensure that embedded mitigation is provided through the design and layout of the proposals. In addition, the design of the Scheme has identified opportunities for enhancement. These are outlined within the **ES Volume 2, Chapters 6-15 [Document Reference 6.2.6 to 6.2.15]**.

Co-located Battery Energy Storage Systems

4.9.3. Energy storage is a benefit in planning terms. The co-location within a solar farm would assist in delivering a number of significant benefits. These include the sharing of grid infrastructure; 'load-shifting' and smoothing out the generation of

electricity to meet demand; and security of supply and reducing the risk of black-outs and brown-outs.

Climate Emergency at a National and a Local Level

4.9.4. A national climate emergency was declared by the UK Parliament in May 2019

4.9.5. In 2019 both City of Doncaster Council and North Lincolnshire Council separately declared a climate emergency in line with the national government.

4.9.6. Through the generation of renewable energy, the Scheme will contribute towards addressing these declarations of climate emergencies.

Energy Security

4.9.7. The Scheme will supply renewable energy to the National Grid, comprising secure, distributed and diversified energy generation which fully accords with the Government policy on energy security as detailed in the British Energy Security Strategy published in 2022 and the Energy Security Plan published in March 2023.

4.9.8. Energy security should be regarded as an important and relevant matter which is separate to the generation of renewable energy per se. The latest published version NPS EN-3 which, when setting the policy for Solar Photovoltaic Generation at Section 2.10, refers at paragraph 2.1.9 to solar playing a key part of the government's strategy for low-cost decarbonisation of the energy sector in the context of the net zero emission pathway to 2050; paragraph 2.10.10also states;

'Solar also has an important role in delivering the government's goals for greater energy independence …"

Best Available Technology

4.9.9. The Scheme will comprise in part the latest best available technology that delivers greater levels of solar efficiency by utilising a solar tracking system together with bi-facial panels, which has the potential to increase continuous electrical productivity by 20-25% when compared to traditional fixed solar arrays.

4.9.10. The Scheme has the ability to incorporate technological features that not all solar farm projects currently proposed are capable of deploying. It is therefore the case,

that the Scheme benefits from proposing the utilisation of the most efficient technology currently available..

Early Grid Connection and Lack of Alternative Sites

4.9.11. It is well established that grid-connections are a scarce resource in the UK, and represents a major barrier to the transition to net zero. The Energy Security Strategy 2023 (page 50) [Ref.11] explains that connections times are a very significant issue, with over 250GW of generation in the transmission queue This is over 3 times the schemes currently connected into the grid of 80GW. The availability of a grid connection offer for up to 800MW of export capacity, combined with 400MW of import capacity for the Scheme is a significant benefit.

4.9.12. There is no national or local policy requirement to carry out an assessment of alternative sites for solar farm developments, however, alternatives have been considered through the evolution of the design and location of the Scheme, including consideration of alternative sites. The approach to the consideration of alternatives by the Applicant is set out in the Site Selection Section of Environmental Statement Chapter 3: Site Description, Site Selection and Iterative Design Process which accompanies this Application.

4.9.13. The availability of a grid connection for the Scheme coupled with a lack of suitable alternative sites with the benefit of a grid connection offer, is an important and relevant matter.

Biodiversity

4.9.14. The Scheme will deliver biodiversity improvements including landscaping, habitat management and biodiversity enhancement to retain and enhance ecological and recreational connectivity.

4.9.15. Within the Order Limits, large areas of neutral grassland will be managed and form part of the bird mitigation strategy. The proposals include the planting of new woodland areas comprising a range of native tree species. This woodland habitat is expected to establish well and achieve at least poor condition initially, with potential for improvement through ongoing management. The native species mix will provide valuable habitat for a variety of wildlife and contribute positively to the Order Limits ecological network. Buffers adjacent to the solar panels will consist of diverse neutral grassland, managed to maintain a varied sward height and

species composition. This management regime will encourage structural heterogeneity within the sward, supporting a wide range of flora and fauna. The varied sward structure will provide important habitat niches and promote biodiversity within these buffer areas.

4.9.16. Details of habitat establishment and long-term management is provided through the **Outline Landscape Ecological Management Plan (LEMP) [Document Reference 7.6]** which has been prepared in line with the **Biodiversity Net Gain assessment [Document Reference 6.3.7.12]**. The Outline LEMP sets out the prescriptions for the establishment and maintenance of the habitats for 40 years. These management measures take into account biodiversity enhancement alongside specific species enhancements.

4.9.17. In addition to the habitat interventions set out above, the following enhancement measures are proposed across the Order Limits to provide enhancements for certain faunal groups:

- 5 barn owl nest boxes installed on suitable mature trees, micro-sited by a suitably experienced ecologist;
- 5 kestrel nest boxes installed on woodland edge/mature hedgerow trees;
- 90 small nest boxes comprising a mixture of open-fronted and hole-fronted nest boxes, with the latter targeted at 40mm in diameter to target starling;
- 100 bat boxes on retained mature trees;
- 100 hedgehog boxes;
- 100 insect hotels, comprising underground bee shelters and general-purpose insect hotels made from natural materials (i.e. brash);
- Inclusion of 100 beetle banks;
- Inclusion of 50 bee hives;
- 50 amphibian/reptile refugia, designed in line with English Nature's (now Natural England) mitigation guidelines, whereby refugia are made from brash/rubble/grass cuttings; and,

- Approximately 65km of new hedgerow and 450 new trees will also be planted within the Order Limits.

4.9.18. With regards to biodiversity net gain (BNG), based on the habitats present that will be lost and those to be created, the development would result in a gain of 3727.44 habitat units, a gain of 345.56 hedgerow units, and a gain of 100.43 watercourse units. This is a percentage gain of 81.35% in habitat units, 178.75% in hedgerow units and 10.84% in watercourse units.

Climate

4.9.19. Renewable energy developments such as the Scheme have a major role to play in the transition to a low carbon economy, and the decarbonisation of the UK national electricity network. Without projects such as the Scheme, the GHG intensity of the UK's electricity generation would not decrease as projected and would severely compromise the UK's ability to meet its carbon reduction targets.

4.9.20. The Scheme will provide renewable electricity that would otherwise be generated via alternative means with higher carbon intensity, such as a combined cycle gas turbine (CCGT) which utilises the burning of natural gas. Specifically, the Scheme is supportive of government policy to transition the national grid to renewables, enabling the removal of fossil fuel generated fuel electricity (e.g., natural gas) from the grid. When comparing the lifecycle carbon emissions of the Scheme to that of a natural gas-fired power generation using CCGT, with Carbon Capture and Storage assumed to be installed in the future, in this scenario the baseline emissions are 3,706,131TCO_2e, which is almost five times the Scheme's lifecycle emissions of 777,732TCO_2e. This represents a carbon emissions saving of -2,928,399TCO_2e.

4.9.21. When assessed against whole lifecycle emissions, the Scheme has a carbon payback period of less than 2 years. Further details regarding the Schemes impact on climate are contained within **ES Volume 2, Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]**.

Air Quality

4.9.22. The Scheme will produce energy from the sun, which is a clean, sustainable source of energy. It will help to reduce the energy requirements from fossil fuels, which emit harmful air emissions, such as carbon dioxide, nitrogen dioxide, sulphur

dioxide, and particulate matters. The Scheme contributes towards the transition to clean energy on a national scale and the reduction in harmful air emissions would be possible through phasing out fossil fuels uses. Further details regarding air quality and emissions are provided within **ES Volume 2, Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]**.

Land, Soil and Groundwater

4.9.23. A reinstatement and habitat creation programme would commence following the construction phase, which will enhance soil quality. This would include landscaping, habitat management and biodiversity enhancement. Areas under the solar PV modules and the landscape buffers would be planted with native grassland, wildflower mixes, scrub and hedgerows. Woodland blocks and belts would be planted strategically to provide visual screening and ecological habitats to achieve BNG. The reinstatement and creation of the landscape and habitat will be undertaken in accordance with the **Outline Landscape Ecological Management Plan [Document Reference 7.7]**.

4.9.24. The cessation of agricultural activity on some parts of the Land Areas during construction and operation could lead to the stabilisation of soil and may reduce soil-laden runoff into watercourses within the Order Limits. A reduction in the application of herbicides, pesticides or fertilisers as a result of changes in land management from agricultural production to solar farm will result in a reduction of surface water runoff from the Land Areas polluted with herbicides, pesticides or fertilisers.

4.9.25. Furthermore, there is potential that soil health could be enhanced over the 40-year period of operation of the Scheme due to the implementation of the **Outline Soil Management Plan [Document Reference 7.9]** and permanent cover of grassland which would reduce the impact of soil erosion.

Permissive Paths and Recreation

4.9.26. The proposed enhancements to landscape structure will enhance green infrastructure, including connectivity across and within the Scheme and contribute to the wider network beyond, whilst incorporating features to address habitat and wildlife creation and secure net gains in green infrastructure.

4.9.27. The Scheme will include recreation and amenity improvements through the creation of approximately 1.72km of new permissive path. These measures would serve to create a coherent landscape framework across the Scheme which would deliver a number of long-term environmental and community benefits. The principal benefits include retention and enhancement of the landscape fabric; rest to farmland; biodiversity net gain; new accessible routes and open spaces.

Community Benefit Fund

4.9.28. In addition to the environmental and recreational benefits set out above, the Applicant is committed to providing a Community Benefit Fund of approximately £12.8 million across the 40-year operational lifespan of the Scheme. Typically, on previous projects delivered by the Applicant, the funds are managed by an independent third party who support fund applicants to ensure the funds are as accessible as possible and recruit a panel of local people to make decisions on fund allocations.

4.9.29. On previous projects delivered by the Applicant, a Community Benefit Fund has helped to fund projects such as a community café and garden centre as well as a wellbeing garden project. The wellbeing garden project has engaged school students to get involved with the planting and maintenance of the garden space. Additionally, the Community Benefit Fund has been used by the Applicant to deliver initiatives such as providing electric vehicle charging points, Public Right of Way (PRoW) improvements in the wider area, fuel poverty measures, picnic benches, rooftop solar for community buildings and funding for other local sustainable initiatives.

4.9.30. It is recognised by the Applicant, and within this Planning Statement, that the Community Benefit Fund sits outside of the DCO Application and, at this moment in time as such, carries no weight as part of the overall planning balance to be considered by the Examining Authority and SoS.

5 SITE CONTEXT

5.1. Introduction

5.1.1. This section provides a summary of the physical characteristics of the Order Limits and its surrounding context, including policy allocations and designations. A detailed description is contained within ES Volume 1, Chapter 3: Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3].

5.2. The Order Limits

5.2.1. The Order Limits for the Scheme extends to approximately 1,831 hectares of land, presented in **ES Figure 1.1 Order Limits [Document Reference 6.4.1.1]** of which comprises the maximum area of land potentially required for the construction, operation and decommissioning of the Scheme.

5.2.2. The Order Limits is made up of five Land Parcels (described as Land Parcels A to E) as shown on **ES Figure 1.2 Land Parcel Plan [Document Reference 6.4.1.2]**, with each parcel further described in **Table 1-1** of **ES Chapter 1 Introduction [Document Reference 6.1.1].**

5.2.3. The **Land Plans [Document Reference 2.2]** show the extent of land over which rights are sought as part of the DCO Application.

5.2.4. The Scheme has been subject to ongoing design development and the Order Limits have been refined in response to environmental and technical factors including the EIA process, and consultation responses. This process has ensured that the Order Limits only include land which is required to deliver the Scheme.

5.3. Overview

5.3.1. The Order Limits broadly lies between the settlements of Thorne and Crowle, occupying separate parcels of land within a relatively flat agricultural landscape predominantly in arable use. Many of the field boundaries are subdivided into rectilinear parcels by long linear drainage ditches, some with partial or sporadic hedgerows. The Order Limits is dissected by several major roads and routes, including the M180 motorway, the A18, the South Humberside Main Line railway route and Stainforth and Keadby Canal.

5.3.2. Numerous other minor roads cross the landscape connecting scattered residential properties and farmsteads, many of which lie adjacent or in proximity to the Order

Limits. Tween Bridge Wind Farm and substation is situated in the northern part of the Order Limits. Overhead power lines and lattice pylons runs across the northern part of the Order Limits. There are wooden pole lines and masts within the Order Limits.

5.3.3. There are two areas of woodland to the north and south of the Order Limits associated with former peat extraction at Hatfield Moors and Thorn Moors. The remainder of the landscape contains relatively limited areas of vegetation, largely limited to field boundaries in the form of hedgerows and occasional scattered trees or groups of trees and some small woodland copses.

5.3.4. There are a number of PRoW that are located within or close to the Order Limits. Public Footpath FP19 (Thorne) lies in the central northern part of the Order Limits. Public Footpath FP15 (Thorne) lies just beyond the most northwestern boundary of the Order Limits. Public Right of Way (Footpath 17) lies beyond the northeastern part of the Order Limits forming a continuation of an unnamed north-east/south west Byway. Footpath 18 runs from the unnamed Byway south eastwards into the western side of Crowe.

5.3.5. Landform within the Order Limits is predominantly flat and open in nature. The topography of the wider area surrounding the Order Limits is generally low lying and displays similar characteristics to that found within the Order Limits.

5.3.6. The land within the Order Limits is not covered by any designation at a national, regional or local level that recognises it as having specific landscape importance.

5.3.7. The Order Limits lie outside designated ecological sites with the exception of a small 0.54ha area of Thorne & Hatfield Moors Special Protection Area (SPA), Thorne Moor Special Area of Conservation (SAC), Thorne, Crowle and Goole Moors Site of Special Scientific Interest (SSSI) and Hatfield Chase Ditches SSSI. Whilst the Thorne & Hatfield Moors SPA/SAC/SSSI lies within the Order Limits, they are outside the development footprint and this area is to be buffered from any development. Therefore no work is scheduled within these designated sites.

5.3.8. Eight national statutory designated sites occur within 5km of the Order Limits, including Local Nature Reserves (LNR) and SSSI's The Humberhead Peatlands National Nature Reserve (NNR) is also located directly adjacent to the Order Limits boundary.

5.3.9. Fourteen non-statutory designated sites fall within the Order Limits, including 10 Local Wildlife Sites (LWS) and four Candidate Local Wildlife Sites (CLWS). These

are all associated with 'drain' watercourses within the Order Limits, except for Whittaker's Plantation CLWS which relates to plantation woodland.

5.3.10. A further two LWS, one CLWS and a Lincolnshire Wildlife Trust Reserve (LWT) are located directly adjacent to the Order Limits boundary, with a further 19 LWS, five CLWS and one Local Geological Site (LGS) situated within 2km. A full list of sites both in and within 2km of the Order Limits can be found in **Annex 2 of ES Appendix 7.1 Baseline Habitats Report [Document Reference 6.3.7.1]**.

5.3.11. There are no Scheduled Monuments or Conservation Areas located within the Order Limits. The nearest Scheduled Monument is the Peel Hill motte and bailey castle located circa 1.3km west of the Order Limits. There are 23 Grade II Listed Buildings located within close proximity to the Order Limits.

5.3.12. The majority of the Order Limits is located within Flood Zone 3, at high risk of flooding. The risk of flooding from surface water shows that the majority of the Order Limits is not predicted to be impacted by a 1 in 1000-year rainfall event and has a Very Low Risk likelihood of surface water flooding.

6 LEGISLATION AND POLICY FRAMEWORK

6.1.1. This section provides an overview of the legislation and policy context for the Scheme. It specifically looks to outline how the Scheme complies with the applicable legislation and policy expanded upon below.

6.1.2. This section is divided into subheadings that focus on relevant legislation and policy, including the relationship between the PA 2008, NPSs, NPPF, local policy and the Scheme.

6.2. Legislative Context

Planning Act 2008

6.2.1. The PA 2008 established the legal framework for applying for, examining, and determining applications for NSIPs.

6.2.2. The Scheme constitutes an NSIP development, in accordance with the PA 2008, as it comprises:

> "*The construction or extension of a generating station (Part 3, Section 14(1)(a) of the PA 2008) with a generating capacity of more than 50MW (Part 3, Section 15(2)(c))*".

6.2.3. In accordance with Part 4 of the PA 2008, development consent is required for development to the extent that it is or forms part of an NSIP.

6.2.4. Part 5 of the PA 2008 sets out that an application for an order granting development consent must be made to the SoS. In accordance with Section 42 of the PA 2008, the Applicant must consult persons, organisations, and local authorities as set out in the legislation. A **Consultation Report [Document Reference 5.1]** has been prepared that details compliance with Section 42 of the PA 2008.

6.2.5. Part 6 of the PA 2008 is to be applied when determining applications for orders granting development consent. Sections 103 to 107 provide the framework for decision-making. Section 104 applies when an NPS has effect for a specified NSIP.

6.2.6. Section 104 applies to the Scheme as the designated NPSs apply to solar projects. This means the SoS must have regard to the following in making their decision:

(a) any national policy statement which has effect in relation to development of the description to which the application relates (a "relevant national policy statement");

(b) any local impact report (within the meaning given by Section 60(3)) submitted to the SoS before the deadline specified in a notice under Section 60(2);

(c) any matters prescribed in relation to development of the description to which the application relates; and

(d) any other matters which the SoS thinks are both important and relevant to the SoS's decision.

6.3. National Policy Statements

6.3.1. The designated energy NPSs form the primary policy basis against which the DCO Application must be assessed.

6.3.2. NPS EN-1 **[Ref. 2]** and EN-3 **[Ref. 3]** contain the relevant national policies for solar PV NSIPs. NPS EN-5 **[Ref. 4]** is also applicable given its relevance to the Scheme's connection to the national electricity grid.

Overarching National Policy Statement for Energy (EN-1)

6.3.3. NPS EN-1 sets out the current national policy for delivering NSIP energy infrastructure in England and Wales. NPS EN-1 has effect in combination with the relevant technology-specific NPS, in this case, NPS EN-3.

6.3.4. Part 3 of NPS EN-1 identifies the need for nationally significant energy infrastructure to address energy security objectives and carbon reduction requirements, replace closing generating capacity, and support an increase in renewables supply. The assessment principles (part 4) and generic impacts (part 5) provide a framework of considerations across energy technologies.

6.3.5. Crucially, NPS EN-1 introduces CNP for low carbon infrastructure. Set out in Section 4.2 of NPS EN-1, the CNP explicitly identifies the need for nationally significant low carbon infrastructure in order to meet Government decarbonisation targets and achieve net zero ambitions. Paragraph 4.2.5 confirms that solar photovoltaic generation is a form of CNP infrastructure.

6.3.6. Paragraph 4.2.6 states that substantial weight should be given to the overarching need case for CNP infrastructure, as a starting point for determination of energy infrastructure applications. It is clarified in paragraphs 4.2.7 - 4.2.9 that this need case is to be considered taking into account the impacts of the project and the application of the mitigation hierarchy, however the CNP policy will influence how residual impacts are considered in the overall planning balance. Whilst further detail on this is provided in Chapter 7 of this Planning Statement, NPS EN-1 is referring here to the policy position that for CNP infrastructure, residual impacts remaining after application of the mitigation hierarchy are unlikely to outweigh the urgent need for its development. Exceptions to this relate to a limited, specified set of unacceptable risks presented by residual impacts. Paragraph 4.2.16 states that the starting point for SoS decision-making is that CNP infrastructures should be treated as if it has met any tests set out in policy requiring a clear outweighing of harm, exceptionality or very special circumstances.

6.3.7. That position is different for residual impacts relating to a Habitats Regulations Assessment (HRA) or Marine Conservation Zone (MCZ), neither of which are relevant to the Scheme (refer to paragraph 7.2.24 for further detail).

National Policy Statement for Renewable Energy Infrastructure (NPS) (EN-3)

6.3.8. NPS EN-3 together with NPS EN-1, provide the primary basis for decisions on renewable energy NSIPs.

6.3.9. The importance of the generation of electricity from renewable sources is stated in paragraph 1.1.2 of NPS EN-3:

> "*Electricity generation from renewable sources of energy is an essential element of the transition to net zero and meeting our statutory targets for the sixth carbon budget (CB6). Our analysis suggests that demand for electricity is likely to increase significantly over the coming years and could more than double by 2050*".

6.3.10. NPS EN-3 paragraph 3.10.7 confirms that BESS are included within CNP as supporting infrastructure for renewables like solar and recognised as essential for grid balancing and system flexibility, which are explicit EN-1 priorities for a resilient and decarbonised energy system,.

6.3.11. NPS EN-3 provides a framework for assessment and technology-specific information for specified renewable energy technologies. Solar PV is included in NPS EN-3 under Section 2.10, which includes relevant information on the technology to inform assessment and decision-making.

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

6.3.12. NPS EN-5 is the primary basis for decisions on transmission and distribution system NSIPs and associated infrastructure. Section 2.7 of EN-5 considers the holistic approach to planning. 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."*

6.3.13. 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"*.

6.3.14. 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.

6.4. National Planning Policy Framework (NPPF) [Ref. 13]

6.4.1. The NPPF was published in March 2012 and most recently updated in December 2024. Paragraph 5 of the NPPF confirms that it does not contain specific policies for NSIPs, and so does not have direct effect in relation to the Scheme. However, the NPPF may be a relevant matter in the SoS's decision making.

6.4.2. Paragraph 187 of the NPPF states that local planning authorities should balance the economic and other benefits of best and most versatile agricultural land. Furthermore, and as stated in footnote 65 to paragraph 188 of the NPPF, where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek developers to use areas of poorer quality land in preference as opposed to that of a higher quality.

6.4.3. Paragraph 168 of the NPPF encourages local planning authorities to support planning applications for all forms of renewable and low carbon development. When determining planning applications, local planning authorities should give significant weight to the benefits associated with renewable and low carbon energy generation and the proposals contribution to a net zero future.

6.4.4. The NPPF is supported by the National Planning Practice Guidance (NPPG) **[Ref. 14]**, which provides guidance on implementing NPPF policies. It includes guidance on a range of topics, including climate change and renewable and low-carbon energy, in terms of plan-making and decision-making. The renewable and low carbon energy guidance includes specific detail regarding large-scale ground-mounted solar photovoltaic farms at paragraph: 013 Reference ID: 5-013-20150327.

6.5. Local Planning Policy Context

6.5.1. The Scheme lies within the administrative boundaries of the City of Doncaster Council and North Lincolnshire Council. Based on this, the local planning policies that may be important and relevant comprise:

- Doncaster Local Plan 2015-2035 (adopted 23 Sept 2021) **[Ref. 17]**
- Barnsley, Doncaster and Rotherham Joint Waste Plan (adopted March 2012) **[Ref. 18]**
- Thorne and Moorends Neighbourhood Plan (adopted 23 September 2021) **[Ref. 19]**
- North Lincolnshire Core Strategy (Adopted June 2011) **[Ref. 20]**

- Saved Polices of the North Lincolnshire Local Plan 2003 **[Ref. 21]**
- Planning for Renewable Energy Development – Supplementary Planning Document (Adopted November 2011) **[Ref. 22]**
- Planning for Solar Photovoltaic (PV) Development – Supplementary Planning Document January 2016 **[Ref. 23]**

6.6. Other Policy and Legislation

The Climate Change Act 2008 **[Ref. 7]**

6.6.1. The Climate Change Act 2008 set up a framework for the UK to achieve its long-term goals of reducing GHG emissions and to ensure steps are taken towards adapting to the impact of climate change. The Act committed the UK to reducing its GHG emissions by 80% by 2050 when compared with 1990 levels.

The Climate Act 2008 (2050 Target Amendment) Order 2019 **[Ref. 8]**

6.6.2. In June 2019, legislation was passed to amend the Climate Change Act 2008 to set a new ambitious target requiring the UK to bring all GHG emissions to net zero (i.e. 100% reduction by 2050, compared with the previous target of at least 80% reduction from 1990 levels).

Net Zero Strategy: Build Back Greener **[Ref. 24]**

6.6.3. The Net Zero Strategy, published by the Government in October 2021, builds on the Government's commitments made in the Energy White Paper (2020) **[Ref.25]** and sets out the long-term strategy, policy and proposals to keep the UK on track for future carbon budgets and sets the vision for a decarbonised economy by 2050. Page 19 of the Strategy sets out key policies related to UK power generation, including:

> "*By 2035 the UK will be powered entirely by clean electricity, subject to security of supply; […] 40 GW of offshore wind by 2030, with more onshore, solar and other renewables – with a new approach to onshore and offshore electricity networks to incorporate new local carbon generation and demand in the most efficient manner that takes account of the needs of local communities […]*"

National Infrastructure Strategy **[Ref. 26]**

6.6.4. The National Infrastructure Strategy (NIS) published in November 2020 sets out plans to transform UK infrastructure, with one of the aims being to put the UK on the path to meetings its net zero emissions target by 2050. The NIS acknowledges that the UK's commitment to achieving net zero emissions by 2050 will require profound changes that will provide huge opportunities for the UK to build back better.

6.6.5. The NIS identifies that to deliver net zero, the share of generation from renewables needs to dramatically increase, and notes that greater generation capacity will need to come from onshore wind and solar. To support this the Government has included solar in the 2021/22 Contracts for Difference Allocation Round (AR4) to help "*deliver a diverse generation mix at low cost*" and to realise "*the rate and scale of new projects needed in the near-term to support decarbonisation of the power sector and meet the Net Zero commitment*" while providing other benefits such as diversity of supply through different resource requirements and a geographical separation from other significant renewable technologies.

Net Zero: Opportunities for the Power Sector **[Ref. 27]**

6.6.6. In June 2019 the Government raised the UK's ambition on tackling climate change by legislating for a net-zero GHG emissions target for the whole economy by 2050. Decarbonising the power sector is integral to achieving this goal and requires major investment in proven technologies, such as solar, which are supported by planning policy at local and national levels.

6.6.7. The NIC, the official advisor to the Government on infrastructure, has subsequently produced a report, 'NetZero: Opportunities for the Power Sector', in March 2020, which sets out the infrastructure required in order to meet the 2050 target, including the amount of new renewable energy development that would need to be deployed. Importantly, the NIC recommends that the generation mix is up to around 90% renewables. The report recommends that across all scenarios, significant solar, onshore wind, and offshore wind, with between 129-237 GW of renewable capacity, is in operation by 2050, including:

- 56-121 GW of Solar;
- 18-27 GW of onshore wind; and
- 54-86 GW of offshore wind.

6.6.8. The above requires an increase in installed capacity, including up to nine times more solar than is currently installed in the UK, which is presently around 17.1GW according to the Solar Photovoltaics deployment, August 2024 published by the Department for Energy Security and Net Zero.

6.6.9. Although the above figures are high-level, they demonstrate the amount of new infrastructure that is required. The scale of this need is such that it must be shared throughout the UK and in recognition that climate change is both a national and global issue.

British Energy Security Strategy **[Ref. 9]**

6.6.10. In April 2022, the Government published the British Energy Security Strategy, which demonstrates the need for secure, clean and affordable British energy for the long term. This states that the Government will be supportive of the effective use of land by encouraging large-scale projects to be located on previously developed or lower-value land, where possible, and to ensure projects are designed to avoid, mitigate, and, where necessary, compensate for the impacts of using greenfield sites. The Government will also support solar that is co-located with other functions (for example, agriculture, onshore wind generation, or storage) to maximise the efficiency of land use.

Powering up Britain (March 2023) **[Ref. 11]**

6.6.11. Powering up Britain sets out the Government's plan to enhance the UK's energy security, seize economic opportunities in the transition and deliver on net zero commitments. The paper is focused on the transition between UK oil and gas to renewable energy sources. In order to meet its goal of quintupling its solar power by 2035, the paper states, regarding large-scale solar development.

> "*Government seeks large scale solar deployment across the UK, looking for development mainly on brownfield, industrial and low/medium grade agricultural land. The Government will therefore not be making changes to categories of agricultural land in ways that might constrain solar deployment*."

A Green Future: Our 25-Year Plan to Improve the Environment **[Ref. 28]**

6.6.12. The 25-Year Environment Plan published in 2018 sets out the Government's 25-year plan to improve the environment within a generation. It aims to deliver cleaner

air and water in our cities and rural landscapes, protect threatened species, and provide richer wildlife habitats. It calls for an approach to agriculture, forestry, land use and fishing that puts the environment first.

6.6.13. It sets out 10 goals which include the achievement of and management of pressure by providing: clean air, clean and plentiful water, thriving plants and wildlife, reduced risk of harm from environmental hazards like flooding and drought; the more sustainable and efficient use of resources from nature; enhanced beauty; heritage and engagement with the natural environment; mitigation and adaption to climate change; minimisation of waste; management of exposure to chemicals; and enhanced biosecurity.

Climate Change Committee (CCC): The Sixth Budget: The UK's Path to Net Zero 2020 **[Ref. 32]**

6.6.14. The CCC advised that the UK set its Sixth Carbon Budget (i.e. the legal limit for UK net emissions of greenhouse gasses over the years 2033-2037) to require a reduction in UK emissions of 78% by 2035 relative to 1990, a 63% reduction from 2019.

6.6.15. On announcing the adoption of the CCC's recommendations for the Sixth Budget in April 2021, the UK set the world's most ambitious national climate change target into law.

6.6.16. The UK is currently in the Fourth Carbon Budget period (2023-2027) and progress reports indicate, to date, the UK is on track to meet this carbon budget.

6.6.17. CCCs's data confirm that the UK has achieved its Third Carbon Budget, covering the period 2018 to 2020, by 15%. The UK has now achieved all three of its carbon budgets to date (first 2008-2012, second 2013-2017 and third 2018-2022), demonstrating strength in the UK's legal framework.

The Environment Act 2021 **[Ref. 29]**

6.6.18. The Environment Act 2021 makes provisions about targets, plans and policies for improving the natural environment and has introduced the concept of mandatory BNG for new development, including for NSIPs. The provisions relating to NSIPs are not yet in force, but are widely expected to be introduced from late 2025. Schedule 15 of the Environment Act 2021, when commenced, will amend the

Planning Act 2008 to introduce a "biodiversity gain statement" to the NPS. It is expected that the biodiversity gain statement will specify a requirement for new NSIPs to provide a minimum 10% BNG.

Clean Power 2030 Action Plan **[Ref. 30]**

6.6.19. The Clean Power 2030 Action Plan, published in December 2024 emphasises the need to accelerate the pace and scale of renewable energy development to maintain a secure and affordable energy supply and protect the environment from the most damaging effects of climate change. The Clean Power 2030 Action Plan outlines the DESNZ's ambition for 45-47 GW of solar power by 2030 as well as onshore and offshore wind. The Clean Power 2030 Action Plan outlines the government's steps to achieving Clean Power by 2030 which includes reforming the grid connections process and reducing the queue to connect, speeding up the planning and consenting process, reforming the electricity markets and focusing on supply chains and workforces.

10-year Infrastructure Strategy Working Paper – Jan 2025 **[Ref. 31]**

6.6.20. This working paper sets out the UK Government's plan for its 10-year Infrastructure Strategy for the UK's social, economic and housing strategy to support a flourishing modern economy, drive growth, deliver net zero and improved public services.

6.6.21. Recent years has seen uncertainty regarding infrastructure plans and policy, inhibited investment in programmes and supply chains pushing up end costs for consumers. Infrastructure investment is essential to deliver the UK Government's mission – growth, housing, clean energy and net zero as well as improved public services. The Strategy aims to reduce uncertainty by bring long-term plans for the country's social, economic and housing infrastructure; sets out an institutional framework to support implementation (setting out the role of public financial institutions such as the National Wealth Fund) and how the Strategy will support other strategies (i.e. the industrial strategy). The Strategy is at the heart of the Government's growth mission and seeks to drive growth, productivity through providing stability and certainty to the market on long-term plan for infrastructure.

6.6.22. The overarching objective of the Strategy is to set out what the public can expect from infrastructure services and provide certainty to industry on the Government's priorities for infrastructure. Enabling resilient growth through

boosting growth, removing barriers to growth, ensuring growth is resilient to future threats.

6.6.23. Delivering the UK Government's "Clean Energy Superpower" mission is also a key objective delivered via:

- Clean Power by 2030 with renewable and low carbon infrastructure, battery storage, long duration storage and supporting investments in energy transmission and distribution networks that can deliver clean power by 2030 and support achieving net zero by 2050. Upgrading the grid and ensuring projects can connect when ready is vital to delivering clean power. Growth benefits through providing green jobs and skills, supply chain opportunities in areas that need investment and reducing reliance on fossil fuels with volatile prices and providing stability for critical sectors such as advanced manufacturing.

- Accelerating to Net Zero by 2050 including supporting decarbonisation of industry by delivering grid upgrades support electrification, building additional enabling infrastructure such as EV charging points, decarbonising buildings and improving energy efficiency through use of clean heat.

6.6.24. The Strategy will be developed in parallel to Spending Review and published together later in 2025. This will ensure alignment between long-term spending and non-spending policy decisions.

Climate Change Committee: The Seventh Carbon Budget (February 2025) **[Ref. 33]**

6.6.25. The CCC's advice on the UK's Seventh Carbon budget was published in February 2025. It is currently a recommendation intended to be translated into legislation informed by the latest science, technological developments and the UK's national circumstances. It is set for the period 2038 to 2042 and is a cap on UK GHG emissions advice by the CCC. The CCC recommends the budget be set at 535 MtCO2e, including emissions from aviation and shipping. This budget, part of the UK's commitment to reach net zero by 2050, will need to be delivered through a combination of strategies.

7 PLANNING ASSESSMENT

7.1. Overview

7.1.1. This section provides an assessment of how the Scheme complies with relevant policy, including the Energy NPSs which are the primary policy basis for the SoS's decision.

7.1.2. This section assesses the Scheme against Part 4 of NPS EN-1 (Assessment Principles), Section 2.10 of NPS EN-3 (solar photovoltaic generation) and Sections 2.3 and 2.9 of NPS EN-5. It provides a summary of the Scheme's compliance with the key relevant policy(s) on a topic-by-topic basis.

7.1.3. This Planning Statement should be read alongside **Appendix A: Policy Compliance Document [Document Reference 5.5.1]**, the purpose of which is to provide a comprehensive assessment of the Scheme's compliance against each relevant national and local planning policy.

7.2. General Principles of Assessment

7.2.1. Paragraph 4.1.3 of NPS EN-1 states that, given the level and urgency of the need for infrastructure projects of the types covered by the energy NPSs, the SoS will start with a presumption in favour of granting consent to applications for energy NSIPs, and that presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused.

7.2.2. When weighing the adverse impacts against the benefits of energy NSIPs, paragraph 4.1.5 of NPS EN-1 states that the SoS should take into account both the potential benefits, including the contribution to meeting the need for energy infrastructure, job creation, reduction of geographical disparities, environmental enhancements, and any long-term or wider benefits. In addition, any potential adverse impacts, 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.

7.2.3. Paragraph 4.1.6 of NPS EN-1 outlines that environmental, social, and economic benefits and adverse impacts both nationally, regionally and locally should be taken into account.

7.2.4. As set out previously in Section 5of this Planning Statement, NPS EN-1 paragraphs 4.2.4-5 outline that there is a CNP for the provision of nationally significant low carbon infrastructure. Paragraph 4.2.7 of NPS EN-1 adds that the CNP policy applies following the normal consideration of the need case, the impacts of the project, and the application of the mitigation hierarchy. Paragraph 4.2.14 of NPS EN-1 states that the SoS will consider the impacts and benefits of CNP Infrastructure on a case-by-case basis. However, paragraph 3.3.63 of NPS EN-1 states that '*the urgent need for CNP Infrastructure will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy*'.

7.2.5. NPS EN-1 paragraph 4.1.7 states that: '*For projects which qualify as CNP Infrastructure, it is likely that the need case will outweigh the residual effects in all but the most exceptional cases. This presumption, however, does not apply to residual impacts which present an unacceptable risk to, or interference with, human health and public safety, defence, irreplaceable habitats or unacceptable risk to the achievement of net zero. Further, the same exception applies to this presumption for residual impacts which present an unacceptable risk to, or unacceptable interference offshore to navigation, or onshore to flood and coastal erosion risk*'. Further detail on compliance with the policies for CNP infrastructure is provided later below.

7.2.6. Paragraph 4.1.12 of NPS EN-1 specifies that other matters that the SoS may consider both important and relevant to their decision-making may include local development plan documents or other documents in the Local Development Framework. However, NPS EN-1 confirms at paragraph 4.1.15 that the NPS is the primary policy document and would take precedence in the event of a conflict between the NPS and the documents specified in paragraph 4.1.12 of NPS EN-1.

7.2.7. Section 5.5 of this document sets out the local policy context for the Scheme, and the Policy Accordance Tables at **Appendix A** also provide an assessment and appraisal of the relationship between the Scheme with the NPPF and relevant local planning policies.

7.2.8. Paragraph 4.1.21 of NPS EN-1 requires applicants to have considered the financial and technical feasibility of developments. For the Scheme, the Applicant has considered both the commercial and financial matters through the submitted **Funding Statement [Document Reference 4.2]**. The Applicant has significant experience in delivering solar and other renewable energy developments. The

Works Plans [Document Reference 2.3] have been informed by technical studies carried out by the Applicant and their professional team which has informed the areas identified for solar PV modules, BESS and associated infrastructure. The **Grid Connection Statement [Document Reference 5.8]** also demonstrates how the Scheme will connect to the NETS.

7.2.9. Paragraph 4.1.19 of NPS EN-1 emphasises the importance of early engagement with stakeholders of the Scheme. This process of engagement with both public regulators and statutory bodies, alongside those likely to have an interest in the application is set out within the submitted **Consultation Report [Document Reference 5.1]**.

7.2.10. It is emphasised within NPS EN-1 at paragraph 4.7.5 that there is an importance of good design for NSIPs. With the document highlighting that 'Design Principles' should be established from the outset of the project to guide the development from conception to operation.

7.2.11. In accordance with Section 4.7 of NPS EN-1, the **Design Approach Document [Document Reference 5.6]** and **ES Volume 1, Chapter 3: Site Description, Site Selection and Design Iteration [Document Reference 6.1.3]** identify how the project design principles have influenced the design development of the Scheme.

Section 4.2 of NPS EN-1 – Critical national priority for low carbon infrastructure

7.2.12. Paragraph 4.2.2 of NPS EN-1 explains that ensuring a smooth transition to abundant, low carbon energy generation will ensure the UK is energy independent, resilient and secure. It identifies the criticality of the deployment of "*new low carbon sources of energy at speed and scale*" in terms of our energy security and net zero ambitions.

7.2.13. Paragraph 4.2.4 of NPS EN-1 is fundamental in highlighting the government's position on the criticality of the delivery of low carbon energy generation. It states that the government has "*concluded there is a critical national priority (CNP) for the provision of nationally significant low carbon infrastructure*".

7.2.14. Paragraph 4.2.5 of NPS EN-1 relates to definitions of low carbon infrastructure for the purposes of the CNP policy. It states that "*for electricity generation, all onshore and offshore generation that does not involve fossil fuel combustion*" is included. This confirms that NSIP scale solar PV development is CNP. It also confirms that

the infrastructure relating to the electricity grid is included, which encompasses "*network reinforcement and upgrade works, and associated infrastructure such as substations*".

7.2.15. Paragraph 4.2.6 of NPS EN-1 expands further on how low carbon energy infrastructure should be considered, and references earlier paragraphs in NPS EN-1, namely 3.2.6 to 3.2.8 which confirm that applications for NSIPs covered by NPS EN-1 should be assessed "*on the basis that the government has demonstrated that there is a need for those types of infrastructure which is urgent*". Paragraph 3.2.7 of NPS EN-1 goes on to state that the SoS has "*determined that substantial weight should be given to this need when considering applications for development consent*". Paragraph 3.2.8 of NPS EN-1 further advises that there is no requirement on the SoS to consider separately the specific contribution of any individual project in satisfying the need established in NPS EN-1.

7.2.16. Paragraph 4.2.7 of NPS EN-1 advises that the CNP policy applies "*following the normal consideration of the need case, the impacts of the project, and the application of the mitigation hierarchy*". It points out that it is therefore relevant during SoS decision making, and with particular reference to any residual impacts that have been identified and should be given consideration by the ExA when making its recommendation to the SoS.

7.2.17. Paragraphs 4.2.10 to 4.2.12 of NPS EN-1 cover an applicant's assessment and require the applicant to show how their proposals meet the requirements of NPS EN-1, applying the mitigation hierarchy and any other relevant legal requirements. Applicants are required to "*apply the mitigation hierarchy and demonstrate that it has been applied*" and demonstrate that all "*residual impacts are those that cannot be avoided, reduced or mitigated*". It further advises applicants to demonstrate, as far as possible, how residual effects may be compensated for to the extent that the relevant topic specific policy requires compensation.

7.2.18. Paragraph 4.2.15 of NPS EN-1 refers to SoS decision making. It states that "*where residual non-HRA or non-MCZ impacts remain after the mitigation hierarchy has been applied, these residual impacts are unlikely to outweigh the urgent need for this type of infrastructure. Therefore, in all but the most exceptional circumstances, it is unlikely that consent will be refused on the basis of these residual impacts*".

7.2.19. This section of the Planning Statement alongside relevant chapters from the **ES Volume 2, Chapters 6 to 18 [Document Reference 6.2.6 to 6.2.18]** and the **Design**

Approach Document [Document Reference 5.6] set out how potential impacts are addressed including the measures taken to avoid, reduce or mitigate such impacts. The instances where CNP is required to be relied upon in relation to the following topics, which after the implementation of mitigation, adverse significant residual effects are anticipated upon:

- Landscape and Visual
- Ecology and Nature Conservation

7.2.20. **ES Chapter 15 Agricultural Circumstances [Document Reference 6.2.15]** also identifies the potential for significant adverse effects during the decommissioning phase. This specifically relates to the optionality for landowners to retain some of the access tracks. Whilst these would be beneficial for the future farming use, it is would potentially result in the permanent loss of 9.1 ha of BMV, which would be medium magnitude impact on a high sensitivity resource, resulting in a moderate adverse effect, which is significant.

7.2.21. The **ES Volume 2, Chapters 6 to 18 [Document Reference 6.2.6 to 6.2.18]** also identify how beneficial significant residual effects are anticipated upon: -

- Socio Economics - The Scheme will have an overall beneficial impact for the economy, and this would be significant.
- Air Quality and Greenhouse Gases - The Scheme will have an overall beneficial impact in terms of GHG emissions, and thus the effect is 'significant'

7.2.22. Paragraph 4.2.19 of NPS EN-1 states that, "*where, following Appropriate Assessment, CNP Infrastructure has residual adverse impacts on the integrity of sites forming part of the UK national site network, either alone or in combination with other plans or projects, the Secretary of State will consider making a derogation under the Habitats Regulations*."

7.2.23. The Conservation of Habitats and Species Regulations 2017 require that consideration be given to whether a project may have a significant effect on a protected site or any site to which the same degree of protection is applied as a matter of policy, either alone or in combination with other plans and projects. Applicants are required to supply such information as the 'competent authority'

(i.e. the SoS) may reasonably require for the purposes of the assessment or to enable it to determine whether an Appropriate Assessment is required.

7.2.24. Paragraph 4.1.19 of NPS EN-1 confirms that applicants should seek early engagement from the appropriate Statutory Nature Conservation Bodies (SNCB). **The Report to Inform Habitats Regulations Assessment [Document Reference 5.3]** submitted as part of this DCO Application sets out at Stage 1 Screening that likely significant effects (alone or in-combination) could not be ruled out and therefore further assessment was required. The subsequent shadow Appropriate Assessment concludes that, with the implementation of mitigation measures secured through the **Outline CEMP [Document Reference 7.1]**, **Outline DEMP [Document Reference 7.3]** and **Outline LEMP [Document Reference 7.7]**, there would be no adverse effects (alone or in-combination) on the integrity of the European sites screened into the assessment, as a result of the Scheme.

Section 4.3 of NPS EN-1 - Environmental Effects/Considerations

7.2.25. Paragraphs 4.3.1 and 4.3.2 of NPS EN-1 discuss that project proposals are required to be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project, if the project is subject to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Paragraph 4.3.3 of NPS EN-1 specifies the range of effects, their duration, and measures for avoiding or mitigating significant effects that must be considered at all project stages.

7.2.26. An ES has been submitted with this DCO Application. The scope of the submitted ES is in accordance with the **ES Volume 4, Appendix 1.2: Scoping Report [Document Reference 6.3.1.2]**. In accordance with NPS EN-1, the ES has been structured to enable a clear understanding of the Scheme's construction, operational, and decommissioning phases. In addition, the ES has been prepared in accordance with the policy contained in paragraphs 4.3.1 and 4.3.4 of NPS EN-1.

7.2.27. NPS EN-1 paragraph 4.3.11 acknowledges that it may not be possible for all elements of an application to be settled in precise detail at the time of submission and that the Applicant should explain where details are yet be finalised. Paragraph 4.3.12 goes on to state that where details are still to be finalised, the ES should assess likely worst-case environmental, social and economic effects of the scheme. This is also known as the application of the 'Rochdale Envelope' approach. **Section 3.5 of ES Volume 1, Chapter 2: Scheme Description [Document Reference 6.1.2]** sets

out the Applicant's approach which involves specifying parameter ranges where flexibility needs to be retained. These include details of the maximum and, where relevant, the minimum size and locations of the different elements of the Scheme (footprint, width, and height relative to above ordnance datum) together with the technology type.

Section 4.3 of NPS EN-1 and Section 2.3 of NPS EN-3 - Alternatives and Site Selection

7.2.28. **ES Volume 1, Chapter 3: Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]**. sets out the Applicant's approach to alternatives and how the design has developed having regard to environmental and other factors.

7.2.29. Paragraph 4.3.9 of NPS EN-1 states that: "*…the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to a scheme is, in the first instance, a matter of law*". It goes on to state that "*This NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option from a policy perspective. Although there are specific requirements in relation to compulsory acquisition and habitats sites, the NPS does not change requirements in relation to compulsory acquisition and habitats sites*".

7.2.30. Paragraph 4.3.15 of NPS EN-1 advises that 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*".

7.2.31. NPS EN-1 paragraphs 4.3.16 and 4.3.17 further note that: "*In some circumstances, the NPSs may impose a policy requirement to consider alternatives*" and that where "*there is a policy or legal requirement to consider alternatives, the applicant should describe the alternatives considered in compliance with these requirements*".

7.2.32. Paragraph 4.3.22 of NPS EN-1 helps set the framework for decision making around alternatives and provides the key principles which should be considered when attributing weight:

• The consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner; and

• Only alternatives that can meet the objectives of the scheme need to be considered.

7.2.33. Paragraph 4.3.23 of NPS EN-1 advises the SoS should be guided by whether there is a "*realistic prospect of the alternative delivering the same infrastructure capacity… in the same timescale as the scheme*". Paragraph 4.3.24 importantly recognises that the SoS should not "*refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure*". The paragraph continues to say that the SoS should have regard to the possibility that "*all suitable sites for energy infrastructure of the type proposed may be needed for future proposals*". There are also specific circumstances where there is a requirement to consider alternatives. The circumstances relating to when they are required and the Applicant's response to these circumstances is set out, below:

- Where a proposal would involve the compulsory acquisition of land or interests in land (NPS EN-1 paragraph 4.3.9). The DCO Application is seeking compulsory acquisition powers. Please see the **Statement of Reasons [Document Reference 4.1]** and **ES Volume 1, Chapter 3: Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]** regarding consideration of alternatives, which together demonstrate that there are no alternatives to compulsory acquisition.

- Where a development would be located near a sensitive receptor site for air quality (NPS EN-1 paragraph 5.2.7). The Scheme is not within an Air Quality Management Area (AQMA).

- Where a development would lead to significant harm to biodiversity and geological conservation interests (NPS EN-1 Section 5.4). Biodiversity and geological conservation considerations of reasonable alternatives have informed the design of the Scheme from the outset and have been integrated as part of the design process, as described in the **ES Volume 1, Chapter 3: Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3] and Design Approach Document [Document Reference 7.2]**. This has facilitated an approach to mitigating impacts that first seeks to

avoid impacts, then minimise them, and then take on-site measures to rehabilitate or restore biodiversity.

- Where a development would result in an adverse effect on the integrity of a European site that cannot be avoided (NPS EN-1 Section 5.4). **Report to Inform Habitat Regulations Assessment [Document Reference 5.3]** has been submitted with the DCO Application which concludes that the Scheme would not result in an adverse impact on the integrity of a European Site, therefore there is no requirement to consider alternatives in this context.

- Where a development would be located within, or partially within, Flood Zone 2 or Flood Zone 3 (NPS EN-1 Section 5.8). In this case the Sequential Test should be undertaken. If following application of the Sequential Test, it is not possible for the Scheme to be located in areas of lower flood risk the Exception Test can be applied, which provides a method of allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available. With regard to applying the Sequential Test, paragraph 5.8.23 of NPS EN-1 sets out that consideration of alternative sites should take account of the policy on alternatives described in Section 4.3 of NPS EN-1. The majority of the land within the Order Limits is within Flood Zone 3. Detail on how the Sequential and Exception Tests have been met are set out in the **Flood Risk Sequential Test [Document Reference 7.11]**

- Where a development would be located within a National Park, the Broads or an Areas of Outstanding Natural Beauty (now National Landscape) (NPS EN-1 Section 5.10). The Scheme is not located in or near such designations, therefore no further consideration of alternatives in this regard is required.

7.2.34. The policy is clear that work should be undertaken on a proportionate basis and any alternative would need to be a reasonable alternative and so would be expected to deliver the same capacity in the same timeframes. Indeed, there is acknowledgement that other sites may exist which potentially have lesser impacts than the Scheme but that they may equally be required for further energy infrastructure in the further (NPS EN-1 paragraph 4.2.24). This goes to the core of the approach to planning in England and Wales, which is that applications should be judged on their own merits.

7.2.35. In terms of legislative requirements on alternatives, Regulation 14(2)(d) of the EIA Regulations 2017 states that an ES should "*include a description of the reasonable*

alternatives studied by the Applicant, which are relevant to the scheme and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment".

7.2.36. **ES Volume 1, Chapter 3: Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]** outlines the reasonable alternatives that have been considered by the Applicant.

7.2.37. **ES Volume 1, Chapter 3: Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]** concludes that there were no alternative technologies or sites identified by the Applicant that could deliver the same outcome as the Scheme. The following conclusions were drawn in this document:

- Alternative types of renewable energy generation technologies, such as wind and hydrogen, were not considered viable for the Order Limits by the Applicant.

- Several alternative solar technologies and design options have been considered throughout the design process to date. The parameters of the DCO Application will seek to maintain a degree of flexibility under the Rochdale Envelope to allow for the latest solar technology to be utilised at the time of construction.

- The design and layout of the Scheme has been developed through an iterative process which has been informed by the ongoing environmental assessment process, site selection assessment and taking into consideration the design principles and controls and engagement with stakeholders and consultees. The evolution of the design has informed the determination of the proposed Order Limits.

Section 4.4 of NPS EN-1 - Health

7.2.38. Paragraph 4.4.1 of NPS EN-1 highlights that energy infrastructure has the potential to impact the health and well-being of the population. Paragraph 4.4.4 of NPS EN-1 goes on to state that where development has the potential to affect human beings, the ES should assess those effects for each element of the project, identifying any adverse health impacts and measures to avoid, reduce, or compensate for the impacts as appropriate.

7.2.39. Paragraph 4.4.7 of NPS EN-1 advises that the aspects of energy infrastructure which are "*most likely to have a significantly detrimental impact on health are subject to separate regulation (for example air pollution) which will constitute suitable mitigation of them, so that it is unlikely that health concerns will either by themselves constitute a reason to refuse consent or require specific mitigation*". Paragraph 4.4.8 of NPS EN-1 continues, however, to advise that not all potential sources of health impacts will be mitigated in such a way and the "*SoS may want to take account of health concerns when setting requirements relating to a range of impacts such as noise*".

7.2.40. Health was scoped out of the Environmental Statement as an individual topic, however, impacts upon human health are assessed across:

- **ES Chapter 6: Landscape and Visual [Document Reference 6.2.6]**
- **ES Chapter 10: Water Resources [Document Reference 6.2.10]**
- **ES Chapter 11: Socio Economics [Document Reference 6.2.11]**
- **ES Chapter 12: Transport and Access [Document Reference 6.2.12]**
- **ES Chapter 13: Noise and Vibration [Document Reference 6.2.13]**
- **Chapter 15: Agricultural Circumstances [Document Reference 6.2.15]**
- **Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]**
- **ES Chapter 16: Other Environmental Topics [Document Reference 6.2.16]**
- **ES Volume 3, Appendix 16.2 Glint and Glare Assessment (fixed and tracker design) [Document Reference 6.3.16.1]**
- **ES Volume 3, Appendix 16.2: Glint and Glare Assessment (fixed design) [Document Reference 6.3.16.2]**

7.2.41. In regard to health impacts in relation to **ES Volume 2, Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]**, reports on potential impacts on human health in relation to dust and particulate matter emissions during construction, including the operation of equipment. The chapter concludes there is negligible risk of impact and therefore no significant residual effects are

expected. In terms of human health impacts as a result of road traffic exhaust emissions during construction and operation, the ES again reports that, following the implementation of additional mitigation, residual impacts are not significant.

7.2.42. **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]** addresses potential impacts on human health in relation to residents' wellbeing and users of the public rights of way and minor road network as well as impacts on residents' amenity. Visual mitigation is primarily delivered through embedded mitigation (such as planting) while mitigation from the impacts of construction itself is secured within the **Outline CEMP [Document reference 7.1] and the Outline Ecological Construction Management Plan [Document Reference 7.5]**. In addition, the Outline CEMP includes measures to ensure safety of the public rights of way users. There is no assessment of the significance of impacts on health and wellbeing as an individual receptor in Chapter 6, however the impacts are addressed across a range of receptors set out within **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]**.

7.2.43. **ES Volume 2, Chapter 13: Noise and Vibration [Document Reference 6.2.13]** addresses potential impacts on human health in relation to residents' wellbeing during the construction, operation and decommissioning phases. This chapter concludes that there are not anticipated to be any adverse noise and vibration effects that may adversely affect residents' wellbeing to a significant level.

7.2.44. **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]** reports on potential impacts caused by disruption to amenity or safety, and where community links and access to facilities and employment may be materially changed during the construction, operation and decommissioning phases. The chapter concludes that no significant adverse fear and intimidation effects on road users are anticipated, and no significant adverse community severance effects or driver and passenger delay effects are anticipated.

7.2.45. **ES Volume 3, Appendix 16.1: Glint and Glare Assessment (fixed and tracker design) [Document Reference 6.3.16.1] and ES Volume 3, Appendix 16.2: Glint and Glare Assessment (fixed design) [Document Reference 6.3.16.2]** reports on potential impacts to human health caused by nuisance to people living in nearby residential properties during the operation (including maintenance) phase. The report concludes adverse effects on people living in nearby residential properties are not anticipated to experience significant adverse glint and glare effects. This is

principally because the potentially affected residential properties are located a sufficient distance away from the nearest reflective source (in this instance these are the solar panels), vegetation that is proposed which would offer suitable screening, and/or because of the limited duration that the sun is in position in the sky where reflections on those properties is possible.

Section 4.6 of NPS EN-1– Environment and Biodiversity Net Gain

7.2.46. Paragraph 4.6.1 of NPS EN-1 outlines that "*Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Projects should therefore not only avoid, mitigate and compensate harms, following the mitigation hierarchy, but also consider whether there are opportunities for enhancements*".

7.2.47. Paragraph 4.6.2 of NPS EN-1 explains how BNG is an essential component of environmental net gain (although it is not yet a mandatory requirement for NSIPs in England). Projects in England are encouraged to consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver BNG.

7.2.48. Project design principle 4.4, as set out in the **Design Approach Document [Document Reference 5.6]**, requires that the Scheme is designed to deliver wildlife/biodiversity enhancement. The mitigation and enhancement areas will deliver a minimum 10% net gain in biodiversity as outlined in **ES Volume 3, Appendix 7.12: Biodiversity Net Gain Assessment [Document Reference 6.3.7.12]**. Paragraph 4.6.15 of NPS EN-1 advises that applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered and, where appropriate, incorporated into the project's design (including any relevant operational aspects). Opportunities to deliver wider environmental gains are outlined by topic in the **ES Volume 2, Chapters 6-15 [Document Reference 6.2]** and the **Outline LEMP [Document Reference 7.7]**.

Section 4.7 of NPS EN-1 and Section 2.5 of NPS EN-3 - Criteria for good design for Energy Infrastructure

7.2.49. NPS EN-1 Paragraph 4.7.2 states, "*Applying good design to energy projects should produce sustainable infrastructure sensitive to place, including impact on heritage, efficient in the use of natural resources, including land-use, and energy used in*

their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible".

7.2.50. Paragraph 4.7.4 of NPS EN-1 states that design principles should be established during the early stages of the project lifecycle. Footnote 122 of NPS EN-1 state that "*Design principles should take into account any national guidance on infrastructure design, this could include for example the Design Principles for National Infrastructure published by the National Infrastructure Commission*".

7.2.51. NPS EN-1 paragraph 4.7.6 states that whilst applicants may have very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, land form and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area. Applicants should also, so far as is possible, seek to embed opportunities for nature inclusive design within the design process.

7.2.52. Paragraph 4.7.7 of NPS EN-1 requires applicants to demonstrate in their application documents how the design process was conducted and how the proposed design evolved.

7.2.53. Paragraph 4.7.10 of NPS EN-1 states that given the importance the PA 2008 places on good design and sustainability, the SoS needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable, and adaptable (including taking account of natural hazards such as flooding) as they can be.

7.2.54. Paragraphs 2.5.1 to 2.5.2 of NPS EN-3 refers to Section 4.7 of NPS EN-1 and emphasise that proposals for renewable energy infrastructure should demonstrate good design with respect to landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology and heritage.

7.2.55. Paragraph 2.10.60 of NPS EN-3 relates specifically to solar development and notes that applicants should consider several factors when designing and laying out the proposed sites. These include proximity to available grid capacity to accommodate the scale of generation, orientation, topography, previous land use, and the ability to mitigate environmental impacts and flood risk.

7.2.56. Further detail is set out in section 2 of this Planning Statement, **ES Volume 1, Chapter 3: Site Selection, Site Description and Iterative Design Process [Document Reference 6.1.3]** and in the **Design Approach Document [Document Reference 7.2]** which set out in detail the Applicant's actions which demonstrate compliance with the design related policy within NPS EN-1 and NPS EN-3.

Section 4.10 of NPS EN-1– Climate Change Adaptation and Resilience

7.2.57. Paragraph 4.10.8 of NPS EN-1 states that applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure. Paragraph 4.10.5 of NPS EN-1 states that applications should consider nature-based solutions. This can also result in biodiversity benefits as well as increasing absorption of carbon dioxide from the atmosphere in adapting to climate change.

7.2.58. Paragraph 2.3.2 of NPS EN-5 requires the consideration of the effects of flooding (particularly on substations that are vital for the electricity transmission and distribution network), winds and storms (on overhead lines), higher average temperatures (leading to increased transmission losses), earth movement or subsidence caused by flooding or drought (on underground cables) and coastal erosion (for the landfall of offshore transmission cables and their associated substations in the inshore and coastal locations respectively).

7.2.59. The design has taken into account impacts from climate change. Site-specific hydraulic modelling has been carried out to assess the actual risk of fluvial flooding to the Scheme and includes a simulation of the Credible Maximum Scenario. The Credible Maximum Scenario accounts for the plausible worst-case impacts of climate change and has been applied in accordance with the requirements set out in paragraph 4.10.12 of NPS EN-1 to ensure the design and layout of the safety critical elements (exporting substations) are sufficiently resilient to extreme climate change. Further detail on the flood modelling undertaken is provided in **ES Volume 3, Appendix 10.1: Flood Risk Assessment [Document Reference 6.3.10.1]**.

Section 4.11 of NPS EN-1 and Section 2.10 of NPS EN-3 Network Connection

7.2.60. Paragraph 4.11.1 of NPS EN-1 notes that the grid connection point of a generating station to the electricity network is an important consideration for applicants.

7.2.61. Paragraph 2.10.21 of NPS EN-3 notes that applicants should consider issues relating to network connection in Section 4.11 of NPS EN-1 and in NPS EN-5. In particular, and where appropriate, applicants should proceed in a manner consistent with the regulatory regime for offshore transmission networks.

7.2.62. The **Grid Connection Statement [Document Reference 5.8]** submitted with the DCO Application demonstrates the Scheme will supply electricity to the NETS. National Electricity System Operator Limited (NESO) is the system operator for the complete NETS and NGET is the Transmission Owner for England and Wales pursuant to a transmission license issued under the Electricity Act 1989.

7.2.63. The Applicant received a grid connection offer from NESO on 13 December 2021, offering connection to a new NGET 400kV Substation with an export capacity of 340MW. That offer was accepted by the Applicant on 27 July 2022. Two subsequent grid connection offers to vary the agreement were received by the Applicant on 27 January 2022 for an additional 250MW and 26 September 2024 for an additional 210MW and were accepted by the Applicant on 26 April 2023 and 25 November 2024, respectively. Together, the grid connection offers, and agreement are referred to as the 'Grid Connection Agreement'. The first variation increased the export capacity to 590MW, and the second variation increased the export capacity to 800MW.

The current connection date for the Scheme is June 2029. As with all electricity generation projects, this date is under review by NESO as part of the ongoing connections reform process. In summary, the Applicant confirms that the output of the Scheme will be exported to the NETS via a new NGET 400kV Substation, which will have capacity for the electricity generated by the Scheme**Section 4.12 of NPS EN-1– Pollution Control and Other Environmental Regulatory Regimes**

7.2.64. Paragraph 4.12.1 of NPS EN-1 states that discharges or emissions from a proposed project, and which lead to other direct or indirect impacts on terrestrial, freshwater, marine, onshore, and offshore environments, or which include noise and vibration may be subject to separate regulation under the pollution control framework or other consenting and licencing regimes.

7.2.65. Paragraph 4.12.9 of NPS EN-1 states that the SoS should focus on whether the development itself is an acceptable use of the land or sea, and that the impact of that use, rather than the control of processes, emissions and discharges themselves. Paragraph 4.12.10 notes that the SoS should work on the assumption

that the relevant pollution control regime and other environmental regulatory regimes will be properly applied and enforced by the relevant regulator.

7.2.66. The DCO Application is accompanied by an **Other Consents and Licences Document [Document Reference 5.7]**. This outlines the consents, permits and licenses that would be required to facilitate the Scheme other than those incorporated within the DCO.

7.2.67. The construction phase environmental impacts of the Scheme would be managed through the implementation of a CEMP. An **Outline CEMP [Document Reference 7.1]** has been submitted with the DCO Application and sets out a series of measures, based on best-practice guidance, to control the environmental effects of construction of the Scheme. The CEMP, in accordance with the requirements of the draft DCO, must be approved prior to the commencement of works and is to be in accordance with the Outline CEMP. These measures will form an important part of the Applicant's efforts to control construction phase impacts.

7.2.68. Ongoing impacts arising from the operational phase of the Scheme are assessed to be few and minor. However, any arising impacts will be controlled through the **Outline Operational Environmental Management Plan (OEMP) [Document Reference 7.2]** submitted with the DCO Application. The **Outline DEMP [Document Reference 7.3]** will control environmental effects as identified in **ES Volume 2, Chapters 6-15 [Document Reference 6.2]** during the decommissioning of the Scheme. In accordance with the requirements of the **Draft DCO [Document Reference 3.1]**, the OEMP and DEMP must in accordance with the Outline OEMP and Outline DEMP.

Section 4.13 of NPS EN-1 – Safety

7.2.69. Paragraph 4.13.1 of NPS EN-1 explains that the Health and Safety Executive (HSE) is responsible for enforcing a range of occupational health and safety legislation, some of which is relevant to the construction, operation and decommissioning of energy infrastructure. Paragraph 4.13.3 confirms that some energy infrastructure will be subject to the Control of Major Accident Hazards Regulations 2015 (COMAH Regulations), however as outlined in **ES Volume 2 Chapter 16 Other Environmental Topics** [**Document Reference 6.2.16],** the Scheme does not fall within the scope of these regulations.

7.2.70. The DCO Application is accompanied by an **Outline Battery Safety Management Plan [Document Reference 7.4]**, which sets out the key fire safety provisions for the BESS including measures to reduce fire risk and fire protection measures.

Section 4.14 of NPS EN-1 – Hazardous Substances

7.2.71. Paragraph 4.14.1, NPS EN-1 states that all establishments wishing to hold stocks of certain hazardous substances above a certain threshold require Hazardous Substances Consent (HSC).

7.2.72. The is no requirement for storage or use of hazardous substances at or above Controlled Quantities for the Scheme and HSC is not required. Notwithstanding this, pollution prevention and control measures with management provisions are set out in the **Outline CEMP [Document Reference 7.1]** which is secured pursuant to the **Draft DCO [Document Reference 3.1]** as a requirement.

Section 4.15 of NPS EN-1– Common Law Nuisance and Statutory Nuisance

7.2.73. Paragraph 4.15.5 of NPS EN-1 states that the application stage of an energy NSIP, it is important that possible sources of nuisance under Section 79(1) of the Environmental Protection Act 1990, and how they may be mitigated or limited, are considered by the SoS so that appropriate requirements can be included in any subsequent order granting consent. Paragraph 4.15.6 of NPS EN-1 advises that at the application stage of an energy NSIP, it is important that the SoS consider possible sources of nuisance under Section 79(1) of the Environmental Protection Act 1990 and how they may be mitigated or limited so that appropriate requirements can be included in any subsequent DCO.

7.2.74. The Applicant has prepared and submitted with the DCO Application a **Statement of Statutory Nuisance [Document Reference 5.4]** as required under APFP Regulation 5(2)(f) and paragraph 4.15.5 of NPS EN-1. Measures to avoid impacts causing nuisance during construction and decommissioning are set out in the **Outline CEMP [Document Reference 7.1]** and **Outline DEMP [Document Reference 7.3]** and are secured pursuant to the DCO as a requirement.

7.2.75. Article 10 of the submission version of the **Draft DCO [Document Reference 3.1]** deals with defence to proceedings in respect of statutory nuisance and provides that no person is able to bring statutory nuisance proceedings under the Environmental Protection Act 1990 in respect of noise, if the noise is created in the

course of carrying out construction, maintenance or decommissioning of the authorised development and for which notice has been given under Section 60 or consent obtained under Section 61(9) of the Control of Pollution Act 1974 or which cannot be reasonably avoided as a consequence of the authorised development.

Section 4.16 of NPS EN-1 – Security Considerations

7.2.76. Paragraph 4.16.1 of NPS EN-1 explains that national security considerations apply across all national infrastructure sectors. Paragraph 4.16.2 of EN-1 notes that the Department for Energy Security and Net Zero works closely with Government security agencies including the National Protective Security Authority (NPSA) and the National Cyber Security Centre (NCSC) to provide advice to the most critical infrastructure assets on terrorism and other national security threats, as well as on risk mitigation.

7.2.77. Paragraph 4.16.4 of NPS EN-1 states that Government policy is to ensure that proportionate protective security measures are designed into new infrastructure projects at an early stage.

7.2.78. Security requirements for the Scheme have been embedded into the design of the proposals from the outset and are considered proportionate. Fencing and CCTV are employed across the Scheme to secure and monitor solar infrastructure and the assessment of the visual impact is included in **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]**.

7.3. Landscape and Visual

7.3.1. This section reviews the Scheme in the context of the relevant planning policies related to landscape and visual impacts. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** to this Planning Statement.

7.3.2. Paragraph 2.10.97 of NPS EN-3 refers to the requirement for Landscape and Visual Impact Assessments (LVIA) and states that visualisations may be required to demonstrate the effects of a proposed solar farm on the setting of heritage assets and any nearby residential areas or viewpoints.

7.3.3. An LVIA is presented within the **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]**. Visualisations are included at **ES Volume 4, Appendix 6.4: Photomontage and Visualisations [Document Reference 6.3.6.4].**

7.3.4. Paragraph 187 of the NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment, including by protecting and enhancing valued landscapes, recognising the intrinsic character and beauty of the countryside.

7.3.5. The **Design Approach Document [Document Reference 5.6]** and **ES Volume 1, Chapter 3: Site Selection, Site Description and Iterative Design Process [Document Reference 6.1.3]** discuss the design process and the decisions that were made, including the project design principles identified to frame the design decisions, in order to minimise landscape and visual impacts and consider the LVIA analysis at **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]**. The layout design at submission has also been influenced by consultation feedback throughout both stages of consultation.

7.3.6. In response to paragraphs 2.10.93 and 2.10.98 of NPS EN-3, Section 5.10 of NPS EN-1 and local policy, considerable effort by the Applicant has been taken to minimise landscape and visual effects from the Scheme, including through the implementation of new hedgerow and occasional tree planting, infilling of existing hedgerows and new and /or extensions of existing woodland areas. Detailed descriptions of the type and location of the biodiversity enhancements are contained within the Outline Landscape and Ecological Management Plan **[Document Reference 7.6]** and **ES Figure 6.4 landscape and Visual Mitigation**

Strategy [Document Reference 6.4.6.4]. As presented on the **ES Figure 6.4 landscape and Visual Mitigation Strategy [Document Reference 6.4.6.4]** landscape mitigation and enhancement include: -

- Existing hedgerows allowed to grow up and be managed at 3m;
- Existing hedgerows gapped up where required with locally appropriate mixed native hedgerow species;
- New native hedgerow trees added to existing hedgerows, where appropriate;
- New species rich native hedgerows planted with hedgerow trees adjacent to footpaths and on boundaries with no existing vegetation. Position of new hedge lines reflective of the local landscape pattern and to allow for required offset from drainage features;
- Sowing of new areas of species rich neutral grassland under the proposed arrays for grazing by sheep;
- Areas of existing arable land managed for neutral species rich grassland and creation and Skylark breeding and wintering birds;
- Existing areas of woodland, tree groups and individual trees retained;
- New areas of linear woodland planting and small copses to provide new habitats and screening; and
- New permissive footpath link, approximately 1.72km in length, with bird hides
- Approximately 65km of new hedgerow will be planted together with 450 trees.

7.3.7. **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6] affirms that: -**

- With regard to effects on landscape features, the construction of the Scheme would result in notable short-term impacts from the construction activity, including the movement of vehicles and plant, temporary compounds and the construction of the Scheme itself. However, with regard to the trees, woodland and hedgerows with the Order Limits, all vegetation would be retained bar limited removals of hedgerows to facilitate access tracks, with existing gaps

utilised for access where possible. This therefore would not result in any significant adverse effects on the most sensitive landscape features at the Order Limits.

- Once construction is completed there would be no further adverse effects on the landscape features within the Order Limits. Indeed, the Scheme includes for notable planting of new trees, woodland and hedgerows, as well as the establishment of neutral species rich grassland across the majority of the Order Limits.

- With regard to effects on landscape character, the construction phase would cause notable, but temporary effects upon the landscape character of the land within the Order Limits, due to the extent and size of the Scheme. Such effects would be significant given the duration and nature of the construction work.

- The operational phase would also cause notable effects upon the Landscape Character of the land within the Order Limits, due to the extent and size of the Scheme along with localised effects upon the Peat Moorlands Landscape Character Type and Thorne and Hatfield Peat Moorlands Landscape Character Area G2, Flat Open Remote Farmland Landscape Character Type, Flat Wooded Farmland Landscape Character Type, and Flat Drained Tree Farmland Landscape Character Type as much of the Scheme would occupy these character areas and types. Such effects would be significant.

- In terms of visual receptors, there would be significant visual effects on several individual properties, which lie outside of the closest settlements within the agricultural landscape, including upon select properties as set out within **ES Appendix 6.2 - Residential Visual Amenity Assessment [Document Reference 6.3.6.2]**. This applies to those properties which have clear, open views across part of the Scheme, which are not blocked by other properties or vegetation. For the majority of residential properties however the magnitude of impact would be no greater than low, resulting in moderate to minor effects. Mitigation has been included as part of the proposals, which includes further offsetting and new vegetation planting to help minimise impacts.

- At the early design stages of the Scheme, it was determined that users of the Stainforth and Keadby Canal and its towpath, would be sensitive receptors and appropriate offsets from the Canal Corridor would be required that have been

designed into the final layout. Nonetheless it is acknowledged that there would be significant visual effects on users of some sections of the canal as they approach and pass through the scheme either in boats or using the towpath, plus several other Public Rights of Way which pass through or close to the Scheme. This would apply to those sections which have clear, open views across parts of the Scheme, which are not blocked by existing hedgerows or other vegetation. Mitigation has been included as part of the proposals, which includes further offsetting and new vegetation planting to help reduce impacts.

- Regarding road users, for a number of roads which pass through or within close proximity of the Scheme, there would be significant visual effects on users of some sections. This would apply to those sections which have clear, open views across part of the Order Limits, which are not blocked by existing hedgerows or other vegetation. Mitigation has been included as part of the proposals, which includes further offsetting and new vegetation planting to help reduce impacts

7.3.8. Section 2.9 of NPS EN-5 refers to landscape and visual impacts where it is encouraged to reasonably mitigate possible impacts of transmission infrastructure on visual and landscape amenity (such as effects resulting from cabling and substations). The Scheme addresses this via principally installing cabling underground and through screening of transmission infrastructure.

7.3.9. Paragraph 2.10.100 of NPS EN-3 states that applicants 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*". Details of the measures and approaches to be adopted which will limit the likelihood of impacts upon retained habitats through damage, pollution and disturbance are presented with the **Outline Ecological Construction Management Plan [Document Reference 7.5]**, the **Outline Construction Environmental Management Plan [Document Reference 7.1]** and the **Outline Landscape and Ecological Management Plan [Document Reference 7.6]**.

7.3.10. Paragraph 2.10.101 of NPS EN-3 further states, "*The impact of the scheme on established trees and hedges should be informed by a tree survey and arboricultural / hedge assessment as appropriate*". This is duly presented within

the **ES Volume 3, Appendix 6.6: Arboricultural Impact Assessment [Document Reference 6.3.6.6]**.

Landscape Character

7.3.11. NPS EN-1 paragraph 3.1.2 states "*it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impact*". Paragraph 5.10.5 also notes specifically with regard to landscape and visual effects that: "*Virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts arising from mitigation*".

7.3.12. NPS EN-1 paragraph 4.2.2 states "*energy security and net zero ambitions will only be delivered if we can enable the development of new low carbon sources of energy at speed and scale*". Complementary to this, NPS EN-1 paragraph 5.10.26 recognises that any reduction in the scale of a project, to mitigate adverse effects, may result in a significant operational constraint or reduction in function, such that the SoS should balance the loss of function, with any potential reduction in adverse landscape and / or visual effects.

7.3.13. NPS EN-1 paragraph 5.10.14 further states that the SoS should judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project.

7.3.14. **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]** was informed by a series of Zone of Theoretical Visibility (ZTV) figures (see **ES Volume 4, Figure 6.3: Screened Zone of Theoretical Visibility with Viewpoints and Photomontage Locations [Document Reference 6.4.6.3]**). It is considered the 3 km study area set within **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]**, is proportionate and appropriate to identify all non-negligible effects on landscape and visual receptors and is appropriate to identify all likely significant effects.

7.3.15. **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]** sets out the relevant landscape character areas in the study area and sets out that landscape sensitivity, including how the landscape might respond to different development scenarios, is considered to be low for each of the assessed LCAs.

7.3.16. In accordance with paragraphs 2.10.100 and 2.10.101 of NPS EN-3, the **Outline CEMP [Document Reference 7.1]** details that construction should be undertaken in a sensitive manner with regard to the existing landscape fabric within the Order Limits. It details where existing hedgerows, trees and woodland would be retained and explains the proposed protection measures to be implemented during construction (except where removal is indicated in the **Tree and Hedgerow to be Removed or Managed Plan [Document Reference 2.10]**).

Landscape and Visual Cumulative Effects

7.3.17. Paragraph 2.10.157 of NPS EN-3 states visual impacts and impacts upon landscape character should be considered together with the possible cumulative effect with any existing or scheme.

7.3.18. **ES Volume 2, Chapter 17: Cumulative Effects [Document Reference 6.2.17]** includes an assessment of cumulative effects, including cumulative visual effects. This assessment considers the anticipated landscape and visual effects of the Scheme in combination with the visual impact of other shortlisted developments within a defined Zone of Influence. It concludes that there would not be any significant landscape and visual cumulative effects.

Summary

7.3.19. The LVIA at **ES Volume 2, Chapter 6: Landscape and Visual [Document Reference 6.2.6]** has concluded that the Scheme will result in some significant adverse effects (to ground cover and the landscape character of the site and immediate surroundings during construction and at operation to the landscape character of the site and immediate surroundings, some residential receptors, some users of the public rights of way network and canal corridor and some users of the transport network), but these are highly localised and limited in nature, with many of the effects would be reduced by Year 15 following implementation of the landscape mitigation planting. Indeed, this planting would result in significant beneficial effects in terms of the hedgerow network within the Scheme. . As recognised in NPS EN-1 paragraph 3.1.2, significant adverse effects can be expected for new nationally significant infrastructure projects. It is also expected in NPS EN-1 paragraphs 5.10.5 and 5.10.13 that there will likely be adverse landscape and visual effects for many receptors. However, considerable effort has been made to minimise landscape and visual impacts of the Scheme, which is in accordance with NPS EN-1 5.10.19 where landscape and visual effects were considered in the

early stages of siting and design. Critically the SoS should consider how well designed a project is and whether an Applicant has genuinely sought to minimise harm to the landscape including by way of use of appropriate mitigation. EN-3 expands on this point and advises applicants to minimise landscape and visual impacts through screening.

7.3.20. Identified adverse landscape and visual effects have been reduced as far as practicable through embedded and additional mitigation measures, while also seeking to preserve the ability for an effective, well sited, renewable energy development to be constructed and operated. This is necessary to achieve sustained growth in Solar PV, as referenced in paragraph 2.10.9 of EN-3, which is required to meet the UK's net zero emissions 2050 target.

7.3.21. It is considered that the wider benefits of the Scheme, including the delivery of significant level of low carbon energy generation, BNG and the provision of permissive paths, outweigh these adverse landscape and visual effects and that the Scheme is considered acceptable in terms of overall landscape, visual and residential amenity impacts. The Scheme is compliant with the NPS EN-1, NPS EN-3, NPS EN-5 and other national and local planning policy.

7.4. Cultural Heritage

7.4.1. This section considers the Scheme in the context of the relevant planning policies relating to cultural heritage. This section should be read in conjunction with Policy Accordance Tables included in **Appendix A** of this Planning Statement.

7.4.2. Paragraph 5.9.10 of NPS EN-1 states that "*as part of the ES, the Applicant should provide a description of the significance of the heritage assets affected by the scheme, including any contribution made by their setting"*. Paragraph 5.9.11 goes on to state "*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*".

7.4.3. In accordance with paragraph 5.9.10 and 5.9.11 of NPS EN-1, and the aforementioned relevant paragraphs contained within the NPPF, **ES Volume 2, Chapter 8: Cultural Heritage & Archaeology [Document Reference 6.2.8]** includes a Cultural Heritage Assessment of the construction, operation, and decommissioning phases of the Scheme, encompassing assessment of built heritage and the historic landscape.

7.4.4. The sources of information, including relevant historic records, used to inform the Archaeological Desk-Based Assessment are set out in ES Volume 2, Chapter **8: Cultural Heritage & Archaeology [Document Reference 6.2.8]**. This includes ES **Volume 4, Appendix 8.1: Heritage Technical Baseline, Appendix 8.2: Geophysical Survey Report, Appendix 8.3: Geoarchaeological Assessment, Appendix 8.4: Archaeological Trial Trenching Report, Appendix 8.5 Test Pitting Report** and **Appendix 8.6 Outline Archaeological Mitigation Strategy [Document Reference 6.3.8.1 to 6.3.8.6]**.

7.4.5. The **ES Volume 2, Chapter 8: Cultural Heritage & Archaeology [Document Reference 6.2.8]** has considered the likely significant effects of the Scheme upon the cultural heritage resource, including buried archaeological remains within the Order Limits and heritage assets (including Scheduled Monuments and Listed Buildings) located within the wider Study Area. It has been established that subject to appropriate mitigation being implemented, the Scheme would not result in any significant adverse effects upon the cultural heritage resource within the Order Limits and in its surroundings. The construction phase of the Scheme has the

potential to affect known, non-designated, archaeological remains associated with possible prehistoric Romano-British, post-medieval and modern archaeological remains as well as potential previously unrecorded archaeological remains. The groundworks associated with the construction of the below ground cable routes, directional drilling access pits, temporary compounds, BESS and substations within the Scheme have the potential to truncate or totally remove the archaeological remains within their footprint. Such effects would result in harm to or total loss of significance of these buried archaeological features.

Construction Phase

7.4.6. It has been established that the construction phase of the Scheme has the potential to affect known, non-designated, archaeological remains associated with possible prehistoric Romano-British, post-medieval and modern archaeological remains as well as potential previously unrecorded archaeological remains. The groundworks associated with the construction of the below ground cable routes, directional drilling access pits, temporary compounds, BESS and substations within the Scheme have the potential to truncate or totally remove the archaeological remains within their footprint. Such effects would result in harm to or total loss of significance of these buried archaeological features. An appropriate programme of mitigation by design together with additional mitigation measures which necessitate a proportionate programme of further archaeological surveys, secured through the **Outline Archaeological Mitigation Strategy [Document Reference 6.3.8.6**] (as required) will allow the magnitude of effect to be Moderate harm (**not significant**). The installation of the solar arrays has the potential to result in localised adverse effects upon archaeological deposits lying beneath the push pin foundations. An appropriate programme of mitigation by design and additional mitigation (as required) will allow the magnitude of effect to be Minor harm (**not significant**).

7.4.7. The construction phase of the Scheme has the potential to affect the settings of five designated heritage assets and three non-designated built heritage assets and one No. Area of Special Historic Landscape Interest. Such effects would result in harm to the significance of these assets, leading to Less than Substantial Residual Harm at the lower end of the spectrum in relation to the designated assets and Minor Residual Harm in relation to the non-designated assets (**Not Significant**).

Operational Phase

7.4.8. The operational phase of the Scheme has the potential to affect the settings of five designated heritage assets and three non-designated built heritage assets and one Area of Special Historic Landscape Interest. Such effects would result in harm to the significance of these assets, leading to Less than Substantial Residual Harm at the lower end of the spectrum in relation to the designated assets and Minor Residual Harm in relation to the non-designated assets.

Decommissioning Phase

7.4.9. The decommissioning phase of the Scheme has the potential to affect the settings of four designated heritage assets and three non-designated built heritage assets and one Area of Special Historic Landscape Interest. Such effects would result in harm to the significance of these assets, leading to Less than Substantial Residual Harm at the lower end of the spectrum in relation to the designated assets and Minor Residual Harm in relation to the non-designated assets.

Mitigation and Enhancement

7.4.10. Designed mitigation in relation to built heritage assets will entail a combination of screening through appropriate boundary treatments and offsets to retain suitable margins around/or views from the assets to minimise the adverse effects upon their settings.

7.4.11. Opportunities to minimise adverse effects upon the buried archaeological resource have also been considered. Site investigation work has determined that some areas of the Site, such as the Romano-British settlement (MLS901) within Land Parcel E, will have no intrusive construction to enable *in situ* preservation of the archaeological remains in this area. It is envisaged that buried remains may be able to be preserved in situ in some parts of the Order Limits through the use of ballast foundations.

7.4.12. A proportionate programme of archaeological survey and mitigation, by means of field investigation and recording has taken, and will be followed by an appropriate and proportionate mitigation strategy that will ensure that they are subject to preservation by record at an appropriate stage in the development process. The appropriate and proportionate additional mitigation, as presented through the **Outline Archaeological Mitigation Strategy [Document Reference 6.3.8.6], would** be determined in consultation with the archaeological advisors, is secured as requirement set out in the draft **DCO [Document Reference 3.1]**. This will

partially offset their loss through the knowledge gained through the investigations. For the archaeological remains the mitigation may include, as appropriate, excavation, strip map and sample investigation, or archaeological monitoring of ground works during construction (known as a watching brief), with appropriate post-excavation analysis and dissemination of results.

Summary

7.4.13. If appropriate mitigation measures, as discussed above, are implemented, the Scheme is considered acceptable and there would be no adverse significant residual effects in relation to non-designated archaeological remains

7.4.14. The Scheme is therefore considered to comply with all relevant cultural heritage planning policy by minimising harm to heritage assets through sensitive design and protecting as much of their significance as possible during the life of the Scheme.

7.5. Climate Change and Greenhouse Gas Emissions

7.5.1. This section reviews the Scheme in the context of the relevant planning policies relating to climate change. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** of this Planning Statement.

7.5.2. The potential impacts of the Scheme on climate change, as well as the vulnerability of the Scheme to the effects of climate change, are considered in **ES Volume 2, Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]** which has been prepared in accordance with the relevant policy.

7.5.3. The Scheme has the potential to directly, and indirectly, affect climate change through the release of GHGs from a number of sources. The Scheme will contribute to the UK's aims to reduce carbon emissions and achieve its ambitious GHG emissions reduction targets.

7.5.4. Over the lifespan of the Scheme, **ES Volume 2, Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]** confirms that **2,928,399 million tCO2e** will be saved when compared to Combined Cycle Gas Turbine-generated electricity. It should be noted this value excludes indirect emissions from the operation of the Combined Cycle Gas Turbine power station including construction of the Combined Cycle Gas and fuel supply chain emissions which would further increase the potential carbon emissions avoided. Overall, it is demonstrated that the Scheme will lead to avoided GHG emissions by replacing electricity currently generated by more carbon intensive methods and enable the removal of fossil fuel generation from the UK electricity grid.

7.5.5. As set out in ES Volume 2, Chapter **14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]** in the absence of any more appropriate identified methodology, this assessment considers that this approach, i.e. a comparison to Combined Cycle Gas Turbine emissions, is a robust and appropriate method to understand the level of GHG savings from the Scheme.

7.5.6. Paragraph 2.2.1 of NPS EN-1 notes the legally binding targets upon the UK Government to cut GHG emissions, the challenging nature of the transition, and the major investment in new technologies required. The resulting urgent need for new nationally significant electricity infrastructure projects is set out in paragraph 3.3.1 of NPS EN-1. Section 3.3 of NPS EN-1 sets out the resulting need for solar at

paragraphs 3.3.20 to 3.3.24. The Scheme will significantly contribute to net zero and reducing GHG emissions.

7.5.7. Section 2.4 of NPS EN-3 notes climate change adaptation and resilience confirming that solar development sites need to be resilient to an increased risk of flooding and also the impact of higher temperatures on the planet.

7.5.8. NPPF paragraph 161 states the planning system should support the transition to net zero by 2050 and shape places in ways that contribute to radical reductions in GHG emissions. Paragraph 168 of the NPPF states that local planning authorities should not require applicants to demonstrate the overall need for renewable or low carbon energy and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse emissions. **Appendix A** of this Planning Statement includes a Policy Accordance Table which addresses NPPF policy.

7.5.9. The following sections set out the specific responses to the relevant Greenhouse Gas Emissions and Climate policy within NPS EN-1 and NPS EN-3.

Climate Change

7.5.10. Paragraph 4.10.1 of NPS EN-1 states that new energy infrastructure must be sufficiently resilient against the possible impacts of climate change or else it will not be able to satisfy the energy needs outlined in Part 3 of the NPS.

7.5.11. Paragraph 4.10.8 of NPS EN-1 requires applicants to consider the impacts of climate change when planning the location, design, build, operation, and where appropriate, decommissioning of new energy infrastructure.

7.5.12. NPS EN-1 continues at paragraph 4.10.13 to advise that the SoS '*should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change*'. At paragraph 4.10.15 it continues to state that SoS should '*be satisfied that there are not features of the design of the new energy infrastructure critical to its operation which may be affected by more radical changes to the climate beyond that projected by the latest set of UK climate projections*'.

7.5.13. NPS EN-3 Paragraph 2.4.11 discusses the introduction of solar photovoltaics and how they are typically proposed within low-lying exposed sites. For these types of

proposals, applicants should consider how the equipment is resilient to increased risk of flooding and the impact of higher temperatures.

7.5.14. Paragraph 2.3.2 of NPS EN-5 requires the consideration of the effects of flooding (particularly on substations that are vital for the electricity transmission and distribution network), winds and storms (on overhead lines), higher average temperatures (leading to increased transmission losses), earth movement or subsidence caused by flooding or drought (on underground cables) and coastal erosion (for the landfall of offshore transmission cables and their associated substations in the inshore and coastal locations respectively).

7.5.15. In response to these paragraphs, the **Design Approach Document [Document Reference 5.6]** describes how the Schemes project design principles were developed and have been applied in the design evolution of the Scheme from the outset. The project design principles have been split into four themes, with a specific theme dedicated to climate. The project design principles under the theme of climate include:

- Designed to be climate resilient by incorporating, where reasonably practicable, mitigation measures and adaptations that respond to the impacts of climate change.
- Demonstrating low carbon approaches to design, construction and long-term maintenance.
- Designed to optimise sustainability in regard to design, construction and long-term maintenance.

7.5.16. **ES Volume 1, Chapter 3: Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]**, outlines the process for identifying the Order Limits for the Scheme. Climate resilience has been embedded throughout the design of the Scheme, through the setting of technical parameters for solar infrastructure, and how it is laid out.

Greenhouse Gas Emissions

7.5.17. Notwithstanding the meaningful contribution to decarbonisation delivered by renewable energy generating stations such as the Scheme, paragraph 5.3.1 of NPS

EN-1 acknowledges that the construction, operation, and decommissioning of energy infrastructure will itself lead to GHG emissions.

7.5.18. Paragraph 5.3.4 of NPS EN-1 states that all proposals for energy infrastructure should include a GHG assessment as part of their ES. This should include:

- A whole life carbon assessment showing construction, operational and decommissioning carbon impacts;
- An explanation of the steps that have been taken to drive down the climate change impacts at each of those stages;
- Measurement of embodied carbon 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 technology for that type of technology;
- Calculation of operational energy consumption and associated carbon emissions; and
- Whether and how any residual carbon 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 regional or national level, or sector level, if sectoral targets are developed.

7.5.19. In response to paragraph 5.3.4, the influences of the Scheme on climate change have been estimated through the emission or reduction in emissions of CO2 caused by the construction, operation and decommissioning of the Scheme. This assessment is based on an approach that calculates the difference between the embodied GHG emissions across all phases of the Scheme and the concentration of GHG which will be both reduced and offset through the decarbonisation of energy generation associated with the Scheme. This approach is in accordance with the Institute of Environmental Management and Assessment (IEMA) Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance (2022) [Ref 38], which outlines the principles for assessment criterion for GHG emission

assessments. The assessment methodology is set out in Section 14.3 of **ES Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]**.

7.5.20. Further responding NPS EN-1 paragraph 5.3.4, given the significant positive contribution to reducing GHG emissions, no net residual offsetting is required. Additionally, while no net residual GHG emissions result from the Scheme, the cumulative effect of the Scheme with other UK renewables generation is considered to be a fundamental change in the climate effects of UK energy supply, which is a major beneficial effect that is significant under the EIA regulations and will contribute to the UK's legally binding emission reduction targets.

7.5.21. **ES Volume 2, Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]** includes a GHG assessment that considers the effects of GHG emissions generated at all stages of the Scheme, i.e. construction, operation, and decommissioning in accordance with paragraph 5.3.4 of NPS EN-1. The mitigation measures defined in **ES Appendix 14.5 Construction Mitigation [Document Reference 6.3.14.5]** are sufficiently robust to minimise emissions during the construction phase as far as practicable. These measures are included as part of the **Outline Construction Environmental Management Plan [Document Reference 7.1**], secured by DCO requirement. Some of the measures may only be necessary during specific phases of work, or during activities with a high potential to produce dust, and the list should be refined and expanded upon in liaison with the construction contractor.

7.5.22. A Decommissioning Environmental Management Plan would be secured pursuant to the DCO as a requirement; to be prepared in advance of the commencement of decommissioning works of each Land Parcel and this would be in substantial accordance with the **Outline Decommissioning Environmental Management Plan (Outline DEMP) [Document Reference 7.3]** and **ES Appendix 14.5 Construction Mitigation [Document Reference 6.3.14.5]**

7.5.23. Beyond the management plans, and the measures contained within, embedded in the design of the Scheme, no additional mitigation is necessary for the construction phase.

Summary

7.5.24. The Scheme provides a significant beneficial effect in terms of impacts on GHG emissions and is the type of infrastructure that is defined as urgent and of CNP by

the UK Government. **ES Volume 2, Chapter 14: Air Quality & Greenhouse Gases [Document Reference 6.2.14]** concludes that **2,928,399 million tCO2e** will be saved over the lifespan of the Scheme when compared to Combined Cycle Gas Turbine-generated electricity. It is considered that the Scheme strongly complies with the relevant policy set out in NPS EN-1 and NPS EN-3 and that the beneficial impact attracts substantial weight in the planning balance.

7.5.25. The Scheme fulfils the policy requirements of NPS EN-1, and in doing so meets the objectives of NPPF paragraph 161.

7.6. Ecology and Biodiversity

7.6.1. This section reviews the Scheme in the context of planning policies related to ecology and biodiversity. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** to this Planning Statement.

7.6.2. Paragraph 5.4.4 of the NPS EN-1 confirms the highest level of biodiversity protection is afforded to sites identified through international conventions and that The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) identifies sites for which a HRA will assess the implications. Paragraph 5.4.49 of NPS EN-1 confirms the SoS must consider whether a project is likely to have a significant effect on a protected site which is part of the National Site Network (a habitat site), or any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans and projects.

7.6.3. Paragraph 5.4.12 of NPS EN-1 states that '*sites of regional and local biodiversity and geological interests, which include … Local Wildlife Sites, are areas of substantive nature conservation value and make an important contribution to ecological networks and nature's recovery*'. Paragraph 5.4.52 of NPS EN-5 states that the SoS should give due consideration to regional or local designations, however given the need for new nationally significant infrastructure, these designations should not be used in themselves to refuse development consent.

7.6.4. NPS EN-1 paragraph 5.4.22 states that 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*".

7.6.5. Paragraph 5.4.17 of NPS EN-1 states that projects should include an ES that clearly sets out any effects on internationally, nationally, and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity.

7.6.6. NPS EN-1 paragraph 5.4.19 states that applicants should show how projects have taken opportunities to conserve and enhance biodiversity conservation interests. Paragraph 5.4.21 of NPS EN-1 adds that the design process should embed

opportunities for nature-inclusive design, and applicants should consider how proposals can contribute towards BNG.

7.6.7. Paragraph 5.4.39 of the NPS EN-1 states that the SoS should have regard to the aims and goals of the Government's 25-year Environmental Plan, recognising that failure to address the challenge of climate change will result in significant adverse impacts to biodiversity. NPS EN-3 paragraph 2.3.7 also refers to the ambition set out in the 25-year Environment Improvement Plan.

7.6.8. NPS EN-3 paragraph 2.5.2 states proposals for renewable energy infrastructure should demonstrate good design to mitigate impacts such as noise and effects on ecology.

7.6.9. NPPF Section 15: 'Conserving and enhancing the natural environment' paragraph 187 states that planning decisions should contribute to and enhance the natural and local environment, and paragraph 192 seeks to encourage opportunities to incorporate biodiversity improvements, particularly where this can secure measurable net gains for biodiversity.

7.6.10. **ES Volume 4, Appendix 7.2: Breeding Bird Survey Report: [Document Reference 6.3.7.2]** undertaken to inform the assessment contained within **ES Volume 2, Chapter 7: Ecology & Nature Conservation [Document Reference 6.2.7]**, identified several notable ground nesting bird species within the Order Limits, including skylark, yellow wagtail, lapwing, meadow pipit, grey partridge and greylag geese. Based on the species conservation status, abundance, and diversity of the species assemblage, the breeding bird assemblage of the Order Limits (which includes the aforementioned notable species) is assessed as being of National-Regional/County value.

7.6.11. **ES Chapter 7: Ecology & Nature Conservation [Document Reference 6.2.7]** provides an assessment of the likely effects of the Scheme on ecological features during its construction, operation and decommissioning phases. A summary of the assessment is set out below.

7.6.12. Habitats within the Order Limits are dominated by arable farmland, associated with species-poor hedgerow systems and watercourses with ponds and a parcel of plantation broad-leaved woodland. The Order Limits comprise of open fields of limited biodiversity value, and subject to intensive farmland management.

7.6.13. The Order Limits lie outside designated sites with the exception of Thorne & Hatfield Moors SPA, Thorne Moor SAC, Thorne, Crowle and Goole Moors SSSI and Hatfield Chase Ditches SSSI. Whilst the Moors SPA/SAC/SSSI lies within the Order Limit, they are outside the development footprint.

7.6.14. Comprehensive ecological surveys have been undertaken since 2022 to inform this assessment. With the aim of providing the required information regarding habitats along with protected species, such as breeding and non-breeding birds, badger, otter, water voles, amphibians and invertebrates. These surveys were used to inform the iterative design of the Scheme and avoidance of ecological features of value, such as hedgerows, woodland and watercourses, has been a core design principle.

Likely Significant Effects

7.6.15. Higher value habitats including woodlands, watercourses, trees and hedgerows are retained and protected, with construction phase effects largely confined to arable land of low ecological value, but which is noted to support both significant assemblages of both breeding and non-breeding birds, which is discussed separately.

7.6.16. The Scheme also includes embedded habitat enhancement provisions, which will be managed for the benefit of wildlife over the long term and will provide biodiversity gains for a wide variety of species including invertebrates and bats.

7.6.17. The proposed creation of diverse grasslands and hedgerow planting will also deliver a quantifiable BNG. Although not mandatory for NSIPs, the commitment to a BNG above mandatory or policy requirements and adopted as a fundamental design principle ensures that the Scheme will deliver a substantial ecological benefit.

7.6.18. Effects from the construction phase have been assessed as not significant in relation to non-statutory designated sites, habitats and species with the exception of statutory designated sites, ground nesting species and non-breeding birds, which are assessed as Significant adverse.

7.6.19. The assessment has concluded that potential impact pathways are present for a number of qualifying features of the nearby statutory sites. Mitigation measures in terms of buffer zones and sensitive working methodologies are detailed within the accompanying **Outline eCMP [Document Reference 7.5]** and are considered to adequately mitigate for most likely significant effects on the statutory designated sites identified.

7.6.20. However, the mitigation is not considered sufficient to mitigate for all likely significant effects on all qualifying features. Impacts on a number of qualifying bird species of the Humber Estuary SPA/Ramsar are expected through habitat loss and disturbance where these species are present in the Order Limits or adjacent land. Additional mitigation in the form of large areas of permanent pasture managed and also arable, both of which will be sensitively for the target species is proposed. The principles of the management of this additional mitigation is included within the **Outline LEMP [Document Reference 7.5],** which although in itself is embedded mitigation, includes the management of this mitigation land for non-breeding SPA bird species, in order to provide one concise management plan for the entire Order Limits.

7.6.21. Additional scrapes are to be created within the grassland areas to provide further habitat opportunities to bird species, which are not currently present.

7.6.22. A significant population of ground nesting species was recorded within the Order Limits. A ground-nesting bird mitigation strategy is proposed that will utilise on-site mitigation measures, comprising the provision of large areas of open, permanent pasture managed sensitively for skylark and skylark plots within arable, the principles of which are set out in the accompanying **Outline LEMP [Document Reference 7.6**].

7.6.23. Once operational, solar farms function with little intervention or disturbance required. This is limited to occasional maintenance visits and ongoing management of grassland and other habitats around the Order Limits, including cutting or grazing the grassland and periodic hedgerow cutting. Habitat creation, which forms part of the operational design, includes extensive areas of grassland attractive to a range of species which maintains habitat connectivity within and around the Order Limits and provides enhanced opportunities for wildlife.

Mitigation

7.6.24. Measures are set out to avoid or mitigate against potentially adverse effects during both the construction, operation and decommissioning periods of The Scheme and these measures will be detailed within the **Outline eCMP [Document Reference 7.5], Outline LEMP [Document Reference 7.6] and Outline DEMP [Document Reference 7.3].**

7.6.25. Additional measures have been identified where required to ensure legislative compliance and the protection of wildlife, including pre-commencement/construction surveys and, where necessary, mitigation licences

issued by Natural England which will ensure that the favourable conservation status of relevant species will be maintained. In addition, land provided and managed specifically for SPA species that utilise the Order Limits is to be provided and secured for the duration of the Scheme.

Enhancement

7.6.26. The included BNG for habitats, combined with other measures, will provide new and enhanced features that can be used for breeding, foraging, overwintering and refuge by a range of species, from birds and bats to amphibians, reptiles and invertebrates. The cessation of the use of agricultural chemicals across the Order Limits (following removal from farming use) will provide further benefit, in particular for invertebrate populations. A BNG Assessment is included within **ES Volume 4, Appendix 7.12 Biodiversity Net Gain Assessment [Document Reference 6.3.7.12]**, and the assessment for BNG utilises Defra's Statutory Biodiversity Metric. The BNG Assessment confirms that the Scheme will achieve at least 10% BNG. This is considered to be a substantial contribution towards the objectives set out within the 25 Year Environment Plan **[Ref. 28]**.

7.6.27. The habitat enhancements across the Order Limits will provide benefits by increasing opportunities for many of the species associated with designated sites and increase and improve ecological connectivity.

7.6.28. A number of boxes will be installed for birds, bats and hedgehogs as well as insect hotels, beetle banks, hibernacula and bee hives across the Order Limits, the principles of which are provided in the **Outline LEMP [Document Reference 7.6]** submitted as part of the DCO Application.

Conclusion

7.6.29. With embedded design measures and mitigation in place as described, the Scheme will not result in any significant adverse effects on any habitats or species, or non-statutory designated sites, with the exception of statutory designated sites, ground nesting birds and non-breeding birds.

7.6.30. Major beneficial effects are anticipated as a result of habitat creation and diversification accompanied by long-term habitat management for the benefit of biodiversity.

7.6.31. **The Report to Inform Habitats Regulations Assessment [Document Reference 5.3** has been prepared in accordance with the requirements of the Habitats

Regulations to set out whether the Scheme is likely to have any significant effect on European designated sites. This document is submitted in support of this DCO Application. The report concludes that with the mitigation in place as set out in the **Outline Ecological Construction Management Plan [Document Reference 7.5]** and the **Outline LEMP [Document Reference 7.6]** there will be no likely significant effects to the European Sites screened in for Appropriate Assessment either from the construction, operation and decommissioning of the Scheme or in combination with other plans and projects.

7.6.32. It is considered that the Scheme is compliant with the relevant NPSs, the NPPF and local policies relating to ecology and biodiversity.

7.7. Glint and Glare Assessment

7.7.1. This section reviews the Scheme in the context of planning policies relating to glint and glare. This section should be read in conjunction with the Policy Accordance Tables in **Appendix A** of this Planning Statement.

7.7.2. Paragraph 2.10.27 of NPS EN-3 states that the two main impact issues related to utility-scale solar farms that determine distances to sensitive receptors are likely to be visual amenity and glint and glare. A glint and glare assessment, included at **ES Volume 3, Appendix 16.1: Glint and Glare Assessment (Fix and Tracker Design) [Document Reference 6.3.16.1]** and **ES Volume 4, Appendix 16.2: Glint and Glare Assessment (Fixed Design) [Document Reference 6.3.16.2]** has been undertaken.

7.7.3. Regarding glint and glare, paragraph 2.10.102 of NPS EN-3 defines 'glint' 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.

7.7.4. Paragraphs 2.10.102 - 2.10.106 of NPS EN-3 sets out the specific assessment impact considerations for solar PV development with regard to glint and glare.

7.7.5. Paragraph 2.10.105 of NPS EN-3 states that glint and glare assessment may need to account for 'tracking' panels if they are proposed as these may cause differential seasonal impacts. The potential for solar PV panels, frames, and supports to have a combined reflective quality should be assessed. This assessment needs to consider the likely reflective capacity of all of the materials used in the construction of the solar PV farm.

7.7.6. As per the requirement in NPS EN-3 paragraph 2.10.105, the assessment considered 'fix' panel layout (Option 1) and a 'fix' and 'tracking' panel layout (Option 2) This is because 'tracking' panels present the greatest opportunity for worst case glint and glare effects. The full assessment method is included in **ES Volume 3, Appendix 16.1: Glint and Glare Assessment (Fix and Tracker Design) [Document Reference 6.3.16.1]** and **ES Volume 4, Appendix 16.2: Glint and Glare Assessment (Fixed Design) [Document Reference 6.3.16.2]**. NPS EN-3 paragraph 2.10.158 confirms that solar PV panels are designed to absorb, not reflect, irradiation, and

states that assessment should consider the potential impact of glint and glare on nearby homes and motorists. Additionally, paragraph 2.10.134 of NPS EN-3 states that Applicants should consider using, and in some cases the SoS may require, solar panels to comprise of (to be covered with) anti-glare/antireflective coatings. The Glint and Glare Assessments have been undertaken on a worst case basis, where panels have been modelled without the use of antiglare/ anti-reflective coatings. Whether the Applicant will use of these will be decided prior to construction.

Road Users

7.7.7. Significant screening in the form of existing vegetation and proposed screening planting is predicted to obstruct views of the reflecting panels from those on the local highways. Therefore, road users along the surrounding major national, and regional roads are not predicted to be subjected to any significant adverse effects for either layout option.

7.7.8. A combination of setbacks and screening via existing hedgerows means that road users along the surrounding local roads would not be subject to significant adverse impacts. As such, it is considered that the proposals are in accordance with paragraph 2.10.158 of NPS EN-3.

Dwellings

7.7.9. For layout option 1, the modelling has shown that solar reflections are geometrically possible towards 281 of the 405 assessed dwelling locations.

7.7.10. Of the 281 properties, no impacts are predicted on 134 dwellings because there is significant existing screening such that views of reflecting panels are not expected to be possible in practice. Mitigation is not required. A low effect is predicted on the remaining 140 dwellings under baseline conditions, either because the duration of effects received in practice on the ground floor is expected to be reduced to less than three months per year and less than 60 minutes per any one day, or there are mitigating factors such as a significant separation distance to the closest reflecting panels and effects occurring within a few hours of sunrise/sunset when the Sun is low in the sky. Proposed vegetation planting is expected to screen panels from the ground floor once sufficiently matured, such that views of reflecting panels are not expected to be possible in practice, and therefore low or

no impact with mitigation in place. Overall, no significant effects are predicted on dwelling receptors if layout option 1 is pursued.

7.7.11. For layout option 2, the modelling has shown that solar reflections are geometrically possible towards 327 of the 459 assessed dwelling locations.

7.7.12. Of the 327 dwellings, no impacts are predicted on 182 dwellings because there is significant existing screening such that views of reflecting panels are not expected to be possible in practice. Mitigation is not required. A low effect is predicted on the remaining 139 dwellings under baseline conditions, either because the duration of effects received in practice on the ground floor is expected to be reduced to less than three months per year and less than 60 minutes per any one day, or there are mitigating factors such as a significant separation distance to the closest reflecting panels and effects occurring within a few hours of sunrise/sunset when the Sun is low in the sky. Proposed vegetation planting is expected to screen panels from the ground floor once sufficiently matured, such that views of reflecting panels are not expected to be possible in practice, and therefore low or no impact with mitigation in place. Overall, no significant effects are predicted on dwelling receptors if layout option 2 is pursued.

7.7.13. Therefore, the potential effects of glint and glare upon dwellings are considered acceptable with regard to paragraph 2.10.158 of NPS EN-3.

Aviation Receptors

7.7.14. Paragraph 2.10.159 of NPS EN-3 confirms that SoS decision-making will be made on the basis that there is no evidence that glint and glare from solar farms interferes in any way with aviation navigation or pilot and aircraft visibility or safety. The paragraph continues to state that, "*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*".

7.7.15. **ES Volume 3, Appendix 16.1: Glint and Glare Assessment (Fix and Tracker Design) [Document Reference 6.3.16.1]** and **ES Volume 4, Appendix 16.2: Glint and Glare Assessment (Fixed Design) [Document Reference 6.3.16.2]** concludes when runway is approach from the south west (runway 05), Solar reflections originating from outside of a pilot's primary field-of-view are predicted towards the 1-mile splayed approaches towards Runway 05. A low impact is predicted in accordance

with the associated guidance and industry best practice. Mitigation is not recommended. When the runway is approached from the north east direction (runway 23), solar reflections with a maximum intensity of 'low potential for temporary after-image' (green glare) are predicted towards the 1-mile splayed approaches towards Runway 23, originating from panel areas within a pilot's primary field-of-view. Considering the associated guidance (Appendix D) and industry best practice pertaining to approach paths at licensed aerodromes, which states that this level of glare is acceptable, it can be reliably concluded that this glare is acceptable. A low impact is predicted, and mitigation is not recommended.

7.7.16. With regards to the standardised circular flight path followed by aircraft during take-offs and landings, solar reflections with a maximum intensity of 'potential for temporary after-image' are predicted towards sections of visual circuits at Sandtoft Airfield, originating from panel areas within a pilot's primary field-of-view (50 degrees horizontally either side of the direction of travel).

7.7.17. Pager Power generally recommends a pragmatic approach whereby instances of 'yellow' glare are evaluated in a technical and operational context. Considering the glare scenario (presented in Section 7.7.4), it is considered that this glare could be accommodated without significant changes to the operational activity of the airfield. The operational measures pilots use to mitigate the effects of direct sunlight can all be used to mitigate the effects of direct solar reflections from the solar panels given the operations at this unlicensed airfield. These mitigation measures include, wearing sunglasses; using darkened cockpit sun visors to reduce the intensity of the sun; overflying the airfield and inspecting the runway prior to landing; Landing in the opposite direction if wind conditions allow; and, aborting their landing if uncertain that it is to be successful (known as a missed approach or a go-around).

7.7.18. The applicant considers there to be no significant impairment potential upon surrounding aviation activity, which is in line with paragraph 2.10.159 of NPS EN-3.

Summary

7.7.19. NPS EN-3 paragraph 2.10.158 requires the SoS to assess potential impact on nearby homes, motorists, public rights of way and aviation infrastructure. This section sets out the findings of the Glint and Glare Assessment and reports that the Scheme with existing screening in combination with mitigation measures (i.e. provision of visual screening), does not result in any unacceptable impacts on motorists,

nearby homes or aviation infrastructure. The proposed screening will be secured through the **Outline LEMP [Document Reference 7.7]**. As such, the Scheme is considered to address the policy expectations on glint and glare set out in NPS EN-3.

7.8. Air Quality

7.8.1. This section reviews the Scheme in the context of planning policies related to air quality. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** to this Planning Statement.

7.8.2. NPS EN-1 paragraph 5.2.8 requires development that is likely to have adverse effects on air quality to undertake an assessment of the impacts of the proposed project as part of the ES. An air quality assessment has been undertaken and the impacts of the Scheme are reported in **ES Volume 3, Appendix 14.1: Air Quality Assessment Impacts on Ecological Sites [Document Reference 6.3.14.1]** and **ES Volume 3, Appendix 14.2: Air Quality Assessment [Document Reference 6.3.14.2]**.

7.8.3. NPS EN-1 paragraph 5.2.9 described what the ES should include with regard to air quality. The content of **ES Volume 3, Appendix 14.1: Air Quality Assessment Impacts on Ecological Sites [Document Reference 6.3.14.1]** and **ES Volume 3, Appendix 14.2: Air Quality Assessment [Document Reference 6.3.14.2]** accords with this policy requirement. NPS EN-1 paragraph 5.2.16 states that great weight will generally be given to air quality considerations where a project would lead to a deterioration in air quality.

7.8.4. The assessment has demonstrated that air quality conditions in the local area are generally good, with pollutant concentrations below the relevant air quality objectives.

7.8.5. The Order Limits are currently used for agricultural purposes which are a small source of GHGs emissions. There are peat soils in areas throughout the Order Limits, but these are degraded and in poor condition and not sequestering large quantities of carbon.

Likely Significant Effects

7.8.6. The assessment has demonstrated that, with mitigation, the effect of construction dust on sensitive receptors will be 'not significant'. Traffic generated by the Scheme during both the construction and operational phases will be below published screening thresholds, and thus will be 'not significant'.

7.8.7. The assessment has demonstrated that the Scheme will lead to residual GHG emissions across its lifetime; these mainly arise during the construction phase. However, once operational, the Scheme will generate electricity with a lower carbon factor than other non-zero fuels, such that its operation will lead to net reductions in GHG emissions and facilitate a transition to net-zero. The overall GHG effects are judged to be beneficial and therefore significant.

7.8.8. A suite of mitigation measures, covering communications and site management, monitoring requirements and measures specific to each phase of work, will be in place throughout the duration of the construction phase to ensure that the residual air quality effects are 'not significant'. These measures will be secured via DCO requirement as part of the **Outline CEMP [Document Reference 7.1]** and **Outline CTMP [Document Reference 7.2].**

7.8.9. The Scheme incorporates a number of best practice measures to minimise its GHG footprint, covering minimising the use of, and procurement of, sustainable construction materials, maintenance of the PV modules to maximise their design life and minimising waste to landfill; no additional mitigation is required beyond these measures. These measures will be developed during detailed design as part of continued evolution of the **Outline CEMP [Document Reference 7.1]**, **Outline Operational Environmental Management Plan (OEMP) [Document Reference 7.2]** and **Outline Decommissioning Environmental Management Plan (DEMP) [Document Reference 7.3]** documents.

Summary

7.8.10. The Scheme will not lead to significant effects on air quality and will have a significant beneficial effect in relation to reducing GHG emissions from the UK's energy supply. Therefore, there is no requirement for substantial weight to be afforded against the Scheme in the planning balance as per the advice within paragraph 5.2.16 of EN-1. It is considered that there are no implications in terms of the tests required to be applied by the SoS in decision making as set out in paragraphs 5.2.15 - 5.2.19 of EN-1.

7.9. Noise and Vibration

7.9.1. This section considers the Scheme in the context of planning policies related to noise and vibration. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** to this Planning Statement.

7.9.2. Paragraph 5.12.5 of NPS EN-1 identifies the factors that will determine the likely noise and vibration impacts of developments, including inherent operational noise, proximity to sensitive noise receptors, proximity to 'quiet places' and potential impacts upon wildlife. Paragraph 5.12.6 of NPS EN-1 sets out specific requirements for noise and vibration assessments.

7.9.3. **ES Volume 2, Chapter 13: Noise and Vibration [Document Reference 6.2.13]** includes a noise and vibration assessment of the Scheme which was prepared in accordance with the requirements set out in paragraph 5.12.6 of NPS EN-1. The assessment considers construction/decommissioning affects and impacts of operational noise on human receptors in accordance with NPS EN-1 paragraph 5.12.9. The assessment considers the noise and vibration generating activities during each phase of the Scheme and assesses the worst-case scenario in terms of duration of impact, time of day/night it could potentially occur and proximity of the activity to sensitive receptors.

7.9.4. Paragraph 5.12.8 of NPS EN-1 states that the noise impact of ancillary activities, including increased traffic, should be considered. The noise impact of the construction traffic is based on the assessment of the projected changes in traffic flow as set out in **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]**.

7.9.5. Paragraph 5.12.15 of EN-1 requires developments to demonstrate good design through the selection of the quietest cost-effective plant available; containment of noise within buildings where possible; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission.

7.9.6. Section 2.10.161 of the NPS EN-3 refers to impacts arising from construction including traffic and transport noise and vibration. The focus is on mitigating construction and decommissioning phase transport impacts, such as noted in NPS EN-3 paragraph 2.10.139 where the local highways 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. However, it is discussed that the SoS should be satisfied that environmental effects related to construction traffic after mitigation are acceptable, as consistent with the generic policy set out in NPS EN-1. It is noted that NPS EN-3 paragraph 2.10.161 confirms that once solar farms are in operation, traffic movements to and from the Scheme are generally 'very light'. As set out above and in **ES Volume 2, Chapter 13: Noise and Vibration [Document Reference 6.2.13]** the construction and decommissioning impacts have been properly assessed and proposed mitigation measures ensures that there would be no significant effects arising.

7.9.7. Paragraph 5.12.17 of NPS EN-1 states that consent should not be granted unless development proposals meet with the following aims:

- Avoid significant adverse impacts on health and quality of life from noise;
- Mitigate and minimise other adverse impacts on health and quality of life from noise; and
- Where possible, contribute to improvements to health and quality of life through the effective management and control of noise.

7.9.8. Paragraph 5.12.13 of NPS EN-1 refers to the consideration by the SoS for the need for mitigation measures both for operational and construction noise over and above any which may form part of the DCO Application. Paragraph 5.12.13 of NPS EN-1 refers to a requirement to take into account guidance in the NPPF with regard to setting requirements to secure appropriate additional mitigation.

7.9.9. Paragraph 187 of the NPPF states that planning policies and decisions should prevent new development from contributing to unacceptable levels of noise pollution. Paragraph 198 of the NPPF also requires new development to mitigate, and reduce to a minimum, potential adverse impacts resulting from noise and to avoid significant adverse impacts of noise on health and quality of life.

7.9.10. The predicted impacts of noise generated from the Scheme are considered in **ES Volume 2, Chapter 13: Noise and Vibration [Document Reference 6.2.13]**.

7.9.11. The assessment concludes that the noise generated by the scheme would fall well below the typical background noise levels at all sensitive residential receptors

surrounding the order limits. For non-residential receptors, assessment demonstrate that the only section of PRoW's fall within the 40dB to 45dB noise band when at closest approach to the BESS facility towards Moor Owners Road. In other locations, the PRoWs fall well below this level. In all instances, the noise levels in the vicinity of the PRoWs fall well below the L_{Aeq} 50dB criteria for 'Moderate Annoyance' in accordance with the WHO.

7.9.12. Given the above outcome, operational noise at the PRoWs is considered to be at the LOAEL effect level, in so far as noise may be heard, but it would not cause a change in behaviours. Given this, the impact significance is considered to be minor adverse.

7.9.13. Specific measures to mitigate noise and vibration impacts are embedded into the design of the Scheme. Further management of potential impacts is secured through measures identified in the **Outline CEMP [Document Reference 7.1]**, **Outline OEMP [Document Reference 7.2]**, and **Outline DEMP [Document Reference 7.3]**. These include standard good practice measures such as use of Best Practicable Means to reduce disturbance associated with noise and vibration during construction as far as reasonably practicable, with reference to relevant guidance. The implementation of final management plans, which will effectively manage adverse effects that may impact local amenity in relation to noise and vibration, will ensure the Scheme is in specific accordance with NPS EN-1 paragraph 5.12.15 and 5.12.17 and NPS EN-3 paragraphs 2.10.139 and 2.10.161.

7.9.14. The technical specifications of the plant associated with the Scheme is not yet determined. However, good design with regard to minimising noise and vibration impacts is demonstrated through embedded mitigation. As a result of the outcome of the noise and vibration assessment, and in response to paragraph 5.12.13 of NPS EN-1, it is not anticipated that the SoS will need to consider additional mitigation measures above those already embedded within the design.

Summary

7.9.15. With the embedded mitigation measures proposed, noise impacts during the construction phase would be, at worst, Minor adverse at the nearest receptor locations. Additionally, adherence to proposed measures will ensure that ground borne vibration would not be perceptible at the receptor locations, giving a Negligible impact. Overall, the **ES Volume 2, Chapter 13: Noise and Vibration [Document Reference 6.2.13]** has demonstrated that construction noise and

vibration is temporary in nature, and with the implementation of the embedded mitigation measures, there will be no significant adverse impacts.

7.9.16. The assessments of the noise during the operational phase indicates that noise during the daytime and night-time period would be Minor adverse at worst, requiring no specific noise mitigation measures.

7.9.17. Therefore, it is considered that the Scheme is in accordance with NPS EN-1, NPS EN-3, the NPPF and relevant local plan policies.

7.10. Socioeconomics

7.10.1. This section reviews the Scheme in the context of planning policies related to population impacts. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** to this Planning Statement.

7.10.2. Paragraph 5.13.2 of NPS EN-1 states that applicants should undertake and include in their application an assessment of socio-economic impacts where the project is likely to have impacts at a local and regional level.

7.10.3. In response, the potential socio-economic impacts of the Scheme on the local economy during the construction, operation and decommissioning phases is assessed in detail in **ES Volume 2, Chapter 11: Socio Economics [Document Reference 6.2.11]**.

7.10.4. NPS EN-1 paragraph 5.13.4 outlines that the assessment should consider all relevant socio-economic impacts. The full wording of the paragraph, along with the Scheme response, is set out in **Appendix A** to this Planning Statement.

7.10.5. **ES Volume 2, Chapter 17: Cumulative Impact [Document Reference 6.2.17]** considers the potential effects of the Scheme on employment. The assessment finds that the majority of socio-economic impacts experienced during the construction and decommissioning phases relate to the creation of employment opportunities and increased spend on local services. Once operational, impacts on local labour market arising from operational and maintenance jobs would be more limited.

7.10.6. Economic benefits will arise through the provision of temporary jobs during the construction phase(s) of the Scheme. Based on previous experience of similar projects, it is estimated that the total capital cost of the Scheme is in the region of £820million, as outlined in the **Funding Statement [Document Reference 4.2].**

7.10.7. Investment in the Scheme is likely to create opportunities for local businesses through the supply chain, during the construction process. It is estimated that there will be an average of 176 on-site jobs generated across the Scheme during the construction period.

7.10.8. Another factor to consider is leakage, which is the proportion of jobs that will be taken up by those outside of the study area, in this case the combined area of

Doncaster, North Lincolnshire, and East Riding of Yorkshire. As set out in **ES Chapter 11 Socio Economics [Document Reference 6.2.11]** it is assumed that a reasonably high proportion of jobs would be retained and leakage out of the study area would be at 25%, which would equate to 33 of the 132 jobs.

7.10.9. Therefore, the net direct employment which could be supported by the Proposed Development is 99 jobs.

7.10.10. In terms of in-direct/induced employment, **ES Chapter 11 Socio Economics [Document Reference 6.2.11]** sets out that the Scheme could support a further 132 temporary jobs in the wider economy during the 4.5-year build phase.

7.10.11. In total, the Scheme could support 231 temporary jobs within the combined area of Doncaster, North Lincolnshire, and East Riding of Yorkshire, both direct jobs on-site and indirect/induced roles in the wider economy, during the 4.5-year construction period.

7.10.12. Another way of looking at the economic impact of the construction phase is to calculate the contribution a development makes to wealth creation, as measured by the increase in the value of goods and services generated within an area. This can be done by looking at the increase in gross value added (GVA), a common proxy for economic output. Using ONS data, it is possible to calculate GVA per employee by sector at a regional level. The overall GVA impact associated with the construction phase is estimated at £36.5million per annum, which equates to £164.2million over the 4.5-year build timeframe.

7.10.13. It is expected that during the operational phase, there will be approximately 1 visit per month to the Site by workers. This means that no full time jobs will be supported specifically by the Scheme.

7.10.14. Business rates are an important economic contributor to an area. It is estimated that the solar project element of the Scheme could generate around £0.9 million per annum in business rates. Over the intended 40-year lifespan of the Scheme, business rates generated could total around £19.8 million (present value).

7.10.15. Economic benefits will arise through the provision of temporary jobs during the decommissioning phase at the Order Limits. It is estimated that the number of workers on site for the decommissioning phase will equate to 50% of the number

for the construction phase. This means that on average, 88 jobs will be supported by the decommissioning phase which is expected to last for around 2 years.

7.10.16. Considering the same proportion of jobs which will be displaced as the construction phase would mean that 25% of decommissioning jobs would be displaced, as explained in **ES Chapter 11 Socio Economics [Document Reference 6.2.11]**. This equates to 22 jobs, which would result in 66 decommissioning jobs once displacement has been taken into consideration. Applying 25% leakage to those 66 jobs would result in 17 jobs being lost due to leakage. Therefore, the net employment figure for the decommissioning phase would be 50 jobs.

7.10.17. Opportunities for employment and skills are supported through the preparation of an **Outline Supply Chain, Employment and Skills Plan (Outline SCESP) [Document Reference 7.9.9].** The Outline SCESP is submitted with the application and the delivery of a final, detailed SCESP secured by a DCO requirement.

7.10.18. The impacts of the changing influx of workers associated with each phase of the Scheme upon the local population, services and facilities is also considered in **ES Volume 2, Chapter 11: Socio Economics [Document Reference 6.2.11]**. Local accommodation facilities would benefit from their bedspaces being filled throughout the year by the construction workers. This enables local businesses to be boosted through increased occupancy rates and revenue during the construction phase of the Scheme.

7.10.19. **ES Volume 2, Chapter 11: Socio Economics [Document Reference 6.2.11]** concludes that recreation and tourism impacts of the Scheme are not significant at any phase and can be effectively mitigated through implementation of management plans secured in the DCO Application. It also concludes that adverse effects generated by the Scheme on recreation and tourism during the construction phase will be minor in impact magnitude, with a slight adverse residual effect post implementation of mitigation measures, which is considered not significant.

Summary

7.10.20. **ES Volume 2, Chapter 11: Socio Economics [Document Reference 6.2.11]** sets out how significant beneficial effects are expected in relation to employment and economic contribution during both the construction and decommissioning phases, and business rates during the operational phases. Additionally, during the

construction and decommissioning phases there will be no adverse impacts on local tourism as there is sufficient capacity to accommodate workers, therefore the additional workforce will provide a boost to local accommodation and tourism businesses. NPS EN-1 paragraph 5.13.11 states that the SoS should consider those positive effects in decision making.

7.10.21. There are no significant adverse effects relating to socioeconomics, and therefore no mitigation measures proposed.

7.10.22. Significant beneficial effects (moderate significance) are predicted in respect of employment in the construction and decommissioning phases. Enhancement of employment is proposed in the form of an **Outline Supply Chain, Employment and Skills Plan (OSCESP) [Document Reference 7.9.9]** which will be agreed with the relevant authorities and secured by a DCO Requirement. It aims to optimise the number of local people who will have access to employment and training opportunities arising from the Scheme.

7.10.23. The legacy effect of upskilling the local workforce where possible will result in a long-term significant benefit for Doncaster, North Lincolnshire and East Riding of Yorkshire.

7.11. Traffic and Transport

7.11.1. This section reviews the Scheme in the context of planning policies related to traffic and transport. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** to this Planning Statement.

7.11.2. In accordance with paragraph 5.14.5 of NPS EN-1, **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]** assesses the impact of the Scheme on traffic and transport and is supported by **ES Volume 4, Appendix 12.1: Transport Statement [Document Reference 6.3.12.1]**.

7.11.3. NPS EN-1 paragraph 5.14.18 notes that new NSIPs may give rise to substantial impacts on surrounding transport infrastructure and that applicants should seek to mitigate these impacts, including during the construction phase of the Scheme.

7.11.4. The nature of the Scheme is such that the greatest traffic and transport impacts are likely to occur during both the construction and decommissioning phases. This is acknowledged in paragraph 2.10.161 of the NPS EN-3 which confirms that once solar farms are in operation, traffic movements to and from the Scheme are generally 'very light'.

7.11.5. In response to NPS EN-1 paragraph 5.14.18, the mitigation measures that have been embedded into the design of the Scheme in the form of an **Outline Construction Traffic Management Plan [Document Reference 7.7]** to reduce the impacts of the construction phase. The document includes a range of management and mitigation measures to reduce the impacts of the construction phase.

7.11.6. **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]** concludes that following the application of mitigation measures, the potential for adverse traffic and transport related effects during the construction, operational and decommissioning phases arising from the Scheme would be not significant. As a result of the mitigation measures proposed, impacts of the Scheme are such that provision of new transport infrastructure is not required which is in accordance with NPS EN-1 paragraph 5.14.11.

7.11.7. The construction of the Scheme will require Abnormal Indivisible Loads (AIL) for the transformer and substation deliveries. The deliveries will be planned with an AIL route assessment and will be escorted and managed along the route from the port of entry into the UK and the Site. Any impacts will be minimised, and the

arrangements will be secured through an AIL assessment in conjunction with the relevant local authorities and the Police. Given the high level of management of these loads, no significant impacts are anticipated.

7.11.8. Paragraph 5.14.12 of NPS EN-1 states that maritime and inland waterway transport methods or rail transport are preferred over road transport at all stages of the project, where cost-effective. However, given the duration of the construction and decommissioning phases and the limited operational impact on the Local Road Network, as concluded in **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12],** it is considered that rail and/or water transport methods would not be the most suitable. Nevertheless, the Humber ports can be used to transport some infrastructure with the final leg via road.

7.11.9. Paragraph 5.14.14 of NPS EN-1 refers to requirements that the SoS may attach to a consent where there is likely to be substantial HGV traffic to control the timing of these movements. The **Outline CTMP [Document Reference 7.8]** sets out that the Principal Contractor will coordinate deliveries and collections associated with the Scheme to optimise the frequency of deliveries, reduce congestion and make efficient use of delivery vehicles.

7.11.10. A CTMP would be secured pursuant to the DCO as a requirement; to be prepared in advance of the commencement of construction works of each Land Parcel and this would be in accordance with the **Outline CTMP [Document Reference 7.3]** and include travel to the site for construction workers (Travel Plans) as requested by North Lincolnshire Council.

7.11.11. NPS EN1 paragraph 5.14.21 states that the SoS should only consider refusing the Scheme 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*.' **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]** states that there are no anticipated significant residual effects and no unacceptance impacts on highway safety. It is also not anticipated to have a significant adverse effect on the strategic or local highway networks in terms of their capacity and highway safety.

7.11.12. NPS EN-3 paragraph 2.10.35 states that applicants need to consider suitability of access routes and that access for the delivery of solar arrays and associated infrastructure during construction can be a significant consideration for solar farm

siting. **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]** and the **Outline CTMP [Document Reference 7.8]** provide further details regarding the suitability of access and delivery arrangements.

7.11.13. Paragraphs 2.10.120 to 2.10.126 of NPS EN-3 refers to construction impacts including traffic and transport in addition to general traffic and transport impacts set out in NPS EN-1. Paragraph 2.10.125 of the NPS EN-3 states that the Applicant should assess whether the access roads are suitable for the transportation of components which will include whether they are sufficiently wide for the proposed vehicles, or bridges sufficiently strong for the heavier components to be transported to the Scheme.

7.11.14. In response to paragraph 2.10.125 of the NPS EN-3, **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]** has identified sections of the surrounding road network that HGVs and LGVs will utilise during the construction phase. **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]** assesses the suitability of each of these road network sections and has considered the necessary works required to facilitate HGV and LGV traffic.

7.11.15. NPS EN-3 paragraph 2.10.126 refers to cumulative impacts of traffic and transportation. Cumulative effects related to transport and traffic are considered in **ES Volume 2, Chapter 17: Cumulative Effects [Document Reference 6.2.17]**, which confirms no significant adverse cumulative traffic and transportation effects are anticipated.

7.11.16. Paragraph 2.10.139 of NPS EN-3 states that in some cases, the local highways authority may request that the SoS impose controls on the number of vehicle movements to and from the Scheme in a specified period during its construction and, possibly, on the routing of such movements particularly by heavy vehicles. Paragraph 2.10.141 of NPS EN-3 refers to residential amenity and potential cumulative impacts arising from traffic and transport during construction.

7.11.17. In response to paragraphs 2.10.139 and 2.10.141 of the NPS EN-3, to mitigate the impacts upon local amenity and the local road networks more generally, deliveries to Site will be distributed across the working day. Construction deliveries will be kept to agreed delivery hours as secured by the **Outline CTMP [Document Reference 7.8]**.

7.11.18. The NPPF, at paragraph 109, also expects consideration and mitigation of transport impacts of development including the environmental impacts and impacts on transport networks. NPPF paragraph 116 notes that development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe, taking into account all reasonable future scenarios.

7.11.19. **ES Volume 2, Chapter 12: Transport and Access [Document Reference 6.2.12]** assesses the impact of added HGVs to the road network during the construction phase of the Scheme on non-motorised user amenity. Through the implementation of the **Street Works, Access and Public Rights of Way Plan [Document Reference 2.4]** and **Outline CTMP [Document Reference 7.9.8]** it is considered that adverse effects would be mitigated to be not significant.

Summary

7.11.20. The assessment concludes that adverse traffic and transport effects during all phases of the Scheme are anticipated to be not significant.

7.11.21. Mitigation has been considered and embedded into the design of the development of the Scheme, including through the implementation of the **Outline CTMP [Document Reference 7.8]**.

7.11.22. Paragraph 5.14.21 of NPS EN-1 advises that 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 that would be severe*". There are no grounds relating to highways impacts in this regard and therefore the Applicant considers that it is compliant with the relevant policy tests in this regard.

7.11.23. Overall, the Scheme is considered to be in compliance with NPS EN-1, NPS EN-3, NPPF, and local planning policy with regard to traffic and transport effects.

7.12. Waste Management

7.12.1. This section reviews the Scheme in the context of planning policy related to waste management. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** of this Planning Statement.

7.12.2. Section 16.3 of **ES Volume 1, Chapter 16: Other Environmental Topics [Document Reference 6.2.16]** sets out the applicant's approach to waste management. Waste arisings will be prevented and designed out where possible. Opportunities to re-use material resources will be sought where practicable. Where re-use and prevention are not possible, waste arisings will be managed in line with the Waste Hierarchy.

7.12.3. Design considerations will seek to minimise waste from the construction phase and are likely to follow these approaches:

- Maximise the use of reclaimed materials during construction;
- Maximise recycling opportunities in the decommissioning phase (further details below);
- Use prefabricated and standardised components in the standard product sizes (e.g., panels, mounting structures). As these are made in a factory-controlled environment, they tend to generate less waste and if standard product sizes are made use of, this minimises wastage within the Order Limits;
- Segregation of construction waste within the Order Limits to maximise potential for reuse/recycling;
- Use of suppliers who collect and reuse/recycle packaging materials;
- The off-site separation and recycling of materials where separation within the Order Limits is not possible; and
- Training of contractors in waste minimisation and materials reuse.

7.12.4. A Construction Environmental Management Plan will be secured pursuant to the **DCO** as a requirement, and in accordance with the **Outline Construction Environmental Management Plan [Document Reference 7.1**], submitted in support of the DCO application. The **Outline Construction Environmental**

Management Plan [Document Reference 7.1] sets out how construction materials and waste would be managed within the Order Limits and how opportunities to recycle waste would be explored during the construction phase of the Scheme. A Site Waste Management Plan will be produced prior to the construction phase and secured within the final Construction Environmental Management Plan. The Site Waste Management Plan will include measures to manage waste during the construction, operational (including maintenance) and decommissioning phases and will be in accordance with the **Outline Construction Environmental Management Plan [Document Reference 7.1].**

7.12.5. A Decommissioning Environmental Management Plan would be secured pursuant to the DCO as a requirement, and in accordance with the **Outline Decommissioning Environmental Management Plan [Document Reference 7.3]** submitted in support of the DCO application. The **Outline Decommissioning Environmental Management Plan** sets out how waste would be managed and detail opportunities for re-use and recycling during the decommissioning phase of the Scheme.

7.12.6. Re-useable waste includes soil excavated from trenches, roads, compound areas and foundations. Soils are an important resource, and to minimise effects to this resource, a Soil Management Plan is secured pursuant to the DCO as a requirement, and in accordance with an **Outline Soil Management Plan [Document Reference 7.9]** and will be implemented across the Order Limits and will comprise the best practice for soil handling.

7.12.7. To avoid wastage, stripped soils will be stored in separate resource bunds no more than 3m high, and kept grassed and free from construction traffic, to ensure that the soil can be re-used elsewhere at the Order Limits.

7.12.8. The primary measures to mitigate against the loss of soil resources will be to reuse as much of the surplus resources on-site and to dispose of any surplus soils thereafter in a sustainable manner (i.e., as close to the Scheme as possible and to an after-use appropriate to the soil's quality). However, surplus resources requiring removal outside of the Order Limits are not expected.

7.12.9. There may be a need to remove some soils from the Order Limits for treatment or disposal, if found to be contaminated and if it is not practical to treat this onsite. This would be overseen by a soil advisor specialist as outlined in the **Outline Soil Management Plan [Document Reference 7.8].**

7.12.10. All waste transported out of the Order Limits will be delivered to the appropriately licensed receivers of such materials. Operators receiving any waste materials resulting from the Scheme will be subject to their own consenting procedures.

7.12.11. During construction, operation (including maintenance), and decommissioning, the re-use or recycling of materials will be explored before resorting to landfill options. Waste during the construction, operation and decommissioning phase will be dealt with as part of the **Outline Construction Environmental Management Plan [Document Reference 7.1], Outline Operational Environmental Management Plan [Document Reference 7.2],** and **Outline Decommissioning Environmental Management Plan [Document Reference 7.3**] which are prepared in line with relevant legislation and guidance. Therefore, it is anticipated that there would be no significant residual effects on waste from the Scheme.

Summary

7.12.12. In summary, through the application of the measures set out in the suite of relevant management plans, as set out above, the Scheme is in accordance with the relevant NPSs, the NPPF and the Local Policy.

7.13. Water Quality and Flood Risk Assessment

7.13.1. This section reviews the Scheme in the context of planning policies related to water quality and resources. This section should be read in conjunction with the Policy Accordance Tables included in **Appendix A** to this Planning Statement.

7.13.2. Paragraph 5.16.3 of NPS EN-1 requires the Applicant to undertake an assessment of the existing status of and impacts of the Scheme on water quality, water resources, and physical characteristics of the water environment as part of the ES. The full paragraph wording of paragraph 5.16.7 of NPS EN-1, which describes what an assessment should include, is included at **Appendix A** of this Planning Statement.

7.13.3. **ES Volume 1, Chapter 10: Water Resources Other [Document Reference 6.2.10]** identifies the potential impacts on the water environment from the construction, operation and decommissioning of the Scheme. The water environment includes surface waterbodies (e.g. rivers, streams, ditches, canals, lakes and ponds, etc.), groundwater bodies, as well as flood risk and drainage. The ES is supported by **ES Volume 3, Appendix 10.1: Flood Risk Assessment [Document Reference 6.3.10.1] and ES Volume 3, Appendix 10.2: Water Framework Directive Assessment [Document Reference 6.3.10.2]]**.

7.13.4. Paragraph 5.16.12 of NPS EN-1 notes that impacts on the water environment will generally be given more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Framework Directive. **ES Volume 3, Appendix 10.2: Water Framework Directive Assessment [Document Reference 6.3.10.2]** identifies how the activities associated with all stages of the Scheme have been considered, with any activities considered to have the potential to impact 'key challenges of the water environment' taken forward for more detailed assessment. This included both activities with a potential adverse effect and those that may be beneficial to River Basin Management Plan objectives.

7.13.5. Activities were assessed to determine whether they could result in a deterioration of status i.e. at least one of the quality elements falling by one class. This assessment took into account the zone of influence of activities, pathways between activities and receptors, mitigation that has been committed to by the Applicant and the characteristics of the watercourses under consideration.

7.13.6. Overall, the assessment concluded that none of the activities associated with the Scheme have the potential to cause a deterioration in status of WFD surface water bodies or groundwater bodies. The Scheme is not considered to jeopardise the attainment of 'good' overall status of WFD water bodies. No further assessment is required in relation to the WFD. Notably, the Scheme will have a positive effect on the 'key challenges for the water environment' as identified within the River Basin Management Plans. The cessation of agricultural activities will have an overall benefit to the status of WFD water bodies, and a positive improvement in biodiversity will be achieved through the proposed species-rich grassland creation and watercourse avoidance buffers.

7.13.7. Paragraph 5.16.8 of NPS EN-1 states the SoS should consider whether mitigation measures are needed over and above any which may form part of the DCO Application. In response, **ES Volume 2, Chapter 9: Ground Conditions [Document Reference 6.2.9]**, **ES Volume 1, Chapter 10: Water Resources Other [Document Reference 6.2.10]; Appendix 10.2: Water Framework Directive Assessment [Document Reference 6.3.10.2]** and **ES Volume 3, Appendix 10.1: Flood Risk Assessment [Document Reference 6.3.10.1]** include additional mitigation measures through the implementation of the **Outline CEMP [Document Reference 7.1]**, **Outline OEMP [Document Reference 7.2]**, **Outline DEMP [Document Reference 7.3]** and **Outline SMP [Document Reference 7.9]**.

7.13.8. Paragraph 5.16.9 of NPS EN-1 states "*the risk of impacts on the water environment can be reduced through careful design to facilitate adherence to good pollution control practice*".

7.13.9. In response to paragraph 5.16.9 of NPS EN-1, the Scheme has employed good design including avoidance measures in order to minimise the risk of impacts on the water environment. The NPPF at paragraph 187(e) states that planning policies and decisions should "*contribute to and enhance the natural and local environment by…preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability*". Mitigation measures during the construction phase of the Scheme will be undertaken according to best practice and implemented through the **Outline CEMP [Document Reference 7.1]**. Vegetation management, secured through **Outline LEMP [Document Reference 7.7]** will also aid in the mitigating adverse effects on the water environment.

Flood Risk

7.13.10. NPS EN-1 paragraph 5.8.13 states that applications for energy projects of 1 hectare or greater in Flood Zone 1 in England and all proposals for energy projects located in Flood Zone 2 and 3 in England should be accompanied by a flood risk assessment (FRA). The Order Limits include land identified within Flood Zone 3 and therefore the Scheme requires an FRA. An FRA is included at **ES Volume 3, Appendix 10.1: Flood Risk Assessment [Document Reference 6.3.10.1]**, and has been prepared in accordance with the requirements of Section 5.8 of NPS EN-1. **Appendix A** to this Planning Statement confirms that the FRA has been prepared in full accordance with the requirements of NPS EN-1.

7.13.11. The likely effects of the Scheme associated with flood risk have been assessed in **ES Volume 3, Appendix 10.1: Flood Risk Assessment [Document Reference 6.3.10.1]**. The FRA concludes that the Scheme will be safe from all forms of flooding and will provide a betterment over the existing situation.

7.13.12. Paragraph 5.8.18 of NPS EN-1 states that projects which may be affected by, or may add to, flood risk should arrange pre-application discussions with the Environment Agency, and, where appropriate, other bodies. Pre-application engagement has been carried out with the Environment Agency's National Infrastructure Team to seek agreement regarding the approach to hydraulic modelling and flood risk mitigation and with the Lead Local Flood Authority (LLFA) and **Doncaster East Internal Drainage Board and Isle of Axholme and North Nottinghamshire Water Level Management Board**. Further details on the engagement undertaken to date is provided within **ES Volume 1, Chapter 10: Water Resources Other [Document Reference 6.2.10].** Paragraph 5.8.21 of NPS EN-1 ensures that a sequential, risk-based approach is followed to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. Where it is not possible to locate development in low-risk areas, the Sequential Test should go on to compare reasonably available sites with medium risk areas and then, only where there are no reasonably available sites in low and medium risk areas, within high-risk areas.

7.13.13. NPS EN-1 paragraph 5.8.23 goes on to state that the consideration of alternative sites should take account of the policy on alternatives and that all projects should apply the Sequential Test to locating development within the Order Limits. Paragraph 5.8.29 continues on the theme of design, advising that the sequential

approach should be applied to layout and design. It states that "*vulnerable aspects of development should be located on parts of the site at lower risk and residual risk of flooding*".

7.13.14. Paragraph 2.4.11 of NPS EN-3 states that "*solar photovoltaic (PV) sites may also be proposed in low lying exposed sites. For these proposals, applicants should consider, in particular, how plant will be resilient to:*

• *increased risk of flooding; and*

• *impact of higher temperatures*".

7.13.15. NPPF paragraph 170 states that "*inappropriate development in areas at risk of flooding should be avoided and that development should be directed away from areas at highest risk. Where development is necessary in areas of flood risk, the development should be made safe for its lifetime without increasing flood risk elsewhere*".

7.13.16. If, following application of the Sequential Test, it has not been possible to successfully steer development to Flood Zone 1 or a sequentially preferable site, a Sequential Approach will be taken to site layout and design, aiming to steer the most vulnerable uses towards the lowest risk parts of the site and upper floors.

Sequential and Exception Tests

7.13.17. As the EA's Flood Map for Planning defines substantial areas of the Order Limits as Flood Zone 3, as shown in **ES Volume 3, Appendix 10.1: Flood Risk Assessment [Document Reference 6.3.10.1],** a **Flood Risk Sequential Assessment and Exceptions Test [Document Reference 7.11]** accompanies the DCO Application.

7.13.18. In accordance with paragraph 5.8.21 of NPS EN-1 the Applicant has applied a sequential, risk-based approach to steer new development to areas with the lowest risk of flooding, taking all sources of flood risk and climate change into account. Please refer to the **Flood Risk Sequential Assessment and Exceptions Test [Document Reference 7.11]** for full detail regarding the application of the Sequential and Exception tests for the Scheme, which demonstrates that the site selection and design processes have been carried out in compliance with relevant flood risk policy.

Summary

7.13.19. **ES Volume 1, Chapter 10: Water Resources [Document Reference 6.2.10]** identifies the potential impacts on the water environment from the construction, operation and decommissioning of the Scheme. The water environment includes surface waterbodies (e.g. rivers, streams, ditches, canals, lakes and ponds, etc.), groundwater bodies, as well as flood risk and drainage.

7.13.20. The potential impacts on the water environment resulting from the Scheme focus on four main events:

- Erosion/sediment movement.
- Chemical/pollution events.
- Alteration/interruption of surface water flows.
- Alteration/interruption of ground water flows.

7.13.21. There are many field drain ditches running across the Order Limits, assumed to be used for agricultural drainage. There are a large number of watercourses located on site and in the immediate vicinity. These include several Main Rivers which are managed by the Environment Agency. In addition, there are a large number of Ordinary Watercourses running through the Order Limits, some of which fall under the control of two Internal Drainage Boards.

7.13.22. The Scheme's Land Parcels are dissected by several major roads and routes, including the M180 motorway, the A18, the South Humberside Main Line railway route and Stainforth & Keadby Canal (see **ES Figure 1.2 Land Parcel Plan [Document Reference 6.4.1.2]).**

7.13.23. There are many field drain ditches running across the Order Limits, assumed to be used for agricultural drainage. The closest Main Rivers noted by the EA are the two drains running adjacent to the canal crossing the midsection of the Order Limits and the Hatfield Waste Drain at the southern end of the Order Limits.

7.13.24. The Order Limits is currently agricultural greenfield area. The bedrock geology underlying the Site is Sherwood Sandstone Group – Sandstone in the west and Mercia Mudstone Group – Mudstone in the east. The soils on Site are 'Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils' and 'Raised bog peat soils' and 'Loamy and clayey soils of coastal flats with naturally high groundwater'.

7.13.25. The Flood Map for Planning (2025) generally defines the entire Order Limits as Flood Zone 3, at High risk of flooding, predicted to be impacted by a 1 in 100 year fluvial flood event or 1 in 200 year tidal flood event. The Risk of Flooding from Rivers and Seas dataset, also predicts the vast majority of the site to be at risk of flooding.

7.13.26. Correspondence with the Environment Agency highlights that the Order Limits is at risk of flooding from the tidal River Trent, the River Torne and associated Drains. The Environment Agency also highlight that land drainage represents the dominant flood risk at the site.

7.13.27. The Risk of Flooding from Surface Water dataset highlights areas at the site with a High to Low likelihood, predicted to be impacted by a 1 in 30 and 1 in 1000 year rainfall event, respectively, spread across the Order Limits. These at-risk areas are generally isolated and associated with surface water arising within the Order Limits boundary itself. Surface water flood depths on site are generally not predicted to exceed 300mm on site. The site has a low risk of flooding from groundwater, sewers, artificial sources and historical flooding.

7.13.28. There are several adverse effects that may occur during the construction and operational phases of the Scheme. These effects could impact water resources and flood risk and drainage on site and elsewhere. In order to mitigate these potential effects, mitigation measures are proposed on site. Mitigation measures to reduce the effects on water resources and flood risk and drainage during the operation phase includes surface water runoff from proposed equipment and access tracks will be directed towards SuDS features that would provide water quality treatment to mitigate the risk of water pollution on site.

7.13.29. Contributions could be made from permeable surfacing, wildflower planting and linear infiltration trenches. Future maintenance of any proposed SuDS on Site will be privately managed by the Applicant. A surface water drainage strategy will be implemented on site. Solar PV modules proposed on Site will have their lowest edge raised above the ground (above the 1 in 1000-year tidal Trent flood level plus an allowance for 100mm of freeboard), to ensure surface water across the vast majority of the site will continue to drain as per the existing conditions.

7.13.30. Overall, following the allocation of the mitigation measures through the DCO, the residual effects of the Scheme during operation are considered to be Negligible (Not Significant).

7.13.31. During the construction phase, additional mitigation measures will be implemented to reduce effects on Water Resources, Flood Risk and Drainage which include

- Where necessary a temporary drainage network will be installed prior to the commencement of construction and a maintenance plan, confirmed through a Construction Environmental Management Plan (CEMP).
- A temporary construction drainage system will be developed to prevent silt-laden runoff from entering surface water drains, watercourses and ponds without treatment (e.g. earth bunds, silt fences, straw bales, or proprietary treatment) under any circumstances.
- Construction SuDS (such as temporary attenuation) may also be used during construction if necessary.
- Buffers of 9m on both bank sides will be preserved adjacent to all receptors to ensure that there is a sufficient buffer from the sensitive receptor.

7.13.32. These mitigation measures include the implementation of the **Outline CEMP [Document Reference 7.1]**, **Outline OEMP [Document Reference 7.2]**, **Outline SMP [Document Reference 7.9]** and **Outline DEMP [Document Reference 7.3]** which will inform the development of final management plans prior to construction

7.13.33. Following the implementation of mitigation measures the residual effects during construction are considered to be **Negligible (Not Significant)**.

Conclusion

7.13.34. With the embedded design and additional mitigation measures described above for the construction, operational and decommissioning phases all identified potential effects have been assessed as being of Negligible significance, and therefore Not Significant

7.13.35. The Scheme is therefore considered to be in compliance with the relevant NPS', the NPPF, and local planning policies.

7.13.36. The Applicant considers that the section above demonstrates the Applicant's compliance with the key policy tests and requirements from NPS EN-1, notably paragraph 5.8.36, in relation to Flood Risk. As set out in **Flood Risk Sequential Assessment and Exceptions Test [Document Reference 7.11]** it is considered

that the site selection process has complied with requirements in relation to the Sequential Test and that the design and layout has considered the flood risk characteristics of the Order Limits, which is predominantly Flood Zone 3. The Applicant considers that the Scheme is acceptable in flood risk terms.

7.14. Agricultural Land

7.14.1. This section reviews the Scheme in the context of planning policy for agricultural land. This section should be read in conjunction with Policy Accordance Tables at **Appendix A** to this Planning Statement.

7.14.2. **ES Volume 2, Chapter 15 Agricultural Circumstances [Document Reference 6.2.15]** assesses the impact of the Scheme on agricultural assets, and in particular the effects on agricultural land. This chapter is supported by **ES Volume 4, Appendix 15.1: Agricultural Land Classification Report [Document Reference 6.3.15.1]**.

7.14.3. Agricultural land quality is assessed by the system of Agricultural Land Classification (ALC) decided by Natural England. The ALC system divides land into five grades 1 to 5, with grade 3 divided into subgrades of 3a and 3b.

7.14.4. Paragraph 5.11.12 of NPS EN-1 states that applicants should seek to minimise impacts on the Best and Most Versatile (BMV) agricultural land (defined as land in grades 1, 2 and 3a of the ALC) and preferably use land in areas of poorer quality (grades 3b, 4 and 5).

7.14.5. Paragraph 5.11.34 advises that the SoS should ensure that applicants "*do not site their scheme on the best and most versatile agricultural land without justification*". NPS EN-1 needs to be read in the context of the more specific focus in relation to ground mounted solar PV projects in NPS EN-3. Paragraph 2.10.30 of NPS EN-3 notes that "*development of ground mounted solar arrays is not prohibited on Best and Most Versatile agricultural land*". This approach is also reflected in the 2024 Written Ministerial Statement: Solar and protecting our Food Security and Best and Most Versatile Land (BMV) Land **[Ref. 35]** which emphasises that BMV land should be avoided where possible and that due weight be given to proposed use of such land when considering whether planning consent should be granted for solar developments.

7.14.6. Paragraph 2.10.29 of NPS EN-3 states that, where possible, ground mounted solar PV projects should avoid the use of BMV cropland. However, it notes that land type should not be a predominating factor in determining the suitability of the site location. Paragraph 2.10.30 to 2.10.31 of NPS EN-3 state that ground mounted solar arrays are not prohibited on BMV agricultural land, however the choice of site

should be explained by the Applicant, noting a preference for development to be situated on suitable brownfield, industrial and low and medium grade agricultural land.

7.14.7. The NPPF requires, in paragraph 187 b), that the economic and other benefits of the Best and Most Versatile (BMV) agricultural land be recognised in planning decisions. BMV agricultural land is defined as land in grades 1, 2 and 3a of the Agricultural Land Classification. In the context of plan making, footnote 65 to paragraph 188 of the NPPF, requires plan makers to seek to use poorer quality land for development in preference to that of a higher quality.

7.14.8. **ES Volume 3, Appendix 15.1: Agricultural Land Classification Report [Document Reference 6.3.15.1]** provides details of the soil type and Agricultural Land Classification of soil and these are summarised in Table 15-9 of **ES Volume 2, Chapter 15 Agricultural Circumstances [Document Reference 6.2.15]**. Soil surveys have been undertaken across the Order Limits, with the exception of the ecological mitigation area within Parcel E as there will be no impacts on soils or land quality and therefore does not need to be surveyed.

7.14.9. The Order Limits comprises a mixture of land quality, from Grade 1 to Subgrade 3b. The Order Limits contains approximately 813ha of BMV land, representing 44.4% of the Order Limits, and approximately 1,001ha of moderate quality Subgrade 3b land. 17ha of mitigation land will remain in arable farming use, with no effect on land quality. The pattern of distribution of land quality is complex. Soils are loamy or sandy.

7.14.10. The Agricultural Land Classification grade will not be changed by the Scheme and impacts to the quality of soil would generally be temporary and reversible (with works all being completed in accordance with the **Outline Soil Management Plan [Document Reference 7.8]** and **Outline Construction Environmental Management Plan [Document Reference 7.1]**.

7.14.11. The **ES Volume 2, Chapter 15 Agricultural Circumstances [Document Reference 6.2.15]** sets out how the majority of the Scheme will not affect agricultural land quality. Works that involve soil disturbance during construction and decommissioning will be limited in scale, generally temporary and reversible, and therefore of low magnitude. The quantum disturbed during construction is only 13.7ha, all of which except 0.4 hectare could be restored at decommissioning.

There will be no further disturbance to soils during the operational phase of the Scheme.

7.14.12. The implementation of a Soil Management Plan will minimise damage to soils and ensure that any damage is ameliorated. The restoring of arable soils with grassland for the duration of the operation phase will produce benefits for the soil resource.

7.14.13. An **Outline Soil Management Plan [Document Reference 7.9]** has been prepared as part of the DCO Application. A Soil Management Plan will be secured pursuant to the **Draft DCO [Document Reference 3.1]** as a requirement, which must be in accordance with the **Outline Soil Management Plan [Document Reference 7.9]**. The **Outline Soil Management Plan [Document Reference 7.9]** seeks to identify the importance and sensitivity of the soil resource and to provide specific measures for the management of the soil resource to maintain the physical properties of the soil on within the Order Limits and to ensure that there is no significant adverse effect on the soil resource as a result of the Scheme.

7.14.14. The **Outline Soil Management Plan [Document Reference 7.9]** provides detail on the following during the construction, operation (including maintenance) and decommissioning phases of the Scheme:

- A description of the soil types and their resilience to being trafficked;
- Measures for soil handling;
- Description of works and how soil damage will be minimised; and
- Monitoring measures for soil condition and criteria against which compliance will be assessed.

7.14.15. Therefore, impacts upon soil structure and quality during the construction and decommissioning phases of the Scheme are limited, and will be protected through the operational phase in a way which will permit unrestricted agricultural use to be facilitated after decommissioning.

7.14.16. Land beneath the solar PV modules is proposed to be used for ecological mitigation and enhancements, which could include planting (including establishment of grassland and wildflowers), which would help to reduce soil degradation and erosion during the operation (including maintenance) phase.

7.14.17. In terms of considering effects on BMV agricultural land in a national context, it is noted that Natural England in their Technical Information Note TIN049 (2012) **[Ref. 36]** estimate that 42% of agricultural land in England is within the BMV category. In the regional context, the Doncaster is estimated to comprise 53.4% (25,600ha) BMV agricultural land according to Defra's provisional mapping, while North Lincolnshire is estimated to comprise approximately 78.6% (61,400ha) of BMV agricultural land. Therefore, BMV agricultural land is not a scarce resource nationally.

7.14.18. When compared to approximately 42% in England, 53% in Doncaster and 79% in North Lincolnshire being BMV agricultural land, the temporary disturbance of 13.7ha and permanent loss of up to 9.5ha of BMV land as a result of the Scheme is small and substantially less than is available at both the national and regional scales.

7.14.19. It is also recognised that there are no national or local policies that require agricultural land (including BMV agricultural land) to be farmed, or to be farmed in a particular way.

7.14.20. Having had regard to the factors influencing site selection as set out in NPS EN-3, the Applicant in the first instance sought to avoid areas of higher quality agricultural land. Following the identification of land for the Order Limits, an ALC survey was then carried out to understand the specific quality of the land in the area being considered, to seek to reduce impacts on BMV agricultural land. On that basis, the Scheme has taken an approach that is consistent with the NPS EN-3 through prioritising development on non-BMV agricultural land where possible.

7.14.21. It has not been possible to remove BMV agricultural land from the Order Limits, or from the areas solar PV modules and related infrastructure are to be sited. To do so would reduce the renewable energy generation capability in a location where there is available grid capacity, at a time when the need for such development is a priority. This is consistent with paragraph 2.10.31 of NPS EN-3 where it is recognised that at this scale, it is likely that applicants' developments may use some agricultural land.

7.14.22. Where not used for solar PV development, the use of non-BMV agricultural land has been prioritised for the areas of environmental mitigation and enhancement, where reasonably practicable, and is an embedded mitigation measure. This aims to reduce the impact upon and enhance the high-quality BMV agricultural land and

ensure the retention and best use of available resources where availability allows. This is secured by the **Works Plans [Document Reference 2.3]**.

7.14.23. Internal access tracks and cable routes propose to use existing tracks, crossings and/or gaps in the hedgerows, where reasonably practicable, and is a further embedded mitigation measure. This aims to reduce the impact on the identified receptors (mainly soil quality and availability of agricultural land) and the environment. This is secured by the **Outline CEMP [Document Reference 7.1]**.

7.14.24. NPS EN-1 paragraph 5.11.13 states applicants should identify any effects and seek to minimise impacts on soil quality, taking into account any mitigation measures proposed. NPS EN-1 paragraph 5.11.14 states that a Soil Management Plan is encouraged to be developed by the Applicant to minimise potential land contamination.

7.14.25. For a development of this scale, it is considered impracticable to locate on land that is entirely outside of very high sensitivity Best and Most Versatile BMV agricultural land, given the BMV context for the region. The implementation of management plans, provided for by the **Outline SMP [Document Reference 7.9]** and **Outline CEMP [Document Reference 7.1]** will effectively manage the significant adverse effects as far as reasonably practicable. It is considered that the site selection approach and mitigation measures are appropriate, with some residual significant adverse effects provided for by NPS EN-1 paragraph 3.1.2. **ES Chapter 15 Agricultural Circumstances [Document Reference 6.2.15]** also identifies the potential for significant adverse effects during the decommissioning phase. This specifically relates to the optionality for landowners to retain some of the access tracks. Whilst these would be beneficial for the future farming use, it is would potentially result in the permanent loss of 9.1 ha of BMV, which would be medium magnitude impact on a high sensitivity resource, resulting in a moderate adverse effect, which is significant.

7.14.26. All of the aforementioned measures with regard to soil impacts and management will ensure compliance with paragraph 5.11.13 and 5.11.14 of NPS EN-1.

Summary

7.14.27. In line with paragraph 2.10.29 of NPS EN-3, areas of BMV agricultural land are required to deliver the Scheme. **ES Volume 2, Chapter 15 Agricultural Circumstances [Document Reference 6.2.15] confirms** there will be **no**

significant adverse effects from the loss of BMV soils for the duration of the Scheme, and most areas will be fully restored at decommissioning. In the scenario where all the farm tracks are left in-situ (which would be at the discretion of the landowners), there could be a **moderate adverse** effect from the loss of BMV, which would be **significant**, but would need to be balanced against the agricultural operational benefits those tracks will allow.

7.14.28. Due to the nature of the Scheme and construction methods, which will include adherence to a Soil Management Plan, impacts upon the soil resource are minimised. The land management regimes will not adversely affect soil quality, soil health, or land quality and there is the potential for overall benefits to soils. The potential benefits are a result of arable soils reverting to pasture and include improved soil structure from long-term grassland allowing build-up of organic matter, reduced vulnerability to erosion by wind or water and enhanced soil micro bacterial activity. Post decommissioning, agricultural land management could resume following removal of the above ground solar infrastructure.

7.14.29. NPS EN-3 paragraph 2.10.29 states that the development of large-scale solar PV is not prohibited on agricultural land and that agricultural land classification should not be a predetermining factor in the consideration of Development Consent applications. However, as a requirement of NPS EN-1 and NPS EN-3, justification for the use of agricultural land for the purposes of energy generation, specifically solar PV in NPS EN-3, is required. **ES Volume 1, Chapter 3: Site Description, Site Selection and Iterative Design Process [Document Reference 6.1.3]** set out the process that determined the extent of the Order Limits, areas excluded from selection and the justification for such decisions.

7.14.30. For national, and local renewable energy needs to be met, some BMV agricultural land is required to be temporarily used for the delivery of solar electricity as without it, the electricity output would not fulfil the available grid capacity and as such would be an inefficient use of land from an energy generation perspective.

7.14.31. Therefore, with regard to agricultural land, the Scheme is considered acceptable pursuant to NPS EN-1, NPS EN-3, NPS EN-5, NPPF and local planning policy.

8 CONCLUSION AND PLANNING BALANCE

8.1. The Planning Balance

8.1.1. Scheme is required to be determined in accordance with Section 104 of the PA 2008 **[Ref. 1]**. As set out in section 7 of this Planning Statement, Section 104(2) of the PA 2008 **[Ref. 1]** requires that, in deciding an application for development consent, the SoS must have regard to:

(a) Any relevant national policy statement;

(b) Local impact reports;

(c) Prescribed matters, and;

(d) Any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision.

8.1.2. In respect of part (a) the NPSs which have effect in relation to the Scheme are:

- NPS EN-1 Overarching National Policy Statement for Energy;
- NPS EN-3 National Policy Statement for Renewable Energy Infrastructure; and
- NPS EN-5 National Policy Statement for Electricity Network Infrastructure.

8.1.3. There are no relevant marine policy documents to the Scheme therefore the SoS is not required to consider this matter.

8.1.4. In regard to section 104(2)(b), a Local Impact Reports (LIR) is expected to be submitted by the host authority. The Scheme is in accordance with the relevant local policy, as set out in **Appendix A** to this Planning Statement.

8.1.5. In regard to section 104(2)(c) it has been demonstrated that a decision to grant a DCO for the Scheme would have regard to the matters prescribed by Regulation 3 and 7 of the Infrastructure Planning (Decisions) Regulations 2010 (as amended) **[Ref. 34]**. The Scheme has regard to preserving heritage assets and their setting as set out in section 8 of this Planning Statement and **ES Volume 2, Chapter 8: Cultural Heritage and Archaeology [Document Reference 6.2.8]**. Biodiversity and conservation enhancement is also addressed in section 8 of this Planning

Statement and **ES Volume 2, Chapter 7: Ecology and Nature Conservation [Document Reference 6.2.7]**.

8.1.6. Section 104(3) of the PA 2008 **[Ref. 1]** requires that applications for development consent must be determined by the SoS in accordance with any relevant national policy statement except to the extent that one or more of subsections 104(4) to 104(8) apply.

8.1.7. None of the limited exceptions in subsections 104(4) to 104(8) of the PA 2008 **[Ref. 1]** are engaged, for the reasons summarised below.

8.1.8. Section 104(4) applies if deciding an application in accordance with any relevant national policy would lead to the UK being in breach of any of its international obligations. There is no evidence to suggest that the granting of the DCO for the Scheme would lead to the UK being in breach of any of its international obligations.

8.1.9. Section 104(5) applies if deciding an application in accordance with any relevant national policy would lead to the SoS being in breach of any duty imposed on the SoS by or under any enactment. There is no evidence to suggest that the granting of the DCO for the Scheme would lead the SoS to be in breach of any such duty.

8.1.10. Section 104(6) applies if deciding an application in accordance with any relevant national policy would be unlawful by virtue of any enactment. There is no evidence to suggest that the granting of the DCO for the Scheme would be unlawful by virtue of any enactment.

8.1.11. Section 104(7) applies if the adverse impact of a scheme would outweigh its benefits. Section 8 of this Planning Statement sets out how the Scheme is in accordance with NPS EN-1, NPS EN-3 and NPS EN-5 and relevant local policy. The overall planning balance of the Scheme is considered below. The very limited adverse impacts of the Scheme remaining after mitigation are not considered to outweigh its substantial benefits.

8.1.12. Section 104(8) applies if any condition prescribed for deciding an application otherwise in accordance with an NPS is met. There is no evidence to suggest that any condition is met in relation to the Scheme.

8.1.13. This Planning Statement sets out how the Scheme complies with the relevant planning policy and other matters that the Applicant considers to be important and relevant to the SoS's decision as to whether to grant development consent.

8.1.14. Critical to determining the overall planning balance, is the strength of the need case that has been established through the NPSs. Paragraph 3.3.62 of NPS EN-1 defines low carbon energy infrastructure as a CNP, which is integral to meeting legally binding Government decarbonisation targets and delivering ambitious national strategies to achieve net zero, increase affordability of energy and improve energy security. The Scheme, a solar generation NSIP, is low carbon infrastructure and its needs case is therefore afforded the very substantial weight set out in NPS EN-1.

Benefits of the Scheme

8.1.15. Section 3 of this Planning Statement establishes the urgent need for the Scheme. Its delivery would respond to this need through the delivery of approximately 800MW of low-carbon, low-cost and UK-located solar electricity generation capacity connecting to the National Electricity Transmission System..

8.1.16. In addition to meeting the urgent national need for secure and affordable low-carbon energy infrastructure, the Scheme will deliver wider benefits to the environment and the local community. The wider benefits of the Scheme include:

- Increasing Renewable Energy Generation - the Scheme has the potential to generate approximately 1,260,000MWh of electricity each year. Over the lifetime of the Scheme this is estimated to equate to 48,233,679MWh which assumes a 0.45% annual degradation rate in energy production. Based on a lifetime GHG footprint of 777,732TCO_2e, this equates to a carbon intensity factor of 0.016kgCO_2e per kWh.

- Co-located Battery Energy Storage Systems - the co-location within a solar farm would assist in delivering a number of significant benefits. These include the sharing of grid infrastructure; 'load-shifting' and smoothing out the generation of electricity to meet demand; and security of supply and reducing the risk of black-outs and brown-outs.

- Climate Emergency at a National and a Local Level - A national climate emergency was declared by the UK Parliament in May 2019. In 2019 both City

of Doncaster Council and North Lincolnshire Council separately declared a climate emergency in line with the national government. Through the generation of renewable energy, the Scheme will contribute towards addressing these declarations of climate emergencies.

- Energy Security - The Scheme will supply renewable energy to the National Grid, comprising secure, distributed and diversified energy generation which fully accords with the Government policy on energy security as detailed in the British Energy Security Strategy published in 2022 and the Energy Security Plan published in March 2023.

- Best Available Technology - the Scheme includes the latest best available technology that delivers greater levels of solar efficiency by utilising a solar tracking system together with bi-facial panels, which increase continuous electrical productivity by 20-25% when compared to traditional fixed solar arrays.

- Early Grid Connection and Lack of Alternative Sites - The availability of a 800MW export grid connection and 400MW import grid connection for the Scheme coupled with a lack of suitable alternative sites with the benefit of a grid connection offer, is a material consideration of significant weight.

- Biodiversity - Biodiversity improvements including landscaping, habitat management and biodiversity enhancement to retain and enhance ecological and recreational connectivity, expecting to achieve at least a 10% net gain in area habitats, hedgerows and watercourses.

  Retention of existing hedgerows, woodland and field margins, with the exception of gaps required for new access points, visibility at turnings and for the installation of cabling.

  Approximately 65km of new hedgerows, 450 new trees and 4.3ha of new woodland is proposed to be planted to further improve visual screening and habitat creation are proposed, as well as new wildflower meadows and grassland areas across the Scheme, to support local ecology.

- 5 barn owl nest boxes installed on suitable mature trees, micro-sited by a suitably experienced ecologist;

- 5 kestrel nest boxes installed on woodland edge/mature hedgerow trees;
- 90 small nest boxes comprising a mixture of open-fronted and hole-fronted nest boxes, with the latter targeted at 40mm in diameter to target starling;
- 100 bat boxes on retained mature trees;
- 100 hedgehog boxes;
- 100 insect hotels, comprising underground bee shelters and general-purpose insect hotels made from natural materials (i.e. brash);
- Inclusion of 100 beetle banks;
- Inclusion of 50 bee hives; and
- 50 amphibian/reptile refugia, designed in line with English Nature's (now Natural England) mitigation guidelines, whereby refugia are made from brash/rubble/grass cuttings.
- With regards to BNG, based on the habitats present that will be lost and those to be created, the development would result in a gain of 3727.44 habitat units, a gain of 334.58 hedgerow units, and a gain of 100.43 watercourse units. This is a percentage gain of 81.35% in habitat units, 172.90% in hedgerow units and 10.84% in watercourse units
- Climate - 2,928,399TCO_2e saved over lifespan of the Scheme when compared to Combined Cycle Gas Turbine-generated electricity.
- Air Quality - The Scheme will produce energy from the sun, which is a clean, sustainable source of energy. It will help to reduce the energy requirements from fossil fuels, which emit harmful air emissions, such as carbon dioxide, nitrogen dioxide, sulphur dioxide, and particulate matters.
- Land, Soil and Groundwater Quality - enhancement of soil and water quality through a reinstatement and habitat creation program. Additionally the cessation of agricultural activity on some parts of the Land Areas during construction and operation could lead to the stabilisation of soil and may reduce soil-laden runoff into watercourses

- Permissive Paths and Recreation - the creation of approximately 1.72km of new permissive paths as shown on the **ES Volume 4, Figure 6.4: Landscape and Visual Mitigation Strategy [Document Reference 6.4.6.4]**, providing improved access to open space for users of the existing public rights of way.

- Community Benefit Fund - in addition to the environmental and recreational benefits set out above, the Applicant is committed to providing a Community Benefit Fund of approximately £12.8 million across the 40-year operational lifespan of the Scheme.

8.1.17. The combined nature of these additional benefits are considered to carry substantial weight in favour of the Scheme.

8.2. Summary of Residual Effects

8.2.1. The design of the Scheme has been an iterative process and developed in consultation with statutory and non-statutory consultees. The design parameters have been considered in detail by the ES Environmental Aspect Chapter authors and the results of the assessments are reported in the individual ES Environmental Aspect Chapter of the ES. A number of measures have been implemented within the design of the Scheme to reduce adverse environmental effects, including landscape design to create habitat and screen views of the Scheme.

8.2.2. A summary of the identified significant residual effects for each ES Environmental Aspect Chapter are presented **in ES Chapter 18 Summary [Document Reference 6.2.18**], namely **Table 18-1** for the construction phase, **Table 18-2** for the operational phase and **Table 18-3** for the decommissioning phase. A description of the effect on the resource or receptor, initial significance of effect, proposed mitigation measures and remaining residual effect with mitigation measures implemented is outlined these tables.

8.2.3. The instances where CNP is required to be relied upon in relation to the following topics, which after the implementation of mitigation, adverse significant residual effects are anticipated upon:

- Landscape and Visual

- Ecology and Nature Conservation

8.2.4. **ES Chapter 15 Agricultural Circumstances [Document Reference 6.2.15]** also identifies the potential for significant adverse effects during the decommissioning phase. This specifically relates to the optionality for landowners to retain some of the access tracks. Whilst these would be beneficial for the future farming use, it is would potentially result in the permanent loss of 9.1 ha of BMV, which would be medium magnitude impact on a high sensitivity resource, resulting in a moderate adverse effect, which is significant.

8.2.5. As a CNP project, the Scheme benefits from the strongest policy position set out in national planning policy. Pursuant to NPS EN-1, subject to consideration of the impacts of the Scheme and the application of the mitigation hierarchy, any residual impacts of CNP infrastructure should not outweigh the urgent need for its delivery. This Planning Statement confirms that the Scheme complies with NPS EN-1, NPS EN-3 and NPS EN-5, the NPPF and Local Plans. Where significant adverse effects have been identified the Applicant has demonstrated its application of the mitigation hierarchy and careful consideration of design.

8.2.6. The **ES Volume 2, Chapters 6 to 18 [Document Reference 6.2.6 to 6.2.18]** also identify how significant beneficial residual effects are anticipated with regards to: -

- Socio Economics - The Scheme will have an overall beneficial impact for the economy and this would be significant.
- Air Quality and Greenhouse Gases - The Scheme will have an overall beneficial impact in terms of GHG emissions, and thus the effect is 'significant'

8.2.7. After the implementation of the proposed mitigation measures, significant residual effects are not anticipated in relation to the following Environmental Statement aspect topics:

- Water Resources
- Cultural Heritage and Archaeology
- Ground Conditions
- Noise and Vibration
- Transport and Access, and

- Other Environmental Topics

8.2.8. Paragraph 4.2.15 of NPS EN-1 is therefore engaged which states that, "*Where residual non-HRA or non-MCZ impacts remain after the mitigation hierarchy has been applied, these residual impacts are unlikely to outweigh the urgent need for this type of infrastructure. Therefore, in all but the most exceptional circumstances, it is unlikely that consent will be refused on the basis of these residual impacts*".

8.2.9. The Applicant set out with the objective to deliver a significant quantity of renewable energy, of NSIP scale, to the National Grid and contribute to the UK's wider decarbonisation of energy supply. Through the careful selection of an appropriate land area which benefited from suitable topography and irradiance and connection to the National Grid through to the detailed design measures the Applicant has developed a proposal which is sensitive to local context. NPS EN- 1 paragraph 4.1.3, notes that given the urgency for the type of infrastructure covered in the energy NPSs, the SoS will start with a presumption in favour of granting consent to applications for energy NSIPs.

8.2.10. The need for low carbon development is such that the UK Government has concluded that there is a CNP for the provision of nationally significant low carbon infrastructure (paragraph. 4.2.4 of NPS EN-1). Paragraph 4.2.5 of NPS EN-1 confirms that solar development falls within the category of CNP by stating that low carbon infrastructure for the purposes of that policy means all onshore and offshore electricity generation that does not involve fossil fuel combustion.

8.2.11. The policy landscape set by the relevant NPSs; NPS EN-1, NPS EN-3 and NPS EN-5, illustrates the Government's position in a very clear way and confirms that the principle of the development is not just accepted, it is of critical importance and priority at a national level. This landscape paves the way for well-considered projects to receive favourable recommendations from the Planning Inspectorate and an eventual grant of consent by the SoS. However, despite the strength of the policy it does not immediately imply that all proposals for such infrastructure will receive approval. There are a number of tests and justification required to be demonstrated by the Applicant as to why a chosen site is an appropriate location for the proposed infrastructure and that any adverse environmental impacts have been mitigated as far as practicable with the application of the mitigation hierarchy. NPS EN-1 also places significant emphasis on the importance of good design throughout the NSIP process. This means more than sensitive siting of

infrastructure and includes consistent decision making based on sound environmentally led principles.

8.2.12. Good design has been embedded into the Scheme from the outset of the site selection process with the search process seeking to avoid areas of higher landscape sensitivity. In this context the first tier of the mitigation hierarchy, has been applied as there are no local or national landscape designations which would be impacted by the Scheme. At a site specific level a comprehensive mitigation package has been embedded into the design of the Scheme to date with further commitments made to minimise any likely significant impacts. However, the nature of the Scheme, the sensitivity of receptors and the existing rural context mean that there are some impacts which cannot be mitigated. The Applicant considers, given the acute need for the Scheme, it has taken all reasonable measures to minimise these likely significant effects. In a policy context, paragraph 5.10.5 of NPS EN-1 accepts that there will likely be some impact in terms of landscape and visual effects as a result of DCO scale energy projects, stating, "*virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts arising from mitigation*".

8.2.13. NPS EN-3, while setting a preference for the type of land to be used for solar development, is clear at paragraph 2.10.29 that the land type should not be a predominating factor in determining the suitability of a site. It goes further to accept that it is likely that agricultural land will form part of an applicant's proposals, and that ground mounted solar PV development is not prohibited on BMV. It is also important to note that there is no planning policy which requires agricultural land to be farmed and farmers are actively encouraged to take land out of arable use to help regenerate soil and combat the biodiversity crisis. The land to be used for the Scheme will be used temporarily and will be returned to agricultural use at the end of the Scheme's lifetime.

8.2.14. The Scheme will make a significant contribution towards the UK's solar targets for reaching Net Zero. The Applicant is well resourced and in a strong position to deliver the Scheme and within a timeframe that means the generation of low carbon energy will also occur in a timely manner and contribute to 2030 and 2035 pathway targets.

8.2.15. As a CNP project, the Scheme benefits from the strongest policy position set out in national planning policy. NPS EN-1 sets out a presumption in favour of energy related development. This Planning Statement and Policy Accordance Tables at **Appendix A** to this Planning Statement, confirm that the Scheme complies with NPS EN-1, NPS EN-3, NPS EN-5, the NPPF and Local Plan. Where significant adverse effects have been identified the Applicant has demonstrated its application of the mitigation hierarchy and careful consideration of design. However, impacts on landscape and visual receptors and ecology and nature conservation cannot be avoided, reduced or mitigated, as per paragraph 4.2.11 of NPS EN-1. Cumulative impacts are also considered, as per the requirements of paragraph 4.2.12 of NPS EN-1.

8.3. Conclusion

8.3.1. In accordance with the provisions of NPS EN-1 and NPS EN-3, it is concluded that the limited residual effects of the Scheme do not outweigh its urgent need, and do not represent an unacceptable risk that would negate the presumption in favour of consent for this CNP infrastructure. The Scheme would deliver greater benefit than adverse effects and would contribute to an urgent national need for low carbon infrastructure.

8.3.2. In addition, there are a significant number of additional benefits that would be achieved by the Scheme, as outlined above.

8.3.3. The Scheme is a well-considered and effectively designed proposal that responds to the locality and is sensitive to the local environment. On this basis, it is concluded that development consent should be granted.

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