



ARCUS

PLANNING, DESIGN AND ACCESS STATEMENT

NINFIELD GREENER GRID PARK

JULY 2021



Prepared By:

Arcus Consultancy Services

Suite 1C
Swinegate Court East
York
North Yorkshire
YO1 8AJ

T +44 (0)1904 715 470 | **E** info@arcusconsulting.co.uk
W www.arcusconsulting.co.uk

Registered in England & Wales No. 5644976

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1 INTRODUCTION

1.1 Background

This Planning, Design and Access Statement ('the Statement') has been prepared to accompany the planning application submitted to Wealden District Council ('the Council/WDC') by Statkraft UK LTD ('the Applicant') for the installation of a Greener Grid Park to support the National Grid ('the Development') on land adjacent to the National Grid Substation to the northwest of Potman's Lane, Ninfield ('the Site'). The Greener Grid Park would incorporate a battery energy storage system (BESS) and an energy management building containing synchronous condensers to support grid stability.

1.2 The Planning Application Submission

The following plans and drawings are submitted alongside the planning application:

- Planning Drawing 1 – Location Plan
- Planning Drawing 2 – Site Layout Plan
- Planning Drawing 3 – Landscape Mitigation Plan
- Planning Drawing 4 – Indicative Battery Container
- Planning Drawing 5 – Indicative Welfare Unit
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The following environmental and technical reports are appended to this Planning, Design and Access Statement:

- Appendix 1 – Statement of Need
- Appendix 2a – Landscape and Visual Appraisal
- Appendix 2b – Arboricultural Report
- Appendix 3 – Heritage Desk Based Assessment
- Appendix 4a – Preliminary Ecological Appraisal
- Appendix 4b – Breeding Bird Survey Report
- Appendix 4c – Great Crested Newt Survey Report
- Appendix 4d - Biodiversity Metric Assessment
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1.1 The Applicant

The Applicant is Statkraft UK LTD. Statkraft is Europe's largest generator of renewable energy; producing hydropower, wind power, solar power, battery storage, gas-fired

power and supplying district heating. Statkraft owns and operates 11 wind farms in the British Isles and the Nordic countries with a combined installed capacity of almost 1,000 MW (1GW). Statkraft has two consented Greener Grid Park projects currently in construction in the UK, with three more currently in planning.

1.2 The Need for the Development

Renewable technologies are intermittent as the amount of energy generated is dependent on weather conditions. It is therefore necessary to balance demand and supply in order to prevent shortages and blackouts, as experienced in the South East of England in August 2019.

As such, there is a growing demand by network operators for a broad range of services such as energy storage and management. The Development is designed to support the flexible operation of the National Grid and the decarbonisation of the electricity supply. The proposed greener grid park would provide rapid-response electrical back-up and energy management to the National Grid and would also represent an early deployment within the UK of a high-tech grid balancing facility, addressing intermittency and fluctuations in inertia.

This is required for a number of reasons:

- The Climate Emergency;
- Electricity Market Reform;
- The Capacity Market; and
- Balancing the Network.

1.2.1 *The Climate Emergency*

In July 2019 Wealden District Council declared a Climate Emergency and committed to net zero carbon emissions (both in the Council and across the District) by 2050. The Wealden District Council Climate Emergency Plan (2019) ('the CEP')¹ sets out key actions and intervention measures for the District to achieve this target. The modelling in the CEP indicates that:

'The most significant carbon reductions will result from switching towards the use of electric heating systems and electric vehicles – provided that the national electricity grid undergoes significant decarbonisation.'

The degree to which the grid decarbonises is therefore a source of significant uncertainty for future projections in the District. The CEP identifies grid decarbonisation as *'the most important factor affecting whether the net zero target is achieved.'* This is presented in the CEP as a significant opportunity and a risk as the Council is considered to have limited control over the pace of grid decarbonisation.

The electrification of transport and heating are key priorities within the CEP, both of which require grid decarbonisation. The CEP recommends a significant increase in large-scale low or zero-carbon energy generation to reduce carbon emissions in the District, which would in turn increase pressure on the grid in terms of intermittency and stability.

The CEP advises that Wealden District Council should actively work towards enabling low and zero carbon technologies and battery storage *'to reduce reliance on fossil fuels,*

¹ Wealden District Council (2019) *Wealden District Council Climate Emergency Plan* [Online] Available from: <https://www.wealden.gov.uk/environment-and-pollution/climate-emergency/> (Accessed 28/6/2021)

reduce pressure on existing utility infrastructure, improve security of supply, and mitigate against price fluctuations.'

The CEP identifies planning as one of the key routes through which the Council can influence progress to net zero, by supporting renewable energy projects in the District. The key recommendations for the Council in the CEP include working proactively to support future renewable electricity in the District through planning policy and other mechanisms.

1.2.2 **Electricity Market Reform**

Given the reduction in centralised coal-fired power, increasingly cheap but intermittent renewable energy supply and the transition to electric vehicles, it is increasingly likely there will be peaks and troughs in the UK energy supply and demand.

It is estimated that over the next decade, the UK will require approximately £100 billion investment in electricity infrastructure to accommodate projected future increases in electricity demand, replace ageing power stations and prevent electricity blackouts. The Development is proposed in response to the requirement for continuity of supply and storage of electricity, particularly during periods of peak demand and over-supply.

Electricity Market Reform ('EMR')² is a UK government policy designed to:

- Incentivise investment in secure, low-carbon electricity;
- Improve the security of the UK's electricity supply; and
- Improve affordability for consumers.

There is an urgent requirement to deliver a greater amount of renewable energy but these technologies (e.g. wind and solar generation) are intermittent, only generating when the wind blows or sun shines. These different factors mean that demand and supply are more challenging to match.

1.2.3 **The Capacity Market**

Through the Energy Act 2013³, the Capacity Market mechanism was introduced to ensure security of electricity supply at the least cost to the consumer.

To deliver a supply of secure, sustainable and affordable electricity, the UK needs not only investment in new generation projects and innovative technologies but to get the best out of existing assets on the network. The Capacity Market aims to deal with both these issues by bringing forward new investment while maximising current generation capabilities.

The Capacity Market aims to balance the difference between demand and supply and to bring forward investment in new generation projects and innovative technologies, in parallel with maximising the utilisation of the existing generation capacity. The Capacity Market operates alongside the electricity market, which is where most participants will continue to earn the majority of their revenues. The Development is anticipated to participate in the Capacity Market in addition to providing other balancing services to the National Grid.

² UK Government (2012) Electricity Market Reform: Policy Overview [online] Available at: <https://www.gov.uk/government/publications/electricity-market-reform-policy-overview--2> (Accessed 19/08/2019)

³ UK Government (2013) Energy Act 2013 [Online] Available at: <http://www.legislation.gov.uk/ukpga/2013/32/contents/enacted> (Accessed 05/04/2019)

1.2.4 **Balancing the Network**

Balancing the system to ensure demand is met by supply is a key requirement of the National Grid, and it is becoming more challenging as intermittent generation – such as wind and solar power – becomes a bigger proportion of the overall energy mix.

The National Grid has a constant supply of 'extra power' available for use when the power required by customers is not equal to the power generated and a reserve supply is needed. The Balancing Mechanism is used to ensure that the network is in balance and reserve power is then used when the network comes under 'stress'.

When unforeseen demand is put on the network, such as when a large power station suddenly comes offline, then the National Grid control room need an alternative source of power. This is achieved with rapid responding facilities such as the proposed Development which can release or absorb energy from the grid as instructed.

As an innovative technology, the Development will provide a flexible and rapid release of electricity to allow the National Grid to regulate electricity supply and demand without any greenhouse gas emissions. Conversely, the Development will also have the capacity to absorb electricity quickly which will allow for the oversupply of the grid to be managed.

1.3 **Local Grid Requirements**

On Easter Monday 2020, National Grid needed to run 17 gas-fired power stations in England and Wales, not for their energy, but in order to keep the grid stable. The Applicant plans to develop projects and technologies to reduce and remove the need for such polluting fossil fuel generation, and the Southeast is one of the areas where this stability is required.

The grid at Ninfield and in the Southeast is subject to voltage variations which leads National Grid to procure reactive power services to manage this. Ninfield Substation has been selected by the Applicant after considering all of the substations in the region and assessing the needs of the transmission grid in the Southeast.

The purpose of Ninfield Greener Grid Park is not only to provide energy storage but predominately for the installation of synchronous condensers to provide stability to the National Grid Energy System Operator (NGESO). This additional stability will enable the grid to accommodate more renewable energy, while the energy storage will maximise the efficiency of existing renewable energy installations such as solar farms.

Although the geographic location of BESS is relatively flexible, the co-location of grid stability and BESS technologies is only appropriate in certain locations along the grid network where their combined impact would be greatest, such as Ninfield.

Ninfield lies within an area identified by NGESO with a '*large growth in stability need*'. The effectiveness of the Greener Grid Park depends on its proximity to National Grid transmission boundaries. The Ninfield National Grid Substation has been selected for its proximity to critical transmission boundaries B10, B12, B15 & SC3 and connection to the 400 kV network. The construction of a Greener Grid Park in this location would therefore maximise the positive impact of this infrastructure on the stability of the transmission network⁴. As such, a Greener Grid Park in this location would provide significant benefits to electricity consumers and to the environment by reducing carbon emissions associated with the grid this decade.

Further information on the need for this Development is provided in the Applicant's Statement of Need at Appendix 1.

⁴ <https://www.nationalgrideso.com/document/171546/download>

1.4 Site Selection

The Development has been strategically sited adjacent to the National Grid Ninfield Substation which lies immediately to the northeast of the Site. Given the close proximity to the substation, lengthy transmission cables will not be required, ensuring efficient connection to the National Grid, minimising disturbance and costs. The substation is capable of accommodating the transfer of electricity to and from the Development at an acceptable cost, which will provide valuable support to grid protecting customers at times when high demand places stress on the local and National electricity network. As a result of the close proximity to the substation, underground cables will avoid any major infrastructure, minimising connection and transmission costs. The small scale of the underground grid connection required will also significantly minimise construction-related disruption.

The other key criteria which have led to the Site being selected for energy management development include:

- Separation from residential properties;
- Existing visual screening provided by trees and hedgerows
- Existing access to the Site for construction; and
- Lack of environmental constraints (e.g. ecological/landscape designations, flood risk, etc.)

All land parcels surrounding the substation have been considered with reference to the above criteria and the Site was identified as the most appropriate location to minimise potential impacts on the environment and amenity.

Following consideration of the above factors and the existing infrastructure within the wider area, the selected site was identified as having excellent potential for development with minimal environmental impacts.

1.5 Pre-Application Consultation

The Applicant has sought to front-load the planning process by engaging with Wealden District Council through a pre-application enquiry ('the Enquiry'). The purpose of the Enquiry was to determine the scope of the Application and the supporting technical reports, agree on the approach to addressing the main issues and seek the Council's views on the principle of the development.

A meeting between the Case Officer, the Applicant and Arcus was held at the Council's offices and a written response to the Enquiry was issued in November 2019 (Ref: MT/PE/2019/0544/E).

The written response provides advice on environmental considerations for the planning application and indicates that the Council may support a development which provides energy network solutions so long as any harmful environmental or landscape impacts are limited.

The engagement with the Council prior to submission of this application has informed the design development and the scope of the technical documents submitted with this application.

1.6 Public Consultation

The Applicant consulted extensively with local residents, Ninfield and Catfield Parish Councils and elected members starting in January-February 2021. As face-to-face consultation was not possible due to Covid-19 restrictions, details of the proposal were sent to consultees by post and/or email and a website with relevant documents and links to further information was published. Consultees had the opportunity to comment and ask questions via comment slips with freepost envelopes, email, a phone line and the

consultation website. 11 responses were received from consultees, mainly with queries about the details of the proposed Development.

Full details of the public consultation and responses received are set out in the Statement of Community Involvement at Appendix 9.

1.7 The Development and the EIA Regulations (2017)

The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 define EIA development as either:

- Schedule 1 development; or
- Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location.

In October 2019 Arcus submitted a request for an EIA screening opinion to the Council based on a preliminary design of the scheme. The Council issued an EIA screening opinion on 29th October 2019 which indicates that the proposal is Schedule 2 development but that it is unlikely to result in any significant environmental effects. The EIA screening opinion therefore concludes that based on the nature, scale and location of the development, an Environmental Impact Assessment is not required.

As the scale and design of the Development has changed slightly since the original EIA screening opinion was issued, EIA screening should be undertaken again by the Council during the determination of the planning application, although it is not considered that the changes made would trigger the requirement for EIA.

2 SITE AND SURROUNDINGS

2.1 Site Location and Description

The Site comprises 2.58 ha of land to the southwest of the Ninfield National Grid Substation, approximately 1.2 km northwest of Lunsford's Cross and 1.4 km to the southeast of Ninfield. The location of the Site is shown on Planning Drawing 1 – Site Location Plan.

The Site comprises a rectangular agricultural field which has been used for grazing and an existing access track from Potman's Lane. The Site slopes gradually from approximately 30 m Above Ordnance Datum (AOD) adjacent to the southwest boundary to approximately 20 m AOD adjacent to the northeast boundary.

The land to the northwest of the Site is densely wooded and designated as ancient woodland known as Spray's Wood, the eastern part of which has been replanted. Watermill Stream runs along the northeast boundary of the Site adjacent to the substation and a public footpath (CAT 21/2) runs to the north of the Stream. The southeast and southwest Site boundaries are defined by tall hedgerows with hedgerow trees which, along with the woodland to the northwest, provides a substantial degree of visual screening.

There is a cluster of low-lying agricultural buildings to the southwest of the Site adjacent to the access track, while a small pond lies approximately 41 m to the southeast of the Site in the neighbouring agricultural field. The nearest dwellings to the Site are as follows:

- Kilwood Farm, adjacent to the existing access track and approximately 280 m to the southwest of the main compound; and
- Two properties (including Potman's Place) along Potman's Lane, approximately 225 m to the southeast of the main compound.

The surrounding area is characterised by rolling countryside with scattered rural/agricultural properties, interspersed with large blocks of woodland. There is an existing solar farm (St Francis Solar Farm) approximately 540 m southeast of the Site.

2.2 Planning History

There are no known historical planning applications in the location of the main compound. However, an application for the erection of a two-storey farmhouse at Kilnwood Farm, including part of the existing access track at the Site, was approved in December 2009 (Ref: WD/2009/0511/F).

Condition 2 attached to the planning permission limits the occupation of the dwelling to a person working in the locality in agriculture or forestry. This requirement has been secured via a Section 106 legal agreement which ties 21 ha of farmland, including the Site, to the house at Kilnwood Farm. A deed of variation will be submitted prior to determination of this application to remove the Site from the agricultural tie.

An application for battery-based electrical storage on land to the east of Ninfield National Grid Substation was approved by Rother District Council in April 2021 (Ref: RR/2020/1817/P). The approved battery development site is located approximately 400 m to the southeast of the Site on the opposite side of Potman's Lane. At the time of writing, the construction of the battery facility had not commenced. The potential cumulative effects of the Development with the approved BESS scheme to the east of the substation have been considered in the preparation of this application. The environmental submitted with this application confirm that there are no substantial cumulative effects associated with the approved BESS scheme.

3 THE DEVELOPMENT

3.1 Overview

The Applicant is seeking planning permission for the construction and operation of a greener grid park including battery storage energy management technologies and an energy management building containing synchronous condensers.

The Development is designed to support the flexible operation of the National Grid and decarbonisation of electricity supply. The Development will store, import and export electricity but will not generate any additional electricity nor have any direct on-site emissions of CO₂. Development Infrastructure

The Development will consist of the following components within a fenced in compound, as shown on the Site Layout Plan (Planning Drawing 2):

The Development consists of the following key elements:

- 60 containerised battery storage units (12.9 m x 2.44 m x 2.59 m), located in the southwestern part of the Site;
- 30 inverters (6.1 m x 2.44 m x 2.59 m), arranged in rows immediately adjacent to the batteries;
- An emergency diesel generator (3.6 m x 6.1 m x 2.9 m), 2 13 kV reactor, welfare facilities (12.9 m x 2.44 m x 2.59 m), a switchgear container (12.19 m x 2.44 m x 3.0 m) and four parking spaces in the middle of the Site.
- An energy management building (20.7 m x 38.6 m x 10.0 m high to roof pitch) containing energy management systems and e-rooms, located on the northeastern part of the Site near to the substation;
- 2 transformers (14.8 m x 6.9 m x 10.8 m) adjacent to the energy management building;
- 4 coolers (9.6 m x 2.4 m x 2.5 m) on either side of the energy management building.
- Fire stop walls up to 10.0 m high between the energy management building and the transformers;
- 2 acoustic walls up to 4 m high northeast and southwest of the coolers;
- An LV switch house (9.1 m x 7.5 m x 3.5 m), a communications house (12.19 m x 2.44 m x 2.59 m) a switchgear container (12.19 m x 2.44 m x 3.0 m) and a small transformer (3.0 m x 3.0 m) and high voltage infrastructure (up to 28.75 m high) in the northeastern part of the main compound;
- A CCTV camera system mounted on 6 security columns up to 6 m high;
- A 3.4 m electric palisade fence erected around the perimeter of the main compound, with a gate at the entrance;
- A drainage swale in the northeastern edge of the Site beside the existing stream; and
- An underground electrical connection with the substation.

Elevations of the proposed infrastructure are shown in Planning Drawings 4-17. Most components of the development will be housed in steel container-style units, while the main building will be constructed with pre-galvanised powder coated steel. The surface of the main compound will be permeable crushed stone.

3.2 Access

The Development will be accessed via the existing track from Potman's Lane to the Site which runs past Potman's Lane. The existing gate at the entrance to the access track will be repositioned further away from Potman's Lane in order to enable HGVs to fully exit the road before stopping to open the gate.

Further details of the access arrangements are provided in the Transport Statement at Appendix 6 and in Section 5.5 of this Statement.

3.3 Construction

The construction and installation of the Development will take approximately 18 months. The sequence of construction activities is anticipated as follows:

- Site surveys & welfare
- Earthwork for foundations/accesses/cable runs
- Balance of plant and temporary site equipment
- Major equipment delivery
- Assembly of major equipment
- Construction of main building over installed equipment
- Installation of supporting equipment
- Testing and commissioning

The Development is anticipated to result in approximately 60 Full-Time Equivalent (FTE) jobs during the construction period. Preference will be given to local contractors for construction wherever possible, to maximise the local economic benefits of the Development.

3.4 Operation

The Development will be operated remotely, with occasional inspection and maintenance visits which will occur on average once per month. The proposed welfare facility for visiting staff will contain a WC with a sealed septic tank so that no foul drainage connection is required. The remote operation of the facility is anticipated to result in 11 FTE jobs.

3.5 Safety

Safety is a key consideration in the design and layout of infrastructure at the Site. The following documents will be produced at the detailed design stage prior to construction of the facility:

- Fire Strategy Report;
- Fire Risk Assessment;
- Evacuation Strategy;
- Fire Safety Drawings;
- A Fire Safety Manual will be created containing design information and operational records. In addition, it will provide a full description of the fire safety design, in regards to the management of the buildings, housekeeping and other functions. Thus, providing a continuously updated record of all aspects of the buildings and the buildings users that affect its fire safety.

The following general safety measures will be implemented to ensure the safe operation of the Development:

- Transformers will be separated from adjacent structures and from each other by firewalls, spatial separation and enclosures;
- Spatial separation between the transformer and the synchronous compensator building or the facing elevation wall of the building;
- Direct consultation with fire department prior to construction;
- Automatic fire, gas and smoke detection (beam based);
- Automatic fire suppression (e.g. sprinklers – water and/or gas based);
- Use of fire-resistant non-combustible materials/enclosures;
- Air ventilation and temperature control in battery containers to prevent overheating; and

- Regular maintenance and testing of BESS.

These and other safety features will be incorporated in the detailed design prior to construction once the specific equipment to be used at the Site is confirmed.

3.6 Landscape

The Development has been designed to minimise the loss of trees and hedges wherever possible, with only minor tree/vegetation removals required to facilitate access.

Additional landscape planting is proposed both within the Site and in the field immediately to the southeast of the Site, as shown on the Landscape and Biodiversity Mitigation Plan (Drawing 3). The main landscape proposals are summarised as follows:

- Retaining boundary vegetation (other than where some localised removal is necessary to create an entry point) and incorporating it within the scheme to maintain landscape character as well as to filter and screen views of the Development;
- Planting the buffer zone between Spray's Wood and the new built form with locally indigenous trees and shrubs (0.77 ha) to help integrate the Development into the wider landscape and improve the biodiversity value of the scheme;
- Reinforcing existing boundary hedgerows with locally indigenous trees and shrubs to improve screening of the Development, particularly in views from Public Footpath Catsfield 21b and Potman's Place; and
- Improving the management of existing boundary hedgerows generally.

In addition, the proposed drainage swale would be designed to appear as natural a feature as possible and would incorporate damp grassland habitats (936 m²). The field to the east of the Site would also be sown with species-rich grassland/wildflowers to further improve the biodiversity value of the scheme (2.55 ha).

3.7 Design Considerations

3.7.1 *Design Rationale*

The scheme has been designed to be as visually unobtrusive as possible and to avoid incursions into areas with environmental sensitivities such as the ancient woodland to the northwest and the small stream to the northeast of the Site. In order to minimise landscape impact, the main compound has been sited within a single field and care has been taken to ensure that the existing field boundaries will be retained and enhanced.

Within the main compound, the taller components such as the energy management building, transformers and fire stop wall are located in the northeastern portion of the Site, close to the adjacent substation so that the height of the Development decreases towards the east of the site where the batteries are located. The main components of the facility will be light grey in colour in order to blend in the Development with the adjacent substation which is also grey. This will result in the Development being read as an extension to the substation rather than as a separate built form within the rural landscape.

The proposed tree planting and landscape improvements have been designed to provide visual screening and general landscape improvements using native species which will integrate the Development in the wider landscape and at the same time provide a biodiversity net gain of over 16.3%, which is considerably more than the net gain target of 10% which will be introduced in the upcoming Environment Bill.

3.7.2 **Specific Design Evolution**

A pre-application enquiry was undertaken with the Council based on a preliminary design in November 2019. Several amendments have been made to the layout of the Development since then, as follows:

- The red line area has been expanded to occupy the entire field and to allow a corridor for underground cabling to the Substation;
- Further batteries and electrical infrastructure have been added to maximise the energy storage capacity and associated decarbonisation/grid benefits;
- A swale has been added at the northeast of the Site to attenuate surface water;
- A landscaping scheme has been prepared to integrate the Development into the surrounding area; and
- An off-site habitat management area has been added in the field to the east to deliver benefits for biodiversity.

4 **PLANNING POLICY CONTEXT**

4.1 **Introduction**

This section of the Statement reviews the key national and local planning policies which relate specifically to the Development. The aim of this section is to establish the land use implications of the Development, consider its compliance with the Development Plan, and identify other material considerations to be taken into account during the determination process.

4.2 **Legislative Background**

The Town and Country Planning Act 1990 Section 70(2) states that:

"In dealing with such an application the authority shall have regard to the provisions of the Development Plan, so far as material to the application, and to any other material considerations."

The Planning and Compulsory Purchase Act 2004 forms an amendment to the Town and Country Planning Act 1990. Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that:

"If regard is to be had to the Development Plan for the purpose of any determination to be made under the Planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise."

The process for determining a planning application can be defined as:

- Identification and consideration of the key provisions within the Development Plan;
- Clarification of whether the Development is in accordance with the Development Plan;
- Identification and consideration of relevant material considerations; and
- Conclusions on whether planning permission is justified.

4.3 **National Planning Policy Framework (February 2019)**

The National Planning Policy Framework (NPPF) sets out Central Government's planning policies for England and how these are to be applied. The NPPF reiterates that applications for planning permission must be determined in accordance with the Development Plan, unless material considerations indicate otherwise. The NPPF also identifies that national planning policy is a material consideration when making decisions on planning applications. The most relevant aspects of national planning policy contained within the NPPF are as follows:

4.3.1 ***Presumption in Favour of Sustainable Development***

The NPPF sets out the economic, environmental and social planning policies for England. Central to these main themes is a presumption in favour of sustainable development, and that development should be planned positively. In achieving sustainable development, three overarching objectives are identified for the planning system; economic, social and environmental (Paragraph 8). The environmental objective includes *"mitigating and adapting to climate change including moving to a low carbon economy"*.

4.3.2 ***Renewable Energy***

The NPPF is clear that planning has a key role in supporting renewable energy and associated infrastructure. Whilst there is no specific policy for energy storage development contained in the NPPF, Paragraph 148 proposes that the planning system should support the transition to a low carbon future in a changing climate.

"The planning system should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings, and support renewable and low carbon energy and associated infrastructure"

In order to increase the supply of renewable and low carbon energy, Paragraph 151 states that plans should provide a positive strategy for renewable and low carbon energy development.

The NPPF is also clear that LPAs should not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions (Paragraph 154). Applications for renewable and low carbon development should be approved if the impacts are (or can be made) acceptable.

4.3.3 ***Guidance on Environmental Issues***

The NPPF contains policies on a number of environmental issues in achieving sustainable development and is a material consideration in planning decisions. Meeting the challenge of climate change is at the core of the NPPF and it sets out how planning plays an intrinsic role in supporting the delivery of renewable and low carbon energy developments.

Paragraphs 170 to 202 emphasise the importance of preservation and enhancement of the built and natural environment. They set out detailed requirements for the assessment of the impact on the landscape value, biodiversity and habitats, and the historic environment. These requirements have been considered throughout the relevant assessments accompanying the Application and have been addressed, to demonstrate compliance of the Development in Section 5 - Assessment of the Development.

4.4 **Local Development Plan**

The relevant Development Plan for the Site consists of the Wealden District Core Strategy Local Plan (2013) ('the CSLP'), the saved policies of the adopted Wealden Local Plan (1998) ('the WLP'), the Affordable Housing Delivery Local Plan (2016), the East Sussex, South Downs and Brighton & Hove Waste and Minerals Local Plan (2013) and the Waste and Minerals Site Plan (2017), as well as neighbourhood plans and supplementary planning documents.

The Wealden Local Plan (2019) was prepared with the intention of replacing the CSLP and was submitted to the Secretary of State for examination in January 2019. However, this was withdrawn following the Stage One examination process and therefore, the policies in the Wealden Local Plan no longer carry any weight.

4.4.1 **Core Strategy Local Plan 2013**

The CSLP⁵ is a statutory document which sets out the strategic policies for the Wealden District. The CSLP aims to mitigate climate change by seeking to reduce carbon emissions and other greenhouse gases and encouraging the use of renewable and low carbon energy sources.

The Site is not subject to any planning designations in the adopted Local Plan Policies Pap. The following policies outlined within the Core Strategy Local Plan are considered to be of relevance to the Development:

Policy SPO1: This policy seeks to protect and enhance recognised biodiversity and geodiversity attributes, along with managing distinct landscapes of the District and those which are nationally designated.

Policy SPO2: The Council will ensure that the intrinsic quality of the historic environment is protected and that Wealden's environmental, heritage and cultural assets are used appropriately.

Policy SPO6: Policy SP06 aims to improve the economic prosperity by helping existing companies to expand and develop. The policy will help improve the range of employment opportunities and the chance for people to work close to where they live.

Policy SPO9: Developments are required to take into account adaptation and mitigation of climate change impacts, including minimising greenhouse gas emissions and the use of non-renewable energy.

Policy SPO10: Policy SP010 indicates that the Council will ensure the safety of residents and reduce the economic impact of flooding events by directing development away from areas of medium and high flood risk.

Policy SPO11: This policy seeks to enhance the District's geodiversity and biodiversity by creating a coherent network of green infrastructure that can better support wildlife and reduce the impact of climate change.

Policy SPO12: Policy SP012 is focussed on ensuring safety, in terms of preventing crime and promoting road safety.

Policy SPO13: This policy promotes local distinctiveness and sustainability, as well as ensuring that new development addresses climate change issues.

Policy WCS7: Effective Provision of Infrastructure: This policy emphasises the importance of adequate infrastructure, including utilities infrastructure, to support development.

Policy WCS12: Biodiversity: The Council seeks a net gain in biodiversity to contribute to the biodiversity targets provided in the Sussex Biodiversity Action Plan, along with the protection, enhancement and restoration of habitats, biodiversity and geological features, and ecology networks. Should a net gain in biodiversity not be achieved, compensatory measures will be applied so there is no overall net loss of biodiversity.

Policy WCS13: Green Infrastructure: Policy WC13 seeks to ensure a multifunctional green infrastructure network that maintains and improves the biodiversity and landscape character and contributes to climate change objectives.

Policy WCS14: Presumption in Favour of Sustainable Development: This policy echoes the NPPF presumption in favour of sustainable development and indicates that

⁵ Wealden District Council (2013) *Core Strategy Local Plan* [online] Available at: <https://www.wealden.gov.uk/planning-and-building-control/planning-policy/adopted-local-plan-documents/core-strategy-local-plan/> (Accessed 28/6/2021)

the Council will take a positive approach and work proactively with applicants jointly to find solutions wherever possible. Applications which accord with the policies in the Local Plan will be approved without delay. Where relevant policies are absent or out of date, permission will be granted unless material considerations indicate otherwise.

Policy	Addressed within Statement Section
Policy SPO1	5.1, 5.2
Policy SPO2	5.4
Policy SPO6	5.1
Policy SPO9	5.1, 5.6
Policy SPO10	5/6
Policy SPO11	5.1, 5.2, 5.3
Policy SPO12	5.5
Policy SPO13	5.1
Policy WCS7	5.1
Policy WCS12	5.1, 5.3
Policy WCS13	5.1, 5.2, 5.3
Policy WCS14	5.1

4.4.2 **Wealden Local Plan (1998) – Saved Policies**

The following policies from the WLP Index of Saved Policies⁶ are considered to be of relevance to the development:

Policy GD2 - Development within development boundaries: This policy states that development outside of development boundaries will be resisted unless it is in accordance with specific policies in the Local Plan.

Policy EN1 - Sustainable Development: Policy EN1 indicates that the Council will pursue sustainable development, having regard to Government guidance and the council's Strategy for the Environment.

Policy EN8 - Low Weald: This policy states that development within the Low Weald will only be permitted if it conserves the low rolling agricultural character of the landscape. The policy encourages the conservation of unspoilt and remote countryside and the retention of woods, trees and hedges.

⁶ Wealden District Council (1998) *Wealden Local Plan* [Online] Available from: <https://www.wealden.gov.uk/planning-and-building-control/planning-policy/adopted-local-plan-documents/adopted-wealden-local-plan-1998/> (Accessed 28/6/2021).

Policy EN12 - Protection of trees and woodlands: The Council will seek to retain and enhance the contribution of trees and woodland to the landscape character of the District.

Policy EN14 - Landscaping with developments: Development proposals are required to incorporate landscaping, where appropriate. The policy encourages the retention of existing trees and hedges and advises that landscape schemes should comprise primarily native species and have regard to nature conservation benefits.

Policy EN27 - Layout and Design of development: This policy sets out criteria for the layout and design of developments and seeks to avoid adverse impacts privacy and amenity. Key considerations include scale, form, materials, landscaping, noise, traffic movements and security.

Policy TR3 - Traffic impact of new development: This policy sets out criteria for development in relation to transport and highways. Development must not create or perpetuate unacceptable traffic conditions and must provide a satisfactory means of access, as well as suitable public transport facilities, where appropriate.

Policy TR16 - Car Parking Standards: Developments are required to provide sufficient vehicle parking on site.

Policy CS2 - Drainage: Policy CS2 requires developments to provide surface and foul water drainage to meet Local Authority standards, to avoid an increased risk of flooding or surface water run-off to watercourses.

Policy	Addressed within Statement Section
Policy GD2 - Development within development boundaries	5.1
Policy EN1 - Sustainable Development	5.1
Policy EN8 - Low Weald	5.1, 5.2
Policy EN12 - Protection of trees and woodlands	5.1, 5.2
Policy EN14 - Landscaping with developments	5.1, 5.2
Policy EN27 - Layout and Design of development	5.2, 5.5
Policy TR3 - Traffic impact of new development	5.5
Policy TR16 - Car Parking Standards	5.5
Policy CS2 - Drainage	5.6

5 ASSESSMENT OF THE DEVELOPMENT

5.1 The Principle of Development

5.1.1 *Climate Change and Renewable Energy*

The Development comprises essential infrastructure to support the existing National Grid Substation by stabilising the grid. The Development will reduce the reliance of the national grid on coal and gas to provide inertia. It will also enable the grid to support a greater proportion of renewable and zero carbon energy by providing storage so that the energy is available to the grid when it is most needed.

The Development will help to reduce the carbon emissions footprint in the Wealden District in light of the climate emergency declared by the Council and the Council's Climate Emergency Plan as detailed in Paragraph 1.2.4 of this Statement. The Climate Emergency Plan identifies the decarbonisation of the grid as the most important factor for meeting the local commitment for Net Zero emissions by 2050. While the CEP states that the Council has limited control over the decarbonisation of the National Grid, planning is highlighted within the document as one of the key routes for the Council to influence progress on Net Zero. This planning application is therefore an opportunity for the Council to support grid decarbonisation as set out in the CEP.

Furthermore, the Development will contribute to meeting the UK-wide 'Net Zero' carbon emissions target, as detailed in Section 6 of this Statement. The Development is therefore supported by NPPF Paragraph **148**, which encourages the transition to a low carbon economy and policies within the CSLP, including Policy **SPO9**, which seeks to minimise greenhouse gas emissions and non-renewable energy; Policy **SP013**, which seeks to address climate change issues; and Policy **WCS7**, which supports infrastructure provision.

5.1.2 *Location*

The location of the Development has been selected due to its proximity to the existing Substation where there is an identified need for the Development as set out in Section 1 of this Statement. The Development would not be suitable for location in a built-up residential area and there are no industrial parks or brownfield Sites in the vicinity of the Substation. As such, there is no reasonable alternative to locating this Development on a greenfield site outside of development boundaries.

The layout has been designed to minimise land take and built development is restricted to one well-defined field. The location of the Development immediately to the southwest of the Substation will ensure that the Development is read as an extension of the Substation rather than a standalone development within open countryside. The Site is well separated from residential properties in terms of both distance, topography and vegetation which will minimise any impacts on residential amenity.

In light of the strong policy support for this type of development throughout the CSLP and the compliance with all of the relevant CSLP and WLP Policies, the Development complies with WLP Policy **GD2**, which indicates that the acceptability of proposals outside of development boundaries depends on accordance with other local plan policies.

5.1.3 *Agricultural Land Quality*

In terms of agricultural land quality, the Site has been used for grazing by cattle and horses and has no known history of crop cultivation. A site-specific Agricultural Land Survey has assessed the entire site as comprising ALC Grade 3b (moderate quality) land, as confirmed in the Agricultural Land Classification Report at Appendix 10. The Site therefore does not comprise 'best and most versatile land' and the Development complies

with NPPF Paragraph **170** with regard to preserving best and most versatile agricultural land.

5.1.4 ***Biodiversity and Green Infrastructure***

The Development will retain and protect existing trees and woodland and deliver a new Habitat Management Area to the southeast of the main compound. The Habitat Management Area will convert low value heavily grazed grassland to higher value wildflower/tussocky grassland while retaining the existing pond. Combined with the proposed native tree, shrub and wetland planting around the main compound, the Development will provide a net gain for biodiversity and enhance green infrastructure, in accordance with CSLP Policies **SPO1, SPO11, WCS12 and WCS13**, as well as WLP Policies **EN1, EN8, EN12, and EN14**.

5.1.5 ***Social and Economic Benefits***

In addition to the decarbonisation and biodiversity benefits, the Development will also contribute to the economic objective of the NPPF by providing infrastructure to support the delivery of a flexible energy system. The recently published Energy White Paper sets out how improvements to the national grid would deliver significant cost savings to domestic electricity consumers and benefit the wider UK economy, with the cost savings of a more flexible energy system estimated as £12 billion per year by 2050. Furthermore, improved grid stability would support the transition to electric vehicles and the manufacturing sector, which is highly dependent on a stable supply of electricity.

The Development would also deliver local social and economic benefits by creating local employment opportunities related to the construction and operation of the facility, which are expected to deliver in 60 FTE and 11 FTE jobs respectively. The Development therefore complies with CSLP Policy **SPO6**.

Overall, there is strong policy support for the principle of development with regard to the location, purpose and benefits of the Development. Taking all of the above factors into account, the Development comprises sustainable development and the presumption in favour of sustainable development set out in NPPF Paragraphs **8** and **11**, CSLP Policy **WCS14** and WLP Policy **EN1**.

The relevant environmental considerations are assessed in detail in the sections below.

5.2 **Landscape and Visual Impact**

A Landscape and Visual Appraisal ('LVA') has been undertaken and is submitted with this application at Appendix 2a. The LVA comprises a description of existing baseline conditions, an assessment of potential landscape and visual effects (including cumulative effects with the approved BESS development to the east of the substation) and recommendations for mitigation measures. The LVA incorporates the results of a desk study, a field study and further evaluations including a viewpoint appraisal, zone of theoretical visibility and visualisations.

The LVA indicates that the Site itself is of low landscape sensitivity due to the absence of landscape designations, high degree of containment afforded by hedgerows and woodland along its boundaries and the presence of the existing National Grid Substation and pylons adjacent to the Site.

A Tree Survey Report at Appendix 2b provides an overview of the existing trees and hedges at the Site and the arboricultural impacts of the Development. The Development has been designed to protect and enhance existing trees and hedges wherever possible. 4 trees which overhang the existing access route are proposed for removal as pruning would not be practical to address potential vehicle impacts. These are insignificant low value trees that do not make a valuable contribution to the area. Part of a tree group at

the entrance to the main compound is also proposed for removal to facilitate access into the Site. The tree group is not visually prominent and the remaining trees at either side of the access will ensure that the group can continue to function as a potential wildlife corridor.

Regarding the effects of the Development, the existing pasture would be lost but boundary vegetation would be retained and protected except for a small amount of hedge, which is to be removed to enable access. In addition, the Development incorporates significant planting around the Site boundaries. Taking mitigation measures into consideration, the residual effects of the Development on the landscape character are predicted to be minor adverse on the character of the Site, and negligible adverse on the Ridges and Slopes Local Landscape Character Type (LLCT) and Ninfield and Hooe Local Landscape Character Area (LLCA). The cumulative impact of the Development with related developments in the surrounding area on the public footpath (Catsfield 21b and 22) which runs adjacent to the northeastern Site boundary is predicted to minor-moderate adverse at Year 1 and negligible adverse at Year 15.

The main landscape and visual effects would largely be limited to the Site itself and its immediate setting. The Development would not give rise to unacceptable effects on any landscape-related planning designations. Neither would it give rise to unacceptable cumulative effects on landscape character in conjunction with cumulative sites identified in the locality, namely the existing Ninfield National Grid Substation, the existing solar farm development at Saint Francis Farm and the proposed battery storage scheme located immediately north of the solar farm.

Overall, the LVA confirms that the landscape and visual effects of the Development would be small in magnitude and localised due to the contained nature of the Site and its proximity to the existing substation. There is no reason why these effects should be regarded as unacceptable and the Development therefore complies with NPPF Paragraphs **127** and **170**, CSLP Policies **SP01**, **SPO11**, **WCS13** and WLP Policies **EN8**, **EN12**, **EN14** and **EN27** with regard to landscape.

5.3 Ecology and Biodiversity

A Preliminary Ecological Appraisal (PEA) has been undertaken and is included at Appendix 4a. The PEA incorporates the results of a desk study, Extended Phase 1 Habitat Survey, Bat Roost Assessment, Badger Survey, Ornithology Walkover and Great Crested Newt Survey. In addition, species-specific survey reports for breeding birds and great crested newts are submitted at Appendices 4b and 4c.

5.3.1 Designated Sites

The Site itself is not subject to any ecological designations. In terms of statutory designations, High Woods SSSI is located 1.5 km to the southwest of the Site, while Pevensy Levels SAC/Ramsar is located 3.6 km to the west. Due to the characteristics of the Development and the lack of clear functional connectivity between the Site and the designated sites, impacts on these designated sites are extremely unlikely, during both construction and operation of the Development.

Pre-application advice received from Wealden District Council indicated that this application should consider potential of the Development impacts on the Ashdown Forest and Lewes Downs Special Areas of Conservation with regard to vehicle emissions and air quality. This is assessed in the Air Quality Statement (AQS) at Appendix 7. Ashdown Forest SAC lies 28.8 km northwest of the Site, while Lewis Downs SAC is 27 km northwest the Site. The AQS indicates that in light of the length of construction, associated vehicle numbers and distances from the SACs, there will be no air quality impact on the SACs as a result of the Development.

5.3.2 **Habitats and Biodiversity**

Multiple areas of ancient and semi-natural woodland and ancient replanted woodland are located within 2 km of the Site. Further priority habitats including areas of deciduous woodland, ghyll woodland and traditional orchards lie within 2 km of the Site. The Site is bordered by two areas of ancient woodland; Spray's Wood to the northwest and Kiln Wood to the south and on either side of the existing access track.

The main habitat identified at the Site during the Phase 1 Survey is poor semi-improved grassland, which has been heavily grazed by livestock. Further habitats found within and around the Site include mixed semi-natural woodland along the northeast boundary, scattered trees/scrub and a large pond in the adjacent field to the southeast.

A Biodiversity Metric Assessment ('BMA') has been undertaken and is submitted with this application at Appendix 4d. The assessment makes use of the DEFRA Biodiversity Metric 2.0 Calculation Tool Beta Test (2019) to quantify the biodiversity units before and after construction to determine the impact of the Development on biodiversity.

The Development will lead to the loss of predominantly low value semi-improved grassland, the environmental effects of which will be minimal. The more sensitive habitats such as woodland and trees/scrub will not be retained, with the exception of a small length of hedge in the southeastern corner to be removed to facilitate access. In addition, the off-site pond will be protected. New habitats to be created at the Site and adjacent field to the southeast include native scrub mix, tussocky wildflower grassland and wetland meadow.

The BMA calculations indicate that the Development will result in a 16.31% net gain in biodiversity compared to the existing situation.

5.3.3 **Protected Species**

The Site contains trees with moderate bat roosting potential and has a low-moderate suitability for foraging and commuting bats. However, the Development will not directly impact trees with roosting potential and will not have a significant impact on foraging/commuting habitats. Bat boxes will be installed on mature trees to provide enhanced roosting opportunities.

With regard to amphibians, three off-site ponds were assessed as having the potential to support great crested newts (GCN). An eDNA survey in 2020 confirmed the presence of GCN in Pond 2 in the field immediately to the southeast of the Site. Further detailed population surveys were carried out in Pond 2 in spring 2021 and a medium population of GCN was recorded, as detailed in the great crested newt survey report at Appendix 4c.

The Site is not considered to be of high value for reptiles, although small amounts of potential sheltering habitat is present. Linear habitats will be retained and will not be directly impacted by the Development.

The Development will not lead to the functional loss of the pond for GCN as it is to be retained and there is still habitat linkage to the wider areas of terrestrial habitats. In addition, there is no hydrological link from the site to Pond 2 and there will be no indirect impact on this waterbody. Habitat creation including wildflower/tussocky grassland, native species scrub and hedgerow and hibernacula and log piles in the field containing Pond 2 is proposed to provide enhanced foraging and commuting opportunities for GCN. A non-licensed method statement will be produced prior to construction to ensure that GCN will be fully protected and that ecological enhancement will be assured.

Badgers are likely to use the habitats on the Site and a single badger sett was identified in the Phase 1 Survey. However, the Development will not directly impact any known setts. A pre-commencement badger survey will be undertaken prior to construction and

protection measures will be implemented to ensure that badgers are not disturbed during construction.

A three-visit Breeding Bird Survey was carried out in spring 2020 to quantify the breeding bird assemblage at the Site, as set out in the Breeding Bird Survey Report at Appendix 4b. A total of 24 bird species were recorded during the survey, including four species of conservation concern (mallard, mistle thrush, stock dove and song thrush. Ten bird species showed evidence of confirmed or probable breeding within the area, with a further 11 species possibly breeding.

The short sward grassland within the Site is of limited value to birds. As the existing woodland, hedges and tall vegetation within and around the Site will be retained, any adverse effects on ornithology interests at the Site are considered negligible. Enhancement measures such as new tree and shrub planting are proposed to improve nesting and foraging resources for birds and, as such, the development is expected to provide a long-term net gain for birds within the Site and immediate surroundings.

The Site and surrounding area contains suitable habitat for hazel dormouse foraging, commuting and nesting. However, these habitats will be retained and enhanced by the Development and precautionary mitigation will be implemented during construction to ensure that hazel dormouse will not be negatively impacted by the Development.

Overall, no significant adverse impacts on habitats or species are predicted in the absence of mitigation during construction and operation of the Development. The habitats and protected species have the potential to be positively impacted by the additional planting within and to the southeast of the Site, creating higher value habitats than those lost by the Development.

The Development will not result in harm to protected species, designated sites, watercourses or habitats and will result in a significant net gain for biodiversity. It therefore complies with NPPF Paragraphs **170** and **175** and CSLP Policies **SPO11**, **WCS12**, **WCS13** with regard to ecology and biodiversity.

5.4 Heritage and Archaeology

A Heritage Impact Assessment (HIA) (Appendix 3) has been undertaken to assess the known or potential archaeological assets and consider any potential effects on heritage features.

The HIA indicates that the Site was cleared of Ancient Woodland within the medieval period and has since been used for agricultural purposes. As such, there is low potential for surviving unknown archaeological remains to be uncovered, and no direct effects from the Development on known assets. Geophysics is recommended as part of the mitigation design, followed by consultation with the East Sussex County Council Archaeologist to agree post-consent conditions where required, following the final design.

44 Listed Buildings have been identified within 2 km of the Site. Of these, 9 designated assets were assessed to have potential for their settings to be affected by the Development, based on a screened Zone of Theoretical Visibility (ZTV). These 9 Grade II Listed Buildings include the Grade II Listed Potman's Farmstead, two Grade II Listed Buildings to the south-east at Watermill Stream and six Grade II Listed Buildings to the north-east at Henley's Down.

The HIA ascertained that none of the assets would undergo a change to their setting, due to distance from the Site and visibility within the landscape, as well as the presence of the existing 400 kV substation adjacent to the Site. As such, the Development will not result in any harm to the designated heritage assets in the surrounding area.

As such, the Development will not result in harm to any archaeological features or heritage assets and therefore complies with NPPF Paragraphs **189-202** and CSLP Policy **SPO2** with regard to heritage and conservation.

5.5 Transport

The Transport Statement (Appendix 6) provides an overview of the Development in relation to traffic and assesses the impact on the highways network within the area.

Construction and operational access to the Development would be taken from the existing access track from Potman's Lane. Potman's Lane is a single carriageway road which has previously seen HGV use in the construction of developments. It is considered sufficient to carry HGV traffic for a temporary period associated with the construction of the development.

A visibility splay assessment has been undertaken using the minimum setback distance of 2.4 m, which confirms that the achievable splays are 215 m to the east and 174 m to the west. Although the visibility splay to the west is less than the 215 m normally required for a 60 mph limit, it is sufficient for vehicle speeds of 55 mph, which is a greater speed than is anticipated in practice, given the proximity of the entrance to a 30 mph zone. However, additional traffic management measures will be put in place on a precautionary basis during the construction phase to mitigate the potential impact on construction traffic.

A swept path assessment has been undertaken which demonstrates that the Site can be successfully accessed by an HGV in forward gear. 4 parking spaces for staff vehicles will be provided within the Site. In terms of road safety, no historical road traffic collisions (RTCs) have been reported on Potman's Lane in the vicinity of the access junction.

The construction of the Development is anticipated to run for approximately 18 months. Approximately 5,046 two-way vehicle movements are expected to occur during this period for staff, and to deliver construction materials and components. An average of 130 two-way car/light van movements are expected to be made to the Site per day. During the peak month of construction (Month 1), up to 17 HGV two-way HGV movements and 4 car/van movements are anticipated per day. This would represent an increase of 5-7% over baseline levels at three traffic locations based on Department for Transport data. The increase in traffic generation due to construction traffic is therefore negligible and not significant.

Traffic management measures will be implemented during construction to ensure the safe operation of route within the vicinity of the Site. These measures will include such as enforcement of the approved route to Site, temporary warning signage, a construction traffic management plan and wheel washing facilities.

During the operational period, the Development will have no discernible impact on traffic levels as it will be remotely operated, with occasional visits for inspection and maintenance.

The proposed entrance junction meets highways standards and the Development will not have an adverse impact on the highways network. The Development therefore complies with NPPF Paragraphs **102** and **108**, CSLP Policy **SPI12**, and WLP Policies **EN27**, **TR3** and **TR16**.

5.6 Flood Risk and Drainage

A Flood Risk Assessment (FRA) (Appendix 5a) has been completed as the site area exceeds 1 ha. The FRA confirms that the Site is predominantly located within Flood Zone 1, while there are small areas of Flood Zone 2 and 3 along the northern site boundary associated with Watermill Stream and crossing the existing access track. The electrical

infrastructure within the main compound is entirely located within Flood Zone 1 with only part of the proposed boundary fence located along the boundary with Flood Zone 3. As such, risk of the Development flooding from Watermill Stream is negligible. The risk of flooding from all other sources is also assessed as negligible.

The Outline Sustainable Drainage Strategy at Appendix 5b sets out the drainage strategy which will be implemented at the Site. The Drainage Strategy is informed by consultations with the East Sussex County Council (the Lead Local Flood Authority), Rother District Council, Pevensey and Cuckmere Internal Drainage Board and the Environment Agency.

The Development has been designed to minimise surface water runoff with internal access tracks mainly made up of unbound aggregate. Battery containers, inverters, transformers and the communications house will be mounted on plinths and underlain by crushed stone which is a permeable surface. The total proposed impermeable area at the Site is therefore 0.17 ha. The proposed surface water drainage network will be designed to attenuate and discharge flows without overtopping in up to a 1:100-year (+40% climate change allowance) event, with a rate of 6.9 l/s.

In order to restrict surface water flows, a Sustainable Urban Drainage System (SuDS) pond with a hydro-brake will be created adjacent to Watermill Stream in the northeast of the Site. The pond will have a total area of 111.5 m² and a depth of 1 m.

Foul water from the welfare facility will be disposed of by a licensed waste carrier and as such, there will be no foul water discharge from the Site.

Overall, the drainage scheme will reduce the rate of runoff from the Site to the surrounding area and store more water in comparison with the current situation. The Development will be safe from flood risk and will not increase the risk of flooding elsewhere. The Development will therefore comply with NPPF Paragraphs **158-161** and **163**, CSLP Policies **SPO9** and **SPO10**, as well as WLP Policy **CS2** in relation to flood risk and drainage.

5.7 Noise

A Noise Impact Assessment (Appendix 8) has been undertaken to determine the existing acoustic climate, predict the sound levels as a result of the Development and assess the potential impact on nearby receptors. The Development has been designed to minimise noise emissions, with the synchronous condensers enclosed in a building and the batteries enclosed in containers.

The Council's Environmental Health Officer was consulted prior to undertaking the noise assessment and it was agreed that noise levels associated with the Development should be limited to no more than 5 dB above background levels, subject to context.

Background noise monitoring was undertaken at two locations in the vicinity of the nearest residential dwellings between 14th and 15th June 2021. The noise profile was typical of a rural area, showing a noticeable dip in noise levels during night time and a steady noise level throughout the day.

Following the noise monitoring, noise modelling was undertaken to predict sound levels at the nearest receptors. It was found that the rating levels for the Development would not exceed 5dB above the respective background sound levels at the nearest, and therefore all noise-sensitive receptors.

As such, the Development will not have an unacceptable noise impact and therefore complies with NPPF **Paragraph 180** and WLP **Policy EN27**.

6 RELEVANT MATERIAL CONSIDERATIONS

6.1 Planning Guidance

6.2 *National Planning Practice Guidance*

The National Planning Policy Guidance⁷ ('the NPPG') provides web-based advice across a variety of planning matters which is continuously updated. The NPPG section 'Renewable and Low Carbon Economy' identifies the important role that the planning system has in increasing renewable energy, whilst also setting out that need does not automatically override environmental protection. The NPPG also advises LPAs not to rule out renewable and low carbon energy through inflexible rules on buffer zones and separation distances.

The NPPG, whilst providing useful advice, does not change national planning policy, which remains the NPPF.

6.2.1 *Wealden Design Guide Supplementary Planning Document (SPD)*

The Wealden Design Guide⁸ was adopted in November 2008. The SPD provides guidance on how new developments can retain and enhance local distinctiveness, within the High Weald Character Area and throughout the wider District.

While much of the SPD is focused on new buildings, it sets out guidelines on how applications can address a variety of issues and impacts, including:

- Landscape;
- Wildlife and biodiversity;
- Sustainability and reducing carbon emissions;
- Heritage;
- Sustainable Drainage Systems and Flood Risk;
- Landscaping; and
- Heritage Assets.

This guidance has been taken into account throughout the design of the Development and is reflected in the plans and technical reports which are submitted with this planning application.

6.3 National Energy and Climate Change Policy and Legislation

6.3.1 *National Policy Statements EN-1 and EN-3*

Overarching National Policy Statement for Energy EN-1⁹ was published in July 2011 to set out national policy for energy infrastructure in the UK. Its primary purpose is to be applied to decisions for Nationally Significant Infrastructure Projects, but can also be a material consideration in the determination of planning applications.

An integral part of the UK energy strategy is to reduce the dependency on fossil fuels. Paragraph 2.2.16 of NPS EN-1 identifies that approximately a quarter of the UK's generating capacity is due to close by 2018 and that new low-carbon generation is required which is reliable, secure and affordable. To address this objective, and meet the

⁷ Ministry of Housing, Communities & Local Government (2016) *Planning Practice Guidance* [Online] Available at <http://planningguidance.communities.gov.uk/blog/guidance/> [Accessed 13/08/2019]

⁸ Wealden District Council (2008) *Wealden Design Guide* Available at: <https://www.wealden.gov.uk/planning-and-building-control/planning-policy/planning-policy-documents/wealden-design-guide/> (Accessed 28/6/2021)

⁹ Department of Energy & Climate Change (2011) *Overarching National Policy Statement for Energy (EN-1)* Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf (Accessed 28/6/2021)

emissions reduction targets, the electricity being consumed will need to be almost exclusively from low carbon sources, in contrast with the first quarter of 2011, when around 75% of our electricity was supplied by burning gas and coal. Therefore, a new low carbon energy mix is required which is reliable, secure and affordable. To this end, EN-1 states that:

'It is necessary to bring forward new renewable electricity generating projects as soon as possible. The need for new renewable energy electricity generation projects is therefore urgent.'

National Policy Statement for Renewable Energy Infrastructure EN-3¹⁰ was also published in July 2011 and sets out the national policy for renewable energy projects. EN-3 should be read in conjunction with EN-1. Similar to EN-1, EN-3 sets out the importance of renewable energy in achieving the Government's ambitious targets for renewable energy generation, highlighting that a *'significant increase in generation from large-scale renewable energy infrastructure is necessary.'*

In order to facilitate the increase in renewable electricity generation projects recommended by National Policy Statements EN-1 and EN-3, it is essential that the grid has sufficient capacity and stability to accommodate renewable energy.

6.3.2 **UK Renewable Energy Roadmap**

The UK Renewable Energy Roadmap (2011)¹¹ ('the Roadmap') sets out the UK Government's commitment to increasing the use of renewable energy. The Roadmap identifies the National Policy Statements as a potential means of improving the delivery of renewable energy development through their advice on need, mitigation and delivery in a sustainable manner.

The UK Renewable Energy Roadmap Update (2013)¹² ('the Roadmap Update') reports on the progress that has been made in the renewable energy sector since the publication of the Roadmap. The Roadmap Update re-iterates Central Government's commitment to renewable energy (Paragraph 1):

The Government strongly supports renewable energy as part of a diverse, low carbon and secure energy mix. Alongside gas, low-carbon transport fuels, nuclear power and carbon capture and storage, renewable energy offers the UK a wide range of benefits from economic growth, energy security and climate change perspective.

The Roadmap Update indicates that tools to help balance the supply and demand of electricity, including energy storage and management, are required to remove constraints on the level of renewable energy which the grid can support.

¹⁰ Department of Energy & Climate Change (2011) *National Policy Statement for Renewable Energy Statement (EN-3)* Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47856/1940-nps-renewable-energy-en3.pdf (Accessed 28/06/2021)

¹¹ Department of Energy and Climate Change (2011) *The UK Renewable Energy Roadmap* [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48128/2167-uk-renewable-energy-roadmap.pdf (Accessed 7/4/2021)

¹² Department for Energy and Climate Change (2013) *UK Renewable Energy Roadmap Update 2013* [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255182/UK_Renewable_Energy_Roadmap_-_5_November_-_FINAL_DOCUMENT_FOR_PUBLICATION_.pdf (Accessed 7/4/2021)

The Roadmap Update also recognises that a number of barriers continue to present challenges to delivery, including pre-consent delays.

6.3.3 ***Net Zero – The UK’s Contribution to Stopping Global Warming***

In May 2019 the Committee on Climate Change published *Net Zero – The UK’s Contribution to Stopping Global Warming*. The report recommends a new emissions target for the UK: net zero greenhouse gas emissions by 2050.

The Report highlights the falling cost of key renewable technologies including battery storage and advises that flexibility in the energy supply (e.g. demand response, storage and interconnection) should be encouraged by policy and regulatory frameworks.

On 27 June 2019, the Climate Change Act 2008 was amended to introduce a target for at least a 100% reduction in greenhouse gas emissions (compared to 1990 levels) in the UK¹³ by 2050. This ‘net zero’ target is likely to affect and increase future Government renewable and low carbon energy targets and create a more positive policy environment for energy storage and management development.

6.3.4 ***Progress in Reducing Emissions – 2021 Committee on Climate Change Progress Report to Parliament***

The 2021 Committee on Climate Change (CCC) Progress Report to Parliament¹⁴ was published in June 2021 and provides a review of Government efforts over the previous 12 months with regards to Climate Change. While UK emissions fell by 13% in 2020, much of this decline was likely a result of the Covid-19 pandemic and as such, lasting changes are far from certain. The CCC report recommends taking action to transition to a fully decarbonised electricity system and enhance system flexibility. Furthermore, it sets a target to phase out gas-fired electricity generation in the UK by 2035, subject to ensuring security of supply.

There has been significant progress in the transition to renewables, with emissions from electricity having decreased by 65% from 2009 to 2019. However, the CCC report notes that electricity systems will need to be adapted to increase generation shares from renewable resources and ensure that the system can support the transition to electric vehicles.

6.3.5 ***UK Sixth Carbon Budget***

On 20 April 2021 the Department for Business, Energy and Industrial Strategy and Prime Minister’s Office jointly announced that the Sixth Carbon Budget will limit further the volume of greenhouse gasses emitted over the 5-year period from 2033 to 2037¹⁵. The UK Government is already working towards a reduction of 68% by 2030, and states that the goal of achieving 78% by 2035 compared with 1990 levels constitutes the world’s most ambitious climate change target.

For the first time, the Carbon Budget will incorporate the UK’s share of international aviation and shipping emissions. The statement also notes that the UK continues to break

¹³ UK Government (2019) *The Climate Change Act 2008 (2050 Target Amendment) Order 2019* (2019 No. 1056) [Online] Available at: <http://www.legislation.gov.uk/ukxi/2019/1056/made> (Accessed 7/4/2021)

¹⁴ Committee on Climate Change (2021) *Progress in Reducing Emissions – 2021 Report to Parliament* [Online] Available at: <https://www.theccc.org.uk/publication/2021-progress-report-to-parliament/> (Accessed 25/6/2021)

¹⁵ UK Government (2021) *Press release: UK enshrines new target in law to slash emissions by 78% by 2035* [Online] Available at: <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035> (Accessed 5/5/2021)

records in renewable energy generation, which has more than quadrupled since 2010, with low carbon electricity accounting for other 50% of total generation.

The new target will be given statutory force by the end of June 2021, with legislation which was introduced through Parliament on 21 April 2020.

6.3.6 ***UK Clean Growth Strategy: Leading the Way to a Low Carbon Future***

The UK Clean Growth Strategy (2017)¹⁶ ('The Strategy') builds on the UK's carbon emissions reduction progress. The report conveys the Government's objective of achieving clean growth, whilst ensuring an affordable energy supply for businesses and consumers. The strategy is in-line with the 2015 Paris Agreement where 195 countries agreed to stretch national targets to keep the global temperature rise below 2C degrees. Therefore, further actions and investment will be needed to ensure the shift to clean growth in the coming years, where the clean growth plays a central role in the UK's Industrial Strategy.

To meet the fourth and fifth carbon budgets (2023-2027, and 2028-2032), there will be a need for a significant acceleration in the pace of decarbonisation, while ensuring energy security supply at minimum cost to both industry and domestic consumers. One of the 'Clean Growth Innovation Challenges' identified within the Strategy is to develop smart energy systems so that clean technologies can integrate smoothly in the energy supply network.

6.3.7 ***The UK's Draft Integrated National Energy and Climate Plan ('NECP')***

The UK NECP¹⁷ was produced in January 2019 and sets out the UK Government's climate and energy objectives, targets, policies and measures covering the five dimensions of the Energy Union. The NECP makes clear that in order to meet the UK's 2050 climate change target, improvements in energy efficiency and energy management are required. This includes smart technologies such as energy storage and system balancing.

6.3.8 ***Upgrading Our Energy System – Smart Systems and Flexibility Plan ('SSFP')***

In July 2017, BEIS and Ofgem published Upgrading our Energy System: Smart Systems and Flexibility Plan¹⁸, which sets out 29 actions that the UK Government, Ofgem, and industry will undertake to remove barriers to smart technologies, including storage; enable smart homes and businesses; and make electricity markets work towards flexibility. The SSFP states that:

By harnessing the potential of energy storage, demand-side response and smarter business models, we have an opportunity to upgrade to one of the most efficient, productive energy systems in the world. This is central to how we deliver secure, affordable and clean energy now and in the future.

¹⁶ UK Government (2017) *Government reaffirms commitment to lead the world in cost-effective clean growth* [Online] Available at: <https://www.gov.uk/government/news/government-reaffirms-commitment-to-lead-the-world-in-cost-effective-clean-growth> (Accessed 7/4/2021)

¹⁷ Department for Business, Energy and Industrial Strategy (2019) *The UK's Draft Integrated National Energy and Climate Plan* [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/774235/national_energy_and_climate_plan.pdf (Accessed 7/4/2021)

¹⁸ Department for Business, Energy and Industrial Strategy and Office of Gas and Electricity Markets (2017) *Upgrading Our Energy System – Smart Systems and Flexibility Plan* [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633442/upgrading-our-energy-system-july-2017.pdf (Accessed 7/4/2021)

The Government aims to implement the actions in the Plan by 2022, enabling the electricity system to work more flexibly and efficiently, potentially unlocking £17-40 billion in savings across the electricity system by 2050. Other benefits of improving energy systems include a reduction in the amount of additional energy generation required and improvements to the functioning of the grid.

6.3.9 **Energy White Paper – Powering our Net Zero Future**

The UK Government published its Energy White Paper¹⁹ (‘the Paper’) in December 2020. The Paper builds on the Prime Minister’s Ten Point Plan to set the energy-related measures consistent with net zero emissions by 2050. One of the key aspects of achieving net zero identified in the paper is the modernisation of the energy system.

The Paper indicates that electricity demand in the UK could double by 2050 due to the electrification of transport and heating. The energy system and power grid will need to adapt accordingly to support the deployment of clean energy technologized and more decentralised energy generation. The cost savings of a more flexible energy system are estimated as £12 billion per year by 2050 compared with a low flexibility system, which would result in lower costs for consumers. Greater flexibility would also mean that the amount of power generation development required to meet demand would be lower.

The Paper acknowledges that flexibility services have traditionally been provided by gas-fired power stations but that there is an opportunity for flexibility to be provided by cleaner sources such as batteries. Additional physical infrastructure is required to maintain the resilience and reliability of the grid.

6.3.10 **Energy Storage and Management Drivers**

There is a focus at International, European and National level on how the UK can deliver secure, clean and affordable electricity to consumers. Energy management facilities will play an important role in achieving this. A report by the National Infrastructure Commission (2016)²⁰ estimates that smart power systems in the UK, which include energy storage and management “could save consumers up to £8 billion a year by 2030, help the UK meet its 2050 carbon targets and secure the UK’s energy supply for generations.”

The Development is designed to support the flexible operation of the National Grid and decarbonisation of electricity supply. The Development will import and export electricity however, will not generate any additional electricity nor have any on-site emissions of CO₂. As such, the Development will contribute to the legal obligations of the Climate Change Act 2008, as amended in 2019 to incorporate the 2050 Net Zero target.

7 **CONCLUSION**

The Development is intended to support National Grid with their ambition to manage a carbon-free grid by 2025 and the general decarbonisation of the electricity supply. This also ties into the UK’s commitments to achieve a Net Zero status by 2050.

Integrating renewable energy into the grid is a growing challenge, as the volume of renewable energy increases and fossil fuel power stations close. It is increasingly likely there will be peaks and troughs in energy supply and demand and a stable supply is

¹⁹ HM Government (2020) *Energy White Paper – Powering our Net Zero Future* [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/943807/201214_BE_IS_EWP_Command_Paper_LR.pdf (Accessed 7/4/2021).

²⁰ UK Government (2016) *Smart Power: A National Infrastructure Commission Report* [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/505218/IC_Energy_Report_web.pdf (Accessed 7/4/21)

needed to support industry and manufacturing as well as increased demand for electric car charging.

Ninfield Greener Grid Park would support the flexible operation of the National Grid and decarbonisation of electricity supply. It would store, import and export electricity but will not generate any additional electricity nor have any direct on-site emissions of CO₂ in the course of normal operations.

Containerised batteries would be used to store surplus electricity for use when it is needed most. In addition, innovative technology such as synchronous condensers would be deployed to balance fluctuations in inertia on the grid, delivering a service which has typically been provided by carbon emitting technologies such as gas or coal-fired turbines.

This type of facility is essential for the grid to support more renewable/low carbon electricity generation and to enable the closure of polluting gas and coal-fired power stations. The Development will therefore contribute to the aims of the Wealden Climate Emergency Plan and achieving the commitment for Net Zero emissions within the District by 2050.

Significant landscape and biodiversity enhancements including native shrub and wildflower grassland are proposed, which will result in a substantial increase in biodiversity in and around the Site and ensure that the Development is well integrated into the wider landscape. In addition, the sustainable drainage pond will reduce runoff from the Site in comparison with the existing situation.

The Development will contribute to the economic, social and environmental objectives of sustainable development. As such, the presumption in favour of sustainable development which is at the heart of the NPPF should be applied.

The Development is supported by national planning policy and complies with the relevant policies in the Local Plan. It is therefore respectfully requested that the Council approves this planning application.