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SPALDING ENERGY PARK

BATTERY ENERGY STORAGE SYSTEM

LAND AT SPALDING POWER STATION,

WEST MARSH ROAD, SPALDING,

SOUTH HOLLAND, LINCOLNSHIRE

PLANNING STATEMENT

December 2021
DWD Ref: 14278A

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EXECUTIVE SUMMARY

Spalding Energy Park Limited ('SEPL'), an InterGen group company ('InterGen'), is applying for planning permission under the Town and Country Planning Act ('1990 Act') to South Holland District Council ('the Council') for the Spalding Energy Park Battery Energy Storage System ('BESS') ('the Proposed Development').

DWD have been appointed by InterGen to support the application. DWD have prepared this Planning Statement and are the planning agent for the application.

The Application Site of 12.6 hectares (ha) is located off West Marsh Road, in Spalding, to the south of the existing InterGen-owned Spalding combined cycle gas turbine ('CCGT') Power Station, and immediately to the west of the existing InterGen-owned Spalding open cycle gas turbine ('OCGT') Power Station.

Most of the Application Site comprises the remaining part of the consented and part-implemented Spalding Energy Expansion ('SEE') development site. SEE was granted consent (on application by InterGen's subsidiary company, Spalding Energy Expansion Limited ('SEEL')) in 2010 under Section 36 of the Electricity Act 1989 ('S36 Consent') and Deemed Planning Permission under section 90 of the 1990 Act. The S36 Consent (as varied, most recently in 2018) permits the construction and operation of *"a combined cycle gas turbine ('CCGT') with open cycle gas turbine ('OCGT') generating station (incorporating a Battery Energy Storage System ('BESS')"* of up to 945MW comprising, in summary:

- A CCGT unit with a rated electrical output up to 645MW;
- A BESS with a rated electrical output of up to 175MW; and
- OCGT unit(s) with a total rated electrical output of less than 300MW

An OCGT unit has been constructed and commenced commercial operation in 2019; however, SECL no longer intends to develop the CCGT and, rather, wishes to develop a larger scale BESS. Following recent changes to the Planning Act 2008, new BESS projects now fall to be consented under the 1990 Act. Accordingly, SEPL is submitting the Spalding Energy Park BESS Application for determination by the Council.

If planning permission is granted for the Spalding Energy Park BESS, it would not be possible to implement the remaining components of the SEE development. Therefore, in practical terms the Spalding Energy Park BESS will replace the unbuilt elements of the SEE development.

The Spalding Energy Park BESS will comprise:

- Batteries, housed in containers / enclosures, also including:
  - Control and protection systems;
  - Power conversion systems and associated transformers; and,
  - Temperature regulation systems;
- An Electrical Banking Station (comprising a main step-up transformer(s) and switchgear);
- A Welfare Compound (comprising office areas, kitchen facilities, changing / toilet facilities and car parking);
- Electrical cabling and electrical connection;
- Site security (including: fencing; Closed Circuit Television ('CCTV') / security cameras; and, operational (intermittent) lighting columns); and,
- Landscaping.

Other associated development works include:

- Site preparation (including any necessary ground works to raise the site to the required levels); and,
- Provision of site drainage.

The Spalding Energy Park BESS will be connected to the existing National Grid 400 kV Spalding North Substation. The Spalding Energy Park BESS will function by taking energy from the electricity grid when demand is low or supply high, and feeding it back on to the grid when demand is higher or supply lower. Operating in either 'energy charge', 'energy storage' or 'energy discharge' modes (or else will be providing ancillary (support) services to the National Grid).

The Spalding Energy Park BESS is likely to be developed in phases. Furthermore, during commercial operation, it is anticipated that regular (approximately every three years) battery augmentations will take place to ensure that the batteries are returned to their original capacity. The augmentations will likely comprise the addition of further batteries and associated BESS containers / enclosures, and will incorporate the necessary control and protection, power conversion and temperature control systems (with associated transformers).

The Spalding Energy Park BESS will be an unmanned operational facility, noting that continuous and remote monitoring / regular inspection and maintenance visits will be undertaken, and each phase will have an operational lifetime of around 20 to 25 years.

Full planning permission is sought for the Proposed Development and it is currently anticipated that the first construction period would commence in Q1 / Q2 2023. However, it is requested that a 5-year period for commencement of development, with the ability to develop in phases, are included in any grant of planning permission in order to allow for the most appropriate development configuration in the evolving electricity market, to ensure sufficient opportunities for the Spalding Energy Park BESS to win an award(s) during the UK's Capacity Market Auction(s)[1], and to subsequently progress towards the finalisation of a construction contract(s) and raise project finance.

It is considered that the Spalding Energy Park BESS is not EIA development by virtue of its limited scale and impacts, the nature of the receiving environment, and the proposed mitigation. Information to assist the Council in forming a screening opinion, should it choose to adopt one, is included in the Environmental and Technical Report by Ramboll, which is included in the Planning Application Submission. The Environmental and Technical Report includes reporting on a range of environmental topics relevant to the application.

The Application Site is not subject to any environmental designations. The nearest international or European designated sites are The Wash Ramsar Site, The Wash and North Norfolk Coast Special Area of Conservation and The Wash Special Area of Protection all approximately 11.8km to the north east (at the mouth of the River Welland with the Wash Estuary). The nearest nationally designated site is the Surfleet Lows Site of Special Scientific Intertest, approximately 4.0 km to the north. The nearest non-statutory designated sites (Local Wildlife Sites or LWS) are the Vernatt's Drain LWS adjacent to the west; the River Welland LWS approximately 180m to the south east; the Coronation Channel LWS approximately 320m to the south east; Pinchbeck Marsh LWS approximately 500m to the north; Spalding Cemetery LWS approximately 440m to the south west; Vernatt's Nature Reserve approximately 560m to the south west; Blue Gowt Drain approximately 680m north west; and Land North of Spalding Station LWS approximately 1.1km to the south west.

[1] Used within the context of the application / variation date and timing, noting that the decision to run a Capacity Market Auction is made around June each year by the Secretary of State and that, during a Capacity Market Auction, the clearing price is driven by a number of factors but mainly by the amount of capacity to be procured and the capacity of Capacity Market Units that participate.

The Environmental and Technical Report demonstrates that there would be no unacceptable impacts upon the environment.

The primary purpose of this Planning Statement is to set out the planning case for the Proposed Development, including with reference to local and national planning policy. This statement should be read in conjunction with the other documents that comprise the planning application submission, including the Environmental and Technical Report by Ramboll, and the plans and drawings.

The principle of battery storage development is supported by local and national planning policy. Furthermore, this form of development is appropriate for the site location and conforms with the South East Lincolnshire Local Plan 2011-2019 allocation of the under Policy 7 (SP037 ('Spalding Power Station') and SP038 ('Spalding Power Station B')) for investment in power generation-related industries. Indeed, varied forms of energy generation and storage development have been consented at this location, under the S36 Consent (as varied) that represent committed development. It is also notable that the UK Government has committed to meeting a legally binding target of net-zero carbon emissions by 2050, and recently committed to a net zero electricity system much earlier than this (2035), which requires significant investment in the development of renewable energy infrastructure locally and throughout the UK. The contribution that the Proposed Development would make towards meeting these needs, in a suitable location near to an electrical grid connection, is a significant material consideration.

The S36 Consent for the committed development provides a fallback position which is a key material consideration in the determination of the Application. The Spalding Energy Park BESS has fewer impacts and more relevant benefits.

The Proposed Development complies with relevant planning policy and provides relevant local and national benefits that represent significant material considerations and, therefore, it is considered that planning permission should be granted.

GLOSSARY OF TERMS

ABBREVIATION	DESCRIPTION
BESS	Battery Energy Storage System
CEMP	Construction Environmental Management Plan
CTMP	Construction Transport Management Plan
DCS	Distributed Control System
EcIA	Ecological Impact Assessment
EN-1	Overarching NPS for Energy
EN-3	NPS for Renewable Energy Infrastructure
EN-5	NPS for Electricity Networks Infrastructure
ha	hectares
InterGen	InterGen group company
MW	megawatt
NIA	Noise Impact Assessment
NIC	National Infrastructure Commission
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
NPSs	National Policy Statements
NSIPs	Nationally Significant Infrastructure Projects
OS	Ordnance Survey
PPG	Planning Practice Guidance
PRoW	Public Right of Way
SECL	Spalding Energy Company Limited
SEEL	Spalding Energy Expansion Limited
SEPL	Spading Energy Park Limited

ABBREVIATION	DESCRIPTION
SPDs	Supplementary Planning Documents
the Council	South Holland District Council
TWh	terawatt hours

1.0 INTRODUCTION

Overview

1.1 Spalding Energy Park Limited ('SEPL'), an InterGen group company ('InterGen'), is applying for planning permission under the Town and Country Planning Act ('1990 Act') to South Holland District Council ('the Council') for the Spalding Energy Park Battery Energy Storage System ('BESS') ('the Proposed Development').

1.2 DWD have been appointed by InterGen to support the Application, and have prepared this Planning Statement.

1.3 The Proposed Development comprises, in summary, the construction and operation of an unmanned BESS with a power capacity of up to 550 megawatt ('MW') with associated works including control and protection systems, power conversion systems (and associated transformers), temperature regulation systems, a main step-up transformer(s) and switchgear, welfare facilities, electrical cabling and electrical connection, and other associated works.

1.4 The Application Site of 12.6 hectares (ha) is located off West Marsh Road, in Spalding, to the south of the existing InterGen-owned Spalding combined cycle gas turbine ('CCGT') Power Station, and immediately to the west of the existing InterGen-owned Spalding open cycle gas turbine ('OCGT') Power Station.

1.5 Most of the Application Site comprises the remaining part of the consented and part-implemented Spalding Energy Expansion ('SEE') development site and includes all land envisaged to be required for the Proposed Development, including the existing site access and land that may be required for electrical connections to and within the existing National Grid 400kV Spalding North Substation and potential drainage connections.

1.6 The current anticipated lifetime of the Spalding Energy Park BESS is around 20 to 25 years. It is requested that a 5-year period for commencement of development, with the ability to develop in phases, are included in any grant of planning permission in order to allow for the most appropriate development configuration in the evolving electricity market, to ensure sufficient opportunities for the Spalding Energy Park BESS to win an award(s) during the UK's Capacity Market Auction(s)[2], and

[2] Used within the context of the application / variation date and timing, noting that the decision to run a Capacity Market Auction is made around June each year by the Secretary of State and that, during a Capacity Market Auction, the clearing price is driven by a number of factors but mainly by the amount of capacity to be procured and the capacity of Capacity Market Units that participate.

to subsequently progress towards the finalisation of a construction contract(s) and raise project finance.

The Applicant

1.7 SEPL is part of InterGen, an independent energy company, that own and operate power stations in the UK and Australia providing energy supplies to consumers. InterGen subsidiaries built and continues to operate the existing Spalding CCGT power station and the existing Spalding OCGT power station immediately to the north and east of the Application Site.

Environmental Assessment

1.8 The Environmental and Technical Report by Ramboll, which accompanies the Application, provides relevant screening information and identifies that, under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, the Proposed Development is not Schedule 1 development and whilst it is a Schedule 2 development, it is unlikely to have significant impacts/effects on the surrounding environment due to its modest size and non-pollutant nature. Therefore, it is considered that the Spalding Energy Park BESS is not EIA development.

1.9 Accordingly, an Environmental Statement is not provided within the Planning Application Submission, however, a comprehensive Environmental and Technical Report, covering a range of environmental topics of relevance in an appropriate level of detail, is included. The information in the Environmental and Technical Report may be used by the Council if it wishes to adopt an EIA screening opinion.

Planning Application Submission

1.10 The Spalding Energy Park BESS Application submission comprises:

- Plans for approval:
  - Site Location Plan at 1:5000 (16181- WDN-XX-XX-DR-A-0320_P02)
  - Site Plan (Parameter Drawings) at 1:1000 (16181-WDN-XX-XX-DR-A-1000_P02) ('parameter plan')
  - Site Elevations (Parameter Drawings) at 1:500 (16181-WDN-XX-XX-DR-A-1010_P02) ('parameter elevations')
- Indicative Drawings not for approval:
  - Indicative BESS Arrangement General Arrangement Plan at 1:1,000 (16181-WDN-XX-XX- DR-A-0500_P02)

- Indicative BESS Arrangement General Arrangement Elevations at 1:500 (16181-WDN-XX-XX-DR-A-0600_P02)
- Indicative Array Layout Part Plans/Sections at 1:250 (16181-WDN-XX-XX-DR-A-4000_P02)
- Indicative Welfare & Banking Station Part Plans / Sections (16181-WDN-XX-XX- DR- A-4100_P02)

- Application Covering Letter, planning application forms and landowner certificates;
- Planning Statement by DWD (this document);
- Design and Access Statement by Weedon Associates;
- Environmental and Technical Report, by Ramboll, incorporating:
  - Accepted Environmental Envelope for the Spalding Energy Park BESS Site (Appendix A)
  - Outline Construction Environmental Management Plan (CEMP) (Appendix B)
  - Ecological Impact Assessment (Appendix C)
  - Ground Conditions Phase 1 Preliminary Environmental Risk Assessment (Appendix D)
  - Flood Risk Assessment (Appendix E)
  - Indicative Landscaping Plan (Appendix F)
  - Noise Impact Assessment (Appendix G)
  - Transport Statement (Appendix H)

The Purpose and Structure of this Document

1.11 The purpose of this Planning Statement is to demonstrate how the Proposed Development is suitable for the Application Site and its setting; to identity the context and need for the Proposed Development; and to demonstrate the extent to which the Proposed Development is compliant with the development plan and acceptable in relation to the decision-making criteria applicable under the 1990 Act.

1.12 In doing so, this Planning Statement draws upon and cross-refers to the range of documents and plans that form part of the submission referred to above.

Structure

1.13 The remainder of this document is structured as follows:

Table 1.1: Structure

SECTION	TITLE	OVERVIEW
Section 2	The Site and Surrounding Area	Describes the Site and its key features, the planning history of relevance, and any local planning designations and allocations that apply.
Section 3	The Proposed Development	Provides an overview of the need for this type of development, and a description of the Proposed Development, including use, amount, layout, appearance and access.
Section 4	Planning Policy Context	Sets out the relevant legislative and policy framework for the determination of the planning application.
Section 5	Assessment of the Proposed Development	Provides an assessment of the Proposed Development against relevant policy at national and local levels.
Section 6	Summary and Conclusions	Sets out the conclusions of this Planning Statement in terms of the overall acceptability of the Proposed Development.

2.0 THE SITE AND SURROUNDING AREA

2.1 This section describes the location and key features of the Application Site and surrounding area and identifies any relevant planning and environmental designations.

Location, Description and Use

2.2 The Application Site is located to the north of Spalding (approximately 2km from the town centre) and approximately 1.6km to the south west of Pinchbeck. The Ordnance Survey (OS) Grid Reference for the centre of the Application Site is approximately 525801, 324553.

2.3 The Application Site is off and to the west of West Marsh Road immediately to the south of Spalding CCGT Power Station and to the southwest of the Benner Road Industrial Estate, separated by Vernatt's Drain which runs parallel to the western boundary of the Application Site. Immediately to the south of the Application Site is the Fowler Welch Transport Deport which forms part of a larger industrial estate separating the Application Site from the town of Spalding. Beyond West Marsh Road to the east is the River Welland, open fields and the Marsh Road industrial estate.

2.4 The Application Site covers a total area of approximately 12.6 ha and is identified in Figure 2.1 below.

2.5 The northern part of the Application Site includes the existing National Grid 400 kV Spalding North Substation beyond which is the Spalding CCGT Power Station complex. Adjacent to the east is the Spalding OCGT Power Station which commenced commercial operations in 2019.

2.6 Running between the northern part of the Application Site and the central and southern parts of the Application Site is the existing Spalding Power Station Gate C access road leading from West Marsh Road to the perimeter of the main Spalding CCGT Power Station complex. Laydown areas used for maintenance and outages of both Power Stations are situation on either side of the internal access road.

2.7 The central part of the site is largely comprised of a mound of 'Made Ground', formed during the redevelopment of the former sugar beet factory when Spalding CCGT Power Station was built. The mound, which contains sugar beet washings from the former factory's settlement lagoons, is approximately 4m higher than the remainder of the site. The land falls away to the south and is covered by introduced shrub and tall ruderals with pockets of scattered semi-improved grassland.

2.8 Most of the Application Site comprises the remaining part of the consented and part-implemented SEE development site. SEE was granted consent (on application by InterGen's subsidiary company, Spalding Energy Expansion Limited ('SEEL')) in 2010 under Section 36 of the Electricity Act 1989

('S36 Consent') and Deemed Planning Permission under section 90 of the Town & Country Planning Act 1990 ('TCPA'). The S36 Consent (as varied, most recently in 2018) permits the construction and operation of *"a combined cycle gas turbine ('CCGT') with open cycle gas turbine ('OCGT') generating station (incorporating a Battery Energy Storage System ('BESS')"* of up to 945MW comprising, in summary:

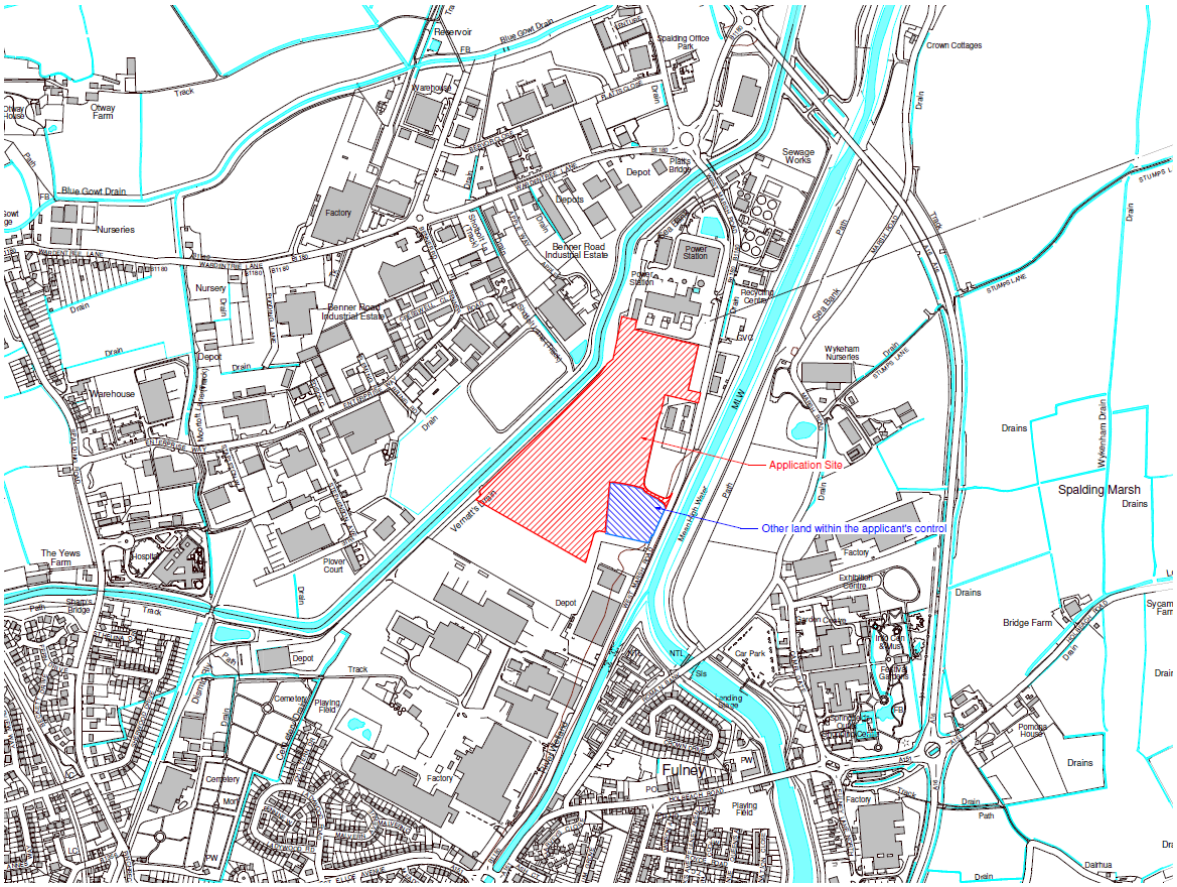
- A CCGT unit with a rated electrical output up to 645MW;
- A BESS with a rated electrical output of up to 175MW; and
- OCGT unit(s) with a total rated electrical output of less than 300MW

2.9 An OCGT unit has been constructed and commenced commercial operation in 2019; however, SECL no longer intends to develop the CCGT and, rather, wishes to develop a larger scale BESS at the site instead.

2.10 Within the South East Lincolnshire Local Plan, the Application Site is located on land allocated under Policy 7 on Improving South East Lincolnshire's Employment Land Portfolio, and more specifically as sites SP037 ('Spalding Power Station') and SP038 ('Spalding Power Station B') noted to be 'Restricted Use Employment Sites' to encourage investment in power generation-related industries.

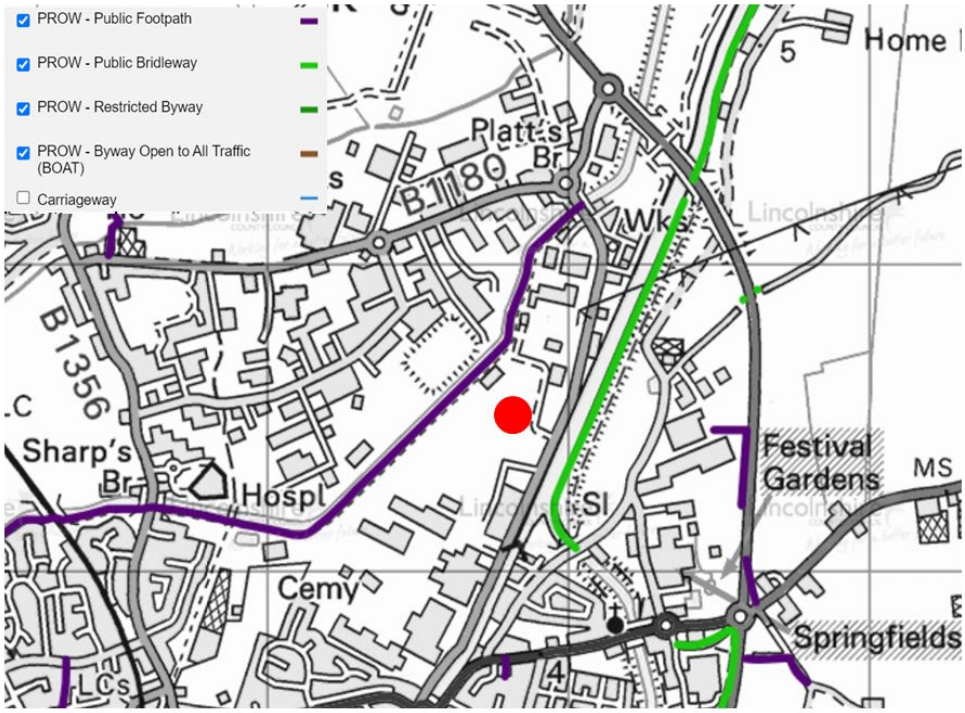
2.11 Within the immediate surrounding area, the predominant land use is commercial and industrial. Within the wider surrounding area, the predominant land use is agricultural with some residential settlements.

Figure 2.1: Site Location



2.12 According to Lincolnshire County Council's electronic working copy of the Definitive Map (Figure 2.2 below), a Public Right of Way ('PRoW') footpath (Pinc 11/3) runs along the western boundary of the site along the bank of Vernatt's Drain. A PRoW Bridleway (Spal 14/2) runs along the far bank of the River Welland approximately 90m to the west of the Site. No PRoWs lie within the Application Site.

Figure 2.2: Public Rights of Way



Source: Lincolnshire County Council Electronic Copy Definitive Map from https://www.lincolnshire.gov.uk/coast-countryside/public-rights-way/3 accessed 09/12/21

Planning, Heritage and Environmental Designations

2.13 The South East Lincolnshire Local Plan Policies Map and the Government's MAGIC Map confirms that the Site is not covered by any statutory or planning policy based environmental or heritage designations.

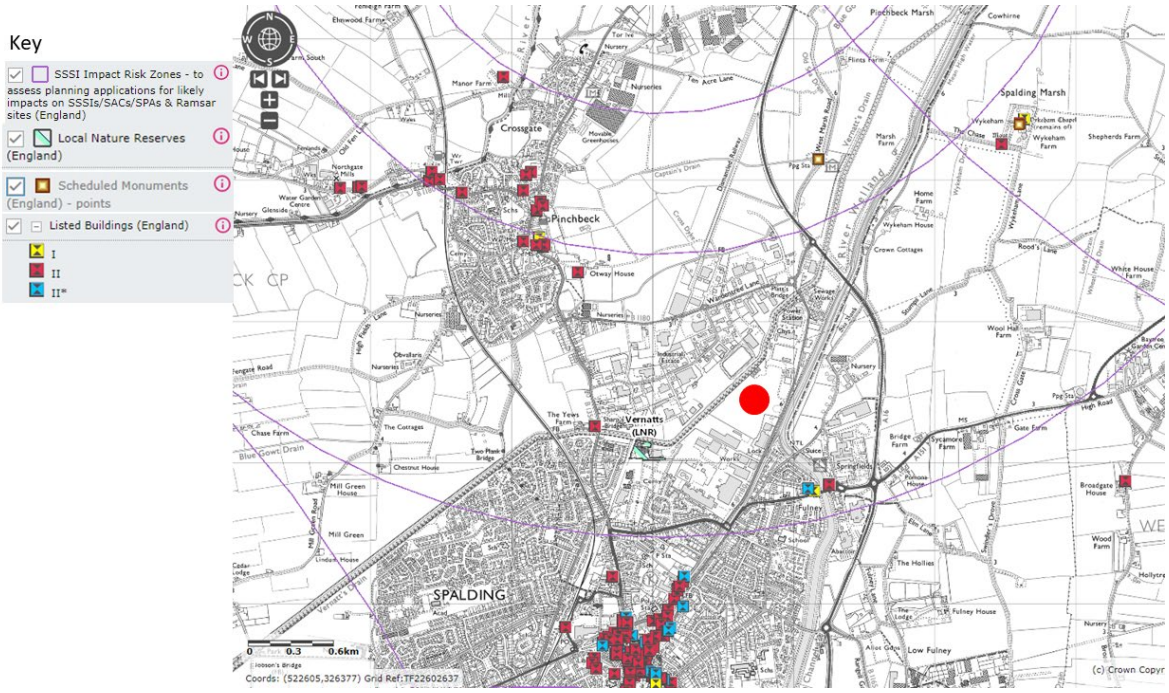
2.14 Vernatt's Drain that runs parallel with the western boundary of the Application Site is identified as non-statutory Local Wildlife Site, as is the River Welland approximately 180m to the south east. Beyond that the next nearest designated sites are the Coronation Channel LWS approximately 320m to the south east; Pinchbeck Marsh LWS approximately 500m to the north; Spalding Cemetery LWS approximately 440m to the south west; Vernatt's Nature Reserve approximately 560m to the south west; Blue Gowt Drain approximately 680m north west; and Land North of Spalding Station LWS approximately 1.1km to the south west.

2.15 The nearest international or European designated sites are The Wash Ramsar Site, The Wash and North Norfolk Coast Special Area of Conservation and The Wash Special Area of Protection all approximately 11.8km to the north east (at the mouth of the River Welland with the Wash Estuary).

The nearest nationally designated site is the Surfleet Lows Site of Special Scientific Intertest, approximately 4.0 km to the north.

2.16 Similarly, the area immediately surrounding the Site is also not subject to any environmental or heritage designations. This is depicted in Figure 2.3 below.

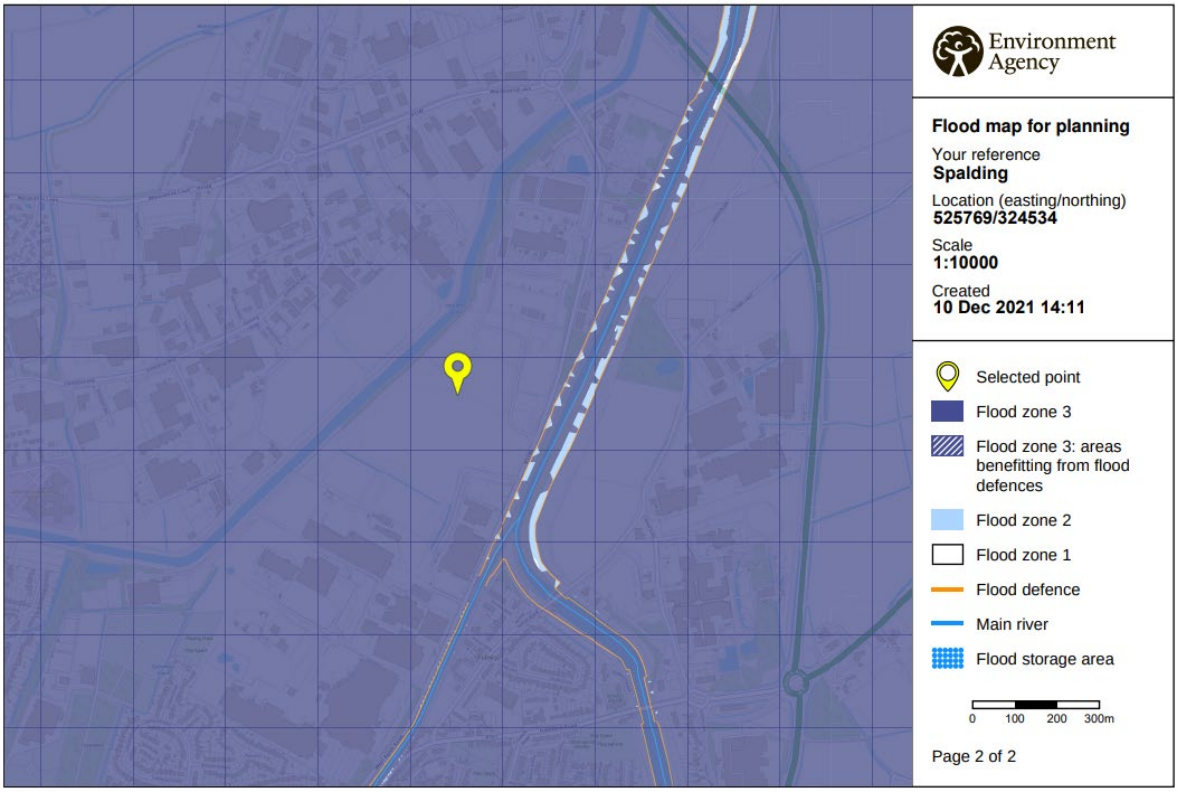
Figure 2.3: MAGIC Map Extract – Environmental and Heritage Designations



Source: https://magic.defra.gov.uk/MagicMap.aspx accessed 09/12/21

2.17 As show in Figure 2.4 below, the Site is located within an area of Flood Zone 3. Flood Zone 3 is defined by the Environment Agency as land determined to have a high probability of flooding. Therefore, a flood risk assessment has been submitted as part of this application.

Figure 2.4: Flood Risk Map for Planning Extract



Planning History

2.18 The key planning permissions and other development consents of relevance, granted since the original Spalding CCGT Power Station application at the Application Site are identified below in Table 2.1. Condition discharge applications are not included.

Table 2.1: Planning History

APPLICATION REFERENCE	DESCRIPTION	DECISION
H16-0847-21	Non-material amendment to the conditions of the deemed planning permission associated with the Section 36 consent for the construction and operation of an electricity generating station of up to 945MW (H16-0835-17). Amendments to condition 1 (definitions), condition 6 (removal and/or reprofiling of the Mound), conditions 21 & 22 (construction traffic management plan & access route), condition 43 (biodiversity enhancement measures and condition 45 (surface water drainage) in order to allow for removal and/or reprofiling of the mound as part of the permitted preliminary works and to omit the permitted preliminary works from triggering certain requirements under conditions that would be more appropriately dealt with as part of future development proposals.	Approved 03/09/2021
H16-0835-17	Variation of the 2015 varied Section 36 Consent to enable a Battery Energy Storage System (BESS) to be provided alongside the Combined Cycle Gas Turbine Unit(s) (CCGT)and the Open Cycle Gas Turbine Unit(s) (OCGT)	No objection to the Section 36 consent and deemed planning permission variation confirmed 28/11/2017. Granted by the Secretary of State 31/01/2018.
H16-0605-17	Non-material amendment to the conditions of the deemed planning permission associated with the Section 36 consent for a generating capacity of the development permitted of up to 945MW (H16-0492-15). Proposed additional condition to provide that a phasing scheme be submitted to and approved by the Local Planning Authority, amendments to Conditions 1, 4, 7, 8, 13, 14, 21, 23, 27, 28, 40, 41, 42, 45, 48, 49 and 50 to allow the details to be submitted prior to the commencement and/or commissioning of each phase of development	Approved 07/08/2017
H16-0492-15	Variation of Section 36 consent for a generating capacity of the development permitted of up to 945 MW	No objection to the Section 36 consent and deemed planning permission variation confirmed 07/07/2015. Granted by the Secretary of State 30/10/2015.

APPLICATION REFERENCE	DESCRIPTION	DECISION
H16-0293-15	Construct and operate an 8 kilometre high pressure natural gas pipeline and extend existing Wragg Marsh above ground installation to support a new minimum off-take connection and a new minimum off-take facility (Renewal of H16-0135-10)	Approved 11/06/2015
H16-0135-10	Construct and operate an 8 kilometre high pressure natural gas pipeline and extend existing Wragg Marsh above ground installation to support a new minimum off-take connection and a new minimum off-take facility	Approved 08/06/2010
H16-0241-09	Proposed 900MW CCGT Electricity Generating Station	No objection to the Section 36 consent and deemed planning permission confirmed 28/01/2010. Granted by the Secretary of State 11/11/2010.
H16-0082-06	Improvements to highway including road widening, ghost island, right turn lane, new access, extension of combined cycleway and footpath along with associated works.	Approved 21/02/2006
H16-1075-02	Development of land for Use Classes B1, B2 & B8, open storage, vehicle parking and petrol filling station with access from West Marsh Road plus re-levelling and landscaping. (Outline planning application)	Approved 04/02/2005
H22-0019-02	Gas off take above ground (AGI) & ancillary dev, fencing, access, buildings, lighting & planting (Renewal H22/0056/97)	Approved 11/02/2002
H22-0599-01	Gas offtake above ground installation (AGI) & ancillary development fencing access buildings, lighting & planting (renewal of H22/0056/97)	Withdrawn 15/06/2021
H16-0788-96	Construction of combined cycle gas turbine generating station and ancillary development.	No objection to the Section 36 consent and deemed planning permission confirmed 14/02/1997. Granted by the Secretary of State 15/11/2000.

3.0 THE PROPOSED DEVELOPMENT

3.1 This section provides a description of the Proposed Development, comprising an overview of its main components; proposed layout, size and design and the requirement for flexibility on the final form of development and how the Application accommodates this; information on construction, operation, decommissioning, timing, phasing and augmentation; need; and site selection.

Overview

3.2 The Spalding Energy Park BESS will comprise:

- Batteries, housed in containers / enclosures, also including:
  - Control and protection systems;
  - Power conversion systems and associated transformers; and,
  - Temperature regulation systems;
- An Electrical Banking Station (comprising a main step-up transformer(s) and switchgear);
- A Welfare Compound (comprising office areas, kitchen facilities, changing / toilet facilities and car parking);
- Electrical cabling and electrical connection;
- Site security (including: fencing; Closed Circuit Television ('CCTV') / security cameras; and, operational (intermittent) lighting columns); and
- Landscaping.

3.3 Other associated development works include:

- Site preparation (including any necessary ground works to raise the site to the required levels); and,
- Provision of site drainage.

3.4 The Proposed BESS will have a power capacity of up to 550MW and will be connected to the existing National Grid 400kV Spalding North Substation via electrical cabling.

3.5 Although 550MW is the maximum capacity envisaged at this point in time there remains a possibility that in the future efficiency and technological gains mean that more can be delivered at the Application Site without further environmental effects and contribute more to the urgent

national need for low carbon electricity. In this case a non-material amendment application may be applied for in the future.

3.6 The Spalding Energy Park BESS will function by taking energy from the electricity grid when demand is low or supply high, and feeding it back on to the grid when demand is higher or supply lower. Operating in either 'energy charge', 'energy storage' or 'energy discharge' modes (or else will be providing ancillary (support) services to the National Grid). Between each mode, from outside the Application Site, there will be no material difference in the Spalding Energy Park BESS operational characteristics.

3.7 The Spalding Energy Park BESS will be an unmanned operational facility, noting that continuous and remote monitoring / regular inspection and maintenance visits will be undertaken, and each phase will have an operational lifetime of around 20 to 25 years.

3.8 The Spalding Energy Park BESS is likely to be developed in phases. Furthermore, during commercial operation, it is anticipated that regular (approximately every three years) battery augmentations will take place to ensure that the batteries are returned to their original capacity. The augmentations will likely comprise the addition of further batteries and associated BESS containers / enclosures, and will incorporate the necessary control and protection, power conversion and temperature control systems (with associated transformers).

3.9 The Application seeks flexibility within any planning permission granted to develop and operate the Proposed Development in phases and to supplement the batteries (and the associated containers/enclosures installed in each phase over time with additional batteries to maintain output.

3.10 The design of the Spalding Energy Park BESS in general seeks to maximise durability and reliability due to the importance of the infrastructure, in terms of both regular and long-term maintenance requirements. Materials and finishes will be selected to meet this objective and also to ensure that the appearance of the Spalding Energy Park BESS does not materially deteriorate over its operating lifetime.

3.11 The Environmental and Technical Report provided with the Application refers to the concept of an accepted environmental envelope at the Application Site, established via the extant S36 Consent for the unbuilt elements of the SEE development. It can be seen from the above list that compared to a CCGT Power Station (the most significant unbuilt element of the SEE development) a BESS has far fewer tall structures, moving parts, noise generating sources, and cooling systems and does not emit NO_x and CO_2.

Layout, Size and Design

3.12 The exact Spalding Energy Park BESS design is yet to be confirmed. Aspects of the Proposed Development which are to be confirmed include the selection and appointment of a BESS integrator, detailed design, the selection and appointment of Construction Contractor (or Construction Contractors), further ground investigations, the accuracy of existing services and utilities information and agreements with existing services and utilities operators. In particular it should be noted that the exact area required, and the associated layout and visuals, will be dependent on a number of factors, in particular: the selected / appointed BESS integrator; the initial BESS power capacity (MW) and duration / energy storage capacity (hours / MWh); and, the subsequent BESS augmentations.

3.13 Therefore, an appropriate degree of flexibility has been incorporated into the Application and supporting reports. To support this approach, a parameter envelope has been determined based on the required flexibility. Appropriate control is afforded by the parameter plans, in particular, by defining maximum extents (horizontal plane) and heights (vertical plane) of the Electrical Banking Station, and the BESS containers / enclosures, which also act to constrain the overall scale and amount of storage. In these cases, the parameters are maximum envelopes; however, it should be noted that the landscaping zone provides a minimum width for planting and biodiversity provision that will be provided. With the exception of the landscaping zone which is fixed, the other development zones provide some overlap so if one component is built out to its maximum adjacent development zones would reduce.

3.14 Indicative plans and drawings showing a potential layout and design for the Proposed Development are provided, for information/illustrative purposes only. These demonstrate how a 550MW BESS, with subsequent augmentation, could be delivered within the parameters. The assessment of environmental effects in the Environmental and Technical Report is generally based on the parameters as well as associated assumptions identified in the Application; however, where relevant/helpful reference is made to the Indicative Scheme.

3.15 The parameter plans identify development zones and maximum footprints and heights of development within those zones for the main components of the Proposed Development. This proposed layout and the maximum height parameters has been derived by a number of factors as explained below.

Batteries

3.16 It is anticipated that lithium-ion batteries will be deployed. Lithium-ion battery technology is fully developed and is also commercially proven and viable.

3.17 The above factors (BESS integrator, initial capacity and duration, and subsequent augmentation) will influence a number of specific BESS container / enclosure characteristics, including (for example): number; size; and, stacking. These will subsequently influence the BESS arrangement / layout.

3.18 The Site Plan Parameter Drawing (16179-WDN-D-ZZ-DR-A-1000) and Site Elevations Parameter Drawing (16181-WDN-XX-XX-DR-A-1010) defines the area in which the main BESS component of the Proposed Development i.e. the batteries within their containers/enclosures, the associated control (including temperature), protection and power conversion systems and transformers, will be sited and the maximum height of development. The BESS development zone (blue hatching) comprises a maximum area of 72,741sqm and a maximum height of 8m above the finished ground level.

3.19 The Indicative Scheme indicates that it is unlikely that all of this area will be required; however, flexibility on final siting and layout, including the spacing between individual containers/enclosures and between the BESS clusters ('arrays'), is required which is accommodated within the parameters. The Indicative Scheme shows a potential arrangement for double-stacking the containers and the maximum height parameter accommodates this. The need for augmentation of the batteries over time is also accommodated within these maximum parameters and illustratively shown in the Indicative Scheme.

Table 3.1: Description of BESS Container / Enclosure Characteristics

	DESCRIPTION OF CHARACTERISTICS
Size (Dimensions)	Varying container / enclosure dimensions are offered. These mainly vary in length and width, rather than height. Lengths vary between 2.6 – 7.2 m, and widths vary between 1.7 – 2.5 m. Heights are typically between 2.6 – 2.9 m. Typically, a number of BESS containers / enclosures are linked together into a group, and each group is then connected to an associated power conversion system and associated transformer.
Number	Depending on the BESS integrator, the container / enclosure number would be between 520 and 2,410. This includes the subsequent BESS augmentation provision. It should be noted that the maximum number corresponds with the minimum container / enclosure dimensions (and, conversely, the

	minimum number corresponds with the maximum container / enclosure dimensions).
Stacking	BESS integrators offer both single and double storey (single-stacked and double-stacked) solutions. In the case of single storey, the BESS container / enclosure height would be up to approximately 3.0 m. In the case of double storey, the BESS container / enclosure height (with the required separation) would be up to approximately 8.0 m. The Parameter Plan assumes the use of a double storey solution to optimise the use of land.

Electrical Banking Station (Transformers and Switchgear)

3.20 The Spalding Energy Park BESS will be connected to the existing National Grid 400 kV Spalding North Substation.

3.21 In order for the connection to be made, the Spalding Energy Park BESS will include an Electrical Banking Station, comprising a main step-up transformer(s) and 400kV Air Insulated Switchgear (AIS), with cable sealing ends. The Electrical Banking Station will also include a switchroom.

3.22 The 400 kV AIS, with cable sealing ends, will comprise:

- 400kV AIS surge arresters;
- 400kV AIS circuit breakers, with associated disconnectors and integral earth switches;
- 400kV High-Accuracy metering current and voltage transformers; and,
- 400kV AIS insulators, busbars and clamps.

3.23 The Electrical Banking Station is to be located in close proximity to the existing National Grid 400kV Spalding North Substation to minimise the length of the electrical connection.

3.24 The Site Plan Parameter Drawing (16179-WDN-D-ZZ-DR-A-1000) and Site Elevations Parameter Drawing (16181-WDN-XX-XX-DR-A-1010) defines the area in which the Electrical Banking Station will be sited and the maximum height of development. The Electrical Banking Station development zone (green hatching) comprises a maximum area of 7,314sqm which is sized based on initial design work for the likely required compound size to serve a 550MW BESS plus flexibility for final sizing and siting. The maximum height of development within the Electrical Banking Station will be 14m.

Electrical Cabling (and Associated Electrical Connection)

3.25 Electrical cabling will connect the transformers and switchgear in the Electrical Banking Station and the existing National Grid 400kV Spalding North Substation.

3.26 The exact route of the electrical connection and any extension to the National Grid substation will be determined during detailed design and in part led by National Grid requirements; however, this will all take place within the developed, northern, part of the Application Site as indicated on the Site Plan Parameter Drawing (16179-WDN-D-ZZ-DR-A-1000). Marker posts (approximately 0.75 m high) will be placed on the electrical connection route (between the Electrical Banking Station and the existing National Grid 400 kV Spalding North Substation) to inform of the existence and whereabouts of the electrical cabling and associated equipment.

3.27 Within the existing National Grid 400 kV Spalding North Substation, it is currently envisaged anticipated that the connection will require a Substation extension. The Substation extension will be approximately 65 m × 75 m (0.5 ha), noting that some of this area would be within the existing footprint.

Welfare Compound

3.28 Whilst the Spalding Energy Park BESS will be an unmanned operational facility, regular inspection and maintenance visits will be undertaken. Accordingly, a small number of parking spaces and welfare facilities within a welfare compound are proposed.

3.29 The welfare compound is located off the existing internal access road where it will be easily accessible to personnel visiting the Spalding Energy Park BESS. The welfare facilities are likely to comprise a small building (or buildings) to provide office areas, kitchen facilities and changing / toilet facilities, as well as a small car park.

3.30 The Site Plan Parameter Drawing (16179-WDN-D-ZZ-DR-A-1000) and Site Elevations Parameter Drawing (16181-WDN-XX-XX-DR-A-1010) define the area in which the welfare compound will be sited and the maximum height of development. The Welfare Facilities development zone (orange hatching) provides a maximum area of 4,536sqm with a maximum height of 6m.

Laydown area

3.31 The existing Spalding CCGT and OCGT Power Stations use parts of the Application Site as laydown areas during maintenance and outages. These areas, which are in close proximity to both Power Stations, are to be retained for this use as well as serving the same purpose for the proposed Spalding Energy Park BESS.

3.32 The Site Plan Parameter Drawing (16179-WDN-D-ZZ-DR-A-1000) defines the area in which the laydown area will be sited with purple hatching. The minimum development zone i.e. the smallest zone should the adjacent zones be built to their maximum sizes is based on the requirements of

both existing stations and the envisaged requirements for maintenance of the Spalding Energy Park BESS. No permanent above ground development is envisaged in these areas; however, the Site Elevations Parameter Drawing (16181-WDN-XX-XX-DR-A-1010) proposes a maximum height of 3m to cover the likely scale of items to be placed temporarily here during maintenance/outages.

Site Security

3.33 Access to the Spalding Energy Park BESS will be strictly controlled.

3.34 Operational security of the Spalding Energy Park BESS site will be achieved by providing suitable fencing on the site perimeter (approximately 2.9 m in height), and security will be monitored via the use of CCTV / security cameras (attached to operational (intermittent) lighting columns, up to approximately 4m in height).

3.35 Specifically, regarding security lighting, there will be no permanent or regular lighting, and only emergency / intermittent lighting is proposed.

3.36 The operational (intermittent) lighting columns will be motion sensitive (for example, controlled by an infrared motion sensor system), and will switch on only when movement within the BESS site is detected or when essential operational maintenance is required. The emergency / intermittent lighting will be highly directional (for example, controlled by cowling) to avoid excessive light spillage beyond the boundary fencing. The associated lighting design will be undertaken with reference to the relevant guidance such as the 'Guidance Note 01/21 for the Reduction of Obtrusive Light'.

3.37 Furthermore, whilst they are noted to be up to approximately 4 m in height, the operational (intermittent) lighting columns will be of the minimum height possible to provide the required lighting. As the light emissions from the operational (intermittent) lighting columns will be motion sensitive and highly directional, any nuisance will be extremely limited in spatial and temporal extent / nature.

3.38 The perimeter security fence and CCTV and lighting will be determined at detailed design stage and are therefore not shown on the parameter plans. The Indicative Scheme shows the likely location of the perimeter fencing.

Landscaping

3.39 The Site Plan Parameter Drawing (16179-WDN-D-ZZ-DR-A-1000) proposes a landscaping/bund zone along the southern half of the western boundary with Vernatt's Drain, the southern boundary adjacent to the Fowler Welch Transport Deport and the southern half of the eastern boundary

facing West Marsh Road. This zone provides for a strip of 10m which equates to a landscaping area of 8,843sqm. It should be noted that there is no overlap with other development zones to provide certainty that this will be accommodated within the detailed design.

3.40 Taken together the Indicative Landscaping Plan (Appendix F of the Environmental and Technical Report) and the Ecological Impact Assessment (Appendix C of the Environmental and Technical Report) provide information on the planting and habitat creation to provide both visual screening/softening and biodiversity enhancement.

3.41 The Site Elevations Parameter Drawing (16181-WDN-XX-XX-DR-A-1010) proposes that this landscaping/bund zone also allows for a bund of up to 2m in height to accommodate any excess spoil following the reprofiling of the mound and the raising of ground levels to 6.7m AOD. However, in the event that there is no excess material, then no bund would be proposed to avoid needing to import additional material.

Other Associated Works

Site Preparation

3.42 Across parts of the Application Site, significant ground clearance and levelling is due to be / is being carried out pursuant to the S36 Consent, facilitated by the recent NMA approval (ref. H16-0847-21) and discharge of conditions, and the baseline area / plot to be developed is largely bare (brownfield) ground.

3.43 Notwithstanding, in advance of the main construction activities, any necessary additional site preparation will be undertaken.

3.44 In particular, parts of the Application Site (i.e. the BESS Zone, Electrical Banking Station Zone, and Welfare Compound Zone) will be raised to a level of 6.7m AOD to mitigate potential flood risks. As above, any excess material is proposed to be retained to create landscaped bunds of up to 2m in height in the designated landscaping/bund zone.

3.45 Other potential site preparation activities may include: further site clearance works; and, remediation works.

3.46 Regarding the clearance works, during detailed design / prior to construction, a geophysical survey will be used to identify any remaining underground obstructions / services with subsequent clearance of any likely to impede the BESS development.

3.47 Regarding the remediation works, during detailed design / prior to construction, validation surveys will be undertaken to verify the previous works, and determine the need for any further

remediation works. Notwithstanding, previous ground investigations have indicated that the Application Site is not significantly contaminated and does not exhibit concentrations of contaminants / pollutants in excess of the commercial and industrial criteria. In addition, (during the previous ground investigations) the collection of groundwater samples has indicated that the groundwater is not significantly contaminated, in particular noting that the metal concentrations were low and were considered to be indicative / representative of local background levels. Ground gas is being generated by this Made Ground, with previous ground gas monitoring investigations indicating that the ground gas concentrations and flows are reducing, as would be expected for the decomposition of the Made Ground material.

Site Drainage

3.48 Site surface water drainage will be provided. It is anticipated that any captured site drainage requirements will connect into existing Spalding OCGT Power Station site drainage system, which (in turn) connects into the existing Spalding CCGT Power Station site drainage system (including storm / surface water pond).

3.49 The existing storm/surface water pond periodically discharges to the River Welland and is likely to be able to accommodate surface water drainage from the Application Site. The River Welland is tidally influenced and the discharge of surface water is anticipated to be allowed at greater rates than would generally be accepted into an ordinary fluvial river.

3.50 However, if surface water attenuation within the Application Site is required, a range of potential attenuation options (SuDS techniques) could be implemented / utilised to reduce peak flows and storm volumes, and also to improve overall water quality. The Flood Risk Assessment (Appendix E of the Environmental and Technical Report) notes that based on the Indicative Scheme's layout and maximum potential impermeable area, the undeveloped parts of the Application Site provide adequate space to accommodate the captured site drainage storage requirement.

Construction

3.51 The Spalding Energy Park BESS development and construction may take place in one phase, or over a number of phases.

3.52 For one construction phase (or the first construction phase), the construction period is likely to last between 18-30 months, and each additional construction period (depending on scale) may last between 18-24 months.

3.53 Construction will be undertaken by an experienced construction contractor(s) in accordance with the relevant industry requirements (e.g. legislation, regulations, codes and standards).

Construction Environmental Management

3.54 The Construction Contractor will be required to prepare and implement a Construction Environmental Management Plan (CEMP). The objectives of the CEMP will be to:

- Identify legal, environmental, ecological and other obligations and requirements appropriate to construction;
- Provide a framework to comply with the identified legal, environmental, ecological and other obligations and requirements through appropriate mitigation and monitoring measures;
- (Based on the identified mitigation and monitoring measures), provide the basis for setting objectives and targets for construction; and,
- Demonstrate a professional approach to environmental management.

3.55 In demonstrating a professional approach to environmental management, the CEMP will set out: general measures and working hours, environmental communications and training requirements, environmental monitoring and audit requirements, and emergency response requirements.

3.56 In addition (based on the identified mitigation and monitoring measures), the CEMP will also include a number of aspect-specific management plans.

3.57 Appendix B of the Environmental and Technical Report includes an Outline CEMP. It is anticipated that the formal requirement for a CEMP, in line with the Outline CEMP, will be secured via a suitably worded condition in the planning permission.

Construction Site Access

3.58 Construction site access will be via the existing Spalding CCGT Power Station / Spalding OCGT Power Station Gate C, off West Marsh Road.

Construction Working Hours

3.59 Regarding general construction works, the construction working hours will be Mon-Fri 07:00 – 19:00 hours, Sat 07:00 – 17:00. No general construction will take place outside the proposed working hours unless the work: is associated with an emergency; is carried out with prior approval from the Council; or, does not cause the existing ambient background noise levels to be exceeded.

3.60 As the Proposed Development has potential for piling (most likely associated with the main step-up transformer(s) and - if required - installation of the double-stacking support structure), the piling working hours will be Mon-Fri 09:00- 18:00, Sat 09:00-13:00. No piling will take place outside the

proposed working hours unless the work: is associated with an emergency; or, is carried out with prior approval from the Council.

- Regarding construction heavy goods vehicle (HGV) movements, the working hours for construction HGV movements will be Mon-Fri 07:00-19:00, Sat 08:00-16:00. No movements of construction HGVs will take place outside these working hours unless such movements are: associated with an emergency; are carried out with prior written approval from the Council; or, are an abnormal / indivisible load authorised by National Highways (formerly Highways England / the Highways Agency).

3.61 All proposed working hours and daily construction schedules mentioned above are consistent with those of the Committed Development.

3.62 Full details of the proposed construction hours are set out in the Environmental and Technical Report, and it is anticipated that any condition relating to hours would pay regard to these full details.

Operation

3.63 After commissioning, the Spalding Energy Park BESS will be operated and maintained in such a manner as to keep it safe and in good condition. Where relevant, the operation and maintenance will take account of the requirements of any authorities or third parties such that the Spalding Energy Park BESS integrity is not compromised.

3.64 The Spalding Energy Park BESS will have an operational lifetime of around 20-25 years, and will operate in either 'energy charge', 'energy storage' or 'energy discharge' modes (or else will be providing ancillary (support) services to the National Grid). Between each, from outside the Application Site, there will be no material difference in the Spalding Energy Park BESS operational characteristics.

Operational Environment Management

3.65 The Spalding Energy Park BESS will be operated in accordance with InterGen's Health, Safety and Environmental Management System.

Operational Safety

3.66 InterGen has a strong operational safety record at all of its Power Station sites and, in 2019, completed its most recent construction with no Lost Time Incidents.

3.67 For the Spalding Energy Park BESS, InterGen will partner with a leading and experienced supplier of battery systems and, from the outset, operational safety will be embedded in every layer of the

BESS's controls and hardware, with the BESS designed to meet established Underwriters Laboratories Inc. and International Electrotechnical Commission standards at cell, module, rack, container, and overall system levels.

3.68 An overall Energy Storage Management Plan will be prepared, in conjunction with key stakeholders (such as the local fire service), prior to construction / prior to commercial commissioning. The Energy Storage Management Plan will consider any relevant risks, and set out any required control / mitigation measures.

3.69 During the planning and design phase, the measures are anticipated to include: physical separation of BESS containers / enclosures, Electrical Banking Station, Welfare Compound, and site access; comprehensive control and protection systems with associated safety features; suitably selected temperature control systems; and, comprehensive site-wide safety planning and use of industry best practice to prepare customised emergency response plans.

3.70 During the operational phase, the measures are anticipated to include: a Battery Management System ("BMS") as the first layer of protection; an Energy Management System ("EMS") as the second layer of operational protection; routine (and regular) physical inspection and associated preventative maintenance; and, appropriate (and ongoing) training for operational personnel.

3.71 A continuous (24 × 7) remote camera system may be provided to provide additional visual observations.

3.72 Overall, the Energy Storage Management Plan (incorporating the BMS, EMS, inspection and maintenance, and training for the O&M team) contributes towards operational safety, and significantly reduces any operational risks associated with thermal runaway.

3.73 In addition, it is noted that the BESS containers / enclosures (typically entirely filled with equipment) will be made of non-combustible material and will typically have an external access door(s). This limits the need / ability for operators to access / enter.

3.74 Furthermore, specific design requirements for any required diesel, fuel, oil and chemical storage containers and containment systems will be included in the Spalding Energy Park BESS specifications.

Operational Security

3.75 Access to the Spalding Energy Park BESS will be strictly controlled.

3.76 As explained above, operational security measures include perimeter fencing approximately 2.9m in height and the installation of CCTV / security cameras (attached to operational (intermitted) lighting columns, up to approximately 4 m in height).

Operational Site Access

3.77 Operational site access will be via the existing Spalding CCGT Power Station / Spalding OCGT Power Station Gate C, off West Marsh Road.

Operational Working Hours

3.78 The Spalding Energy Park BESS will be capable of continuous operation.

3.79 Given the importance of the infrastructure and the suitable location, no limitations on operational working hours via planning conditions will be necessary or are considered reasonable.

Timing, phasing, and augmentation

3.80 The Spalding Energy Park BESS is likely to be developed in phases. Furthermore, during commercial operation, it is anticipated that regular (approximately every three years) battery augmentations will take place to ensure that the batteries are returned to their original capacity. The augmentations will likely comprise the addition of further batteries and associated BESS containers / enclosures, and will incorporate the necessary control and protection, power conversion and temperature control systems (with associated transformers).

3.81 Full planning permission is sought for the Proposed Development and it is currently anticipated that the first construction period would commence in Q1 / Q2 2023. However, it is requested that a 5-year period for commencement of development, with the ability to develop in phases, are included in any grant of planning permission in order to allow for the most appropriate development configuration in the evolving electricity market, to ensure sufficient opportunities for the Spalding Energy Park BESS to win an award(s) during the UK's Capacity Market Auction(s)[3], and to subsequently progress towards the finalisation of a construction contract(s) and raise project finance.

3.82 For one construction phase (or the first construction phase), the construction period is likely to last between 18-30 months, and each additional construction period (depending on scale) may last between 18-24 months.

[3] Used within the context of the application / variation date and timing, noting that the decision to run a Capacity Market Auction is made around June each year by the Secretary of State and that, during a Capacity Market Auction, the clearing price is driven by a number of factors but mainly by the amount of capacity to be procured and the capacity of Capacity Market Units that participate.

3.83 The Spading Energy Park BESS may be augmented during its lifetime to preserve or increase its overall power capacity and energy storage capacity.

3.84 At present it is assumed that during commercial operation, it is anticipated that regular (approximately every three years) battery augmentations will take place to ensure that the batteries are returned to their original capacity. The augmentations will likely comprise the addition of batteries and associated BESS containers / enclosures only, and will incorporate the necessary control and protection, power conversion and temperature control systems. Within the Parameter Plans, and the Environmental and Technical Report, a conservative estimate for augmentation has been assumed.

3.85 It is anticipated that the timing of phasing and approach to augmentation will be agreed with the Council via a Phasing and Augmentation Scheme, pursuant to a planning condition.

Decommissioning

3.86 At the end of the Spalding Energy Park BESS operational lifetime (envisaged after 20-25 years), the Spalding Energy Park BESS will be decommissioned.

3.87 Decommissioning will take account of the prevailing environmental legislation and guidance in place at the time. Notice will be given to the relevant statutory authorities, including the Council, and any necessary authorisations or permissions(s) will be acquired.

3.88 During decommissioning, it will be ensured that the site is left with no residual environmental or safety risks, and that the site is returned to a condition suitable for reuse.

3.89 Under the 2009 Waste Batteries and Accumulators Regulations, the appointed BESS integrator will be required to take back any waste batteries, and ensure they are delivered to an approved treatment and recycling facility. In addition, wherever possible, the equipment will be made of materials suitable for reuse or recycling. All equipment will be removed offsite by an approved and licenced waste management operator, for treatment at an approved and licenced facility.

3.90 However, if the prevailing market conditions or electricity supply constraints at the time indicate that it would be appropriate to extend the Spalding Energy Park BESS (or any separate Spalding Energy Park BESS equipment / plant components') operational lifetime, then decommissioning may be deferred. In order to ensure continuing the equipment condition and performance, the Spalding Energy Park BESS may be further augmented.

3.91 Alternatively, the Spalding Energy Park BESS could be repowered whereby the existing battery equipment would be removed and replaced with new units.

Need

3.92 This section of the report outlines the many uses of battery storage within the electricity system, the current and future need for it and how it is vital to support the move to a highly renewable electricity system in order to meet the government's legal commitment to achieve net zero emissions nationally by 2050.

3.93 In October 2021 the UK government announced[4] a commitment to decarbonise the UK's electricity system by 2035, a full 15 years earlier than the nationwide 2050 legal commitment, identifying that *"we need to reduce our emissions and meet increased demand whilst ensuring the system remains reliable and affordable"*.

3.94 Battery storage has a number of different uses within the electricity system and is going to become an increasingly vital part of our system in the future. In 2020 National Grid ESO published an article titled Electricity Explained: Battery Storage. This states that *"battery storage is a vital tool that we use to balance the grid and they play a wide range of roles in doing so. The main function is to provide us with artificial inertia and it is stored electricity that can be called upon to provide fast response."* It goes on to outline the various services and uses of battery storage, including the below:

3.95 Balancing & Ancillary Services:

- **Maintain grid frequency** – it provides us with enhanced frequency response
- **Minimise reserve costs** – a fast acting reserve to quickly inject the energy to make up the shortfall
- **Minimise foot room costs** – foot room is the ability to turn a generator up or down when it isn't running at full capacity. Injecting electricity from battery storage reduces the foot room and helps in balancing the grid at the lowest possible cost
- **Black Start capability** – in the unlikely event of a total blackout, National Grid could use the battery power to re-start at a local level and would then synchronise with the main grid.

3.96 Transmission Owner/Distribution Network Operator Asset Services

[4] 'Plans unveiled to decarbonise UK power system by 2035' (Secretary of State for Business, Energy & Industrial Strategy, 7 October 2021). Available at: https://www.gov.uk/government/news/plans-unveiled-to-decarbonise-uk-power-system-by-2035

- **Minimise TO/DNO reinforcement costs & reduce congestion management** - constraints don't happen all the time so it can be cheaper to add more battery storage contracts rather than upgrade the system
- **Keep voltage in limits**

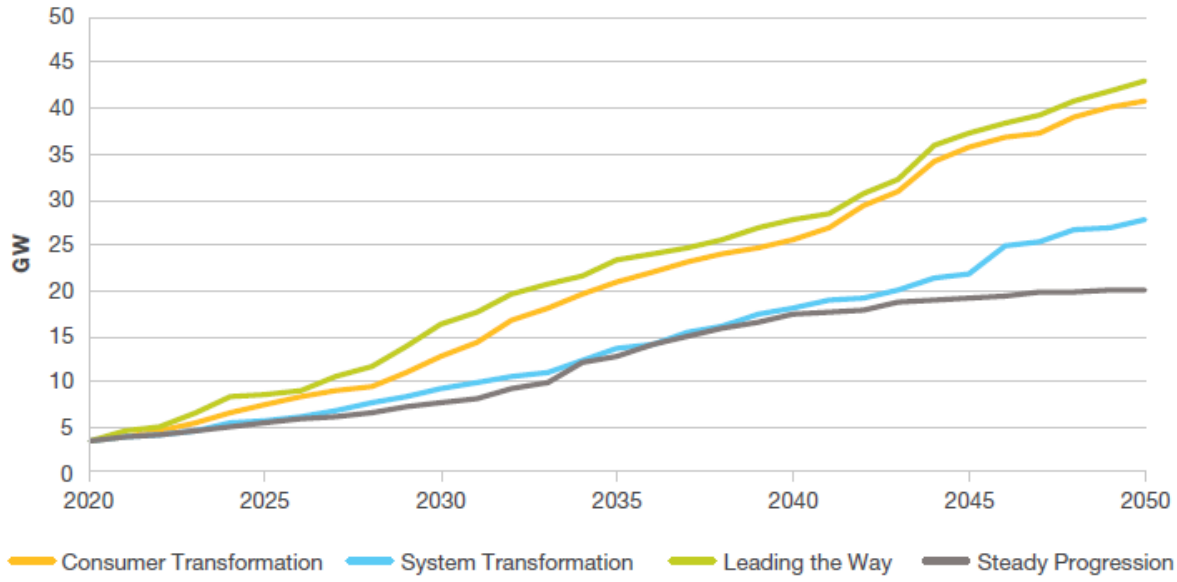
3.97 Other uses:

- **Lower wholesale costs** – the wholesale cost of electricity is higher at peak times such as early evening. Batteries are able to store electricity during low demand periods, and then inject this into the system during peak time. As more battery storage suppliers enter the market, this should reduce costs even more
- **Participate in the Capacity Market** – battery storage plays its part in the Capacity Market. It can compete against traditional generation to provide security of supply.

3.98 National Grid ESO's Future Energy Scenarios 2021 report[5] outlines four different, credible pathways for the future of energy between now and 2050. It states that electricity storage will become increasingly important as levels of renewable generation increase, although the degree of storage varies significantly across their different scenarios. It finds that while electricity storage capacity is currently around 4GW (2020), it will need to be at between 8 GW and 17 GW by 2030, and between 20 GW and 43 GW by 2050, representing significant increases under all scenarios.

[5] Available online at: https://www.nationalgrideso.com/future-energy/future-energy-scenarios/fes-2021

Figure 3.3: Electricity Storage Capacity (from 'Future Energy Scenarios 2021' by National Grid ESO)



3.99 The National Infrastructure Commission ('NIC') is the UK government's official and independent advisor on major infrastructure. The NIC's 2021 report 'Operability of Highly Renewable Electricity Systems'[6] identifies the need for energy storage capacity, to support a highly renewable and flexible electricity system, stating:

"Historically, coal and natural gas supplies have acted as a form of energy storage. Plants using these fuels to generate electricity have been able to manage their electricity output to meet demand requirements. But as the system decarbonises these fuels will no longer be used. Instead, the system will require storage of electricity using electrochemical storage such as batteries, mechanical storage such as pumped hydro plants or flywheels, and potentially low carbon gases such as hydrogen.

Others, including the ESO, government, and the Climate Change Committee have also found that highly renewable electricity systems are capable of balancing supply and demand at low cost. A system such as this can only be realised if the flexibility of the electricity system is significantly increased. This can be achieved through the deployment of technologies such as electricity storage, demand side response and interconnection.

[6] Available online at: https://nic.org.uk/studies-reports/operability-highly-renewable-electricity-systems/

Variable renewables rely on weather patterns such as the wind and solar irradiance. And whilst weather patterns are locally predictable, variable renewables are inherently more variable that traditional fossil fuel generation. Supply will therefore fluctuate more than previously, and so the system must be able to respond faster to these changes in generation."

3.100 The move towards a highly renewable electricity system is already underway. The Climate Change Committee's 2021 Progress Report to Parliament identifies that between 2009 and 2019 electricity generated from renewables has increased from 9 terawatt hours (TWh) (approximately 3% of total generation) to 73 TWh (approximately 26% of total generation). The report goes on to suggest that 70% of total generation should come from renewables by 2035, and 80% by 2050.

3.101 The Overarching National Policy Statement for Energy (NPS EN-1) (DECC, 2011) provides the need case for larger scale energy projects and is material to decisions on other projects such as this. It identifies at paragraph 3.3.15 '*in order to secure energy supplies that enable us to meet our obligations for 2050, there is an urgent need for new (and particularly low carbon) energy NSIPs to be brought forward as soon as possible, and certainly in the next 10 to 15 years'*[7].

3.102 More recent and emerging policy is planning for further increases in renewable energy deployment, including the draft National Policy Statement for Renewable Energy (Draft NPS EN-3) (BEIS, 2021)[8].

3.103 Taking all of the above into account it is of clear and national importance that energy storage capacity increases to keep up with the rapid deployment of renewable energy.

3.104 In light of the above, it is considered that there is a strong national need for grid scale BESS developments such as the Proposed Development.

Site Selection

3.105 The Proposed Site was selected for a number of relevant reasons, which can be summarised as follows:

- **Availability of the land**. The applicant is in control of the land required to implement the project, which is crucial to the delivery of the project and in meeting the urgent national need for this type of infrastructure.

[7] Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf

[8] Available online at: https://www.gov.uk/government/consultations/planning-for-new-energy-infrastructure-review-of-energy-national-policy-statements

- **The feasibility and proximity of the Site to a suitable connection to the electricity grid.** The proximity, technical feasibility and deliverability of a connection to the high voltage national transmission system ('NTS') are crucial to the delivery of this infrastructure. A grid scale connection is necessary for this scale of BESS and shorter connections such as this reduce transmission losses.

- **The availability of suitable road access to the Strategic Highway Network**. Road access is required for construction in order to bring in bulk materials, the containerised batteries, and large items of plant such as transformer components, as well as for future maintenance and augmentation of the BESS. The application includes access to the existing wider road network which has suitable onward access to the Strategic Highway Network.

- **The principle of various types of energy use is well established at the site**. This is by virtue of the various consents for generation, storage and transmission infrastructure on land in and adjoining the application site, as shown in Table 2.1 above. Furthermore, the Application Site is located on land designated under Policy 7 on Improving South East Lincolnshire's Employment Land Portfolio, and more specifically as sites SP037 ('Spalding Power Station') and SP038 ('Spalding Power Station B') noted to be 'Restricted Use Employment Sites' to encourage investment in power generation-related industries.

- **The location of the Site on previously developed land, rather than open countryside**. This is consistent with the general approach of national and local planning policy.

- **The distance of the Site from sensitive receptors.** As set out in section 2 the site is well separated from residential properties and environmental and heritage designations.

3.106 The high suitability of this site means that the national need for the Proposed Development corresponds to an identified need for this type of development at this location. The principle of a BESS development of this approximate scale is therefore considered to be acceptable.

4.0 PLANNING POLICY CONTEXT

4.1 This section provides a brief overview of the relevant planning policy and guidance at local and national level. The design of the Proposed Development has been influenced by these policies and the proposals are assessed against them in Section 5 of this report.

4.2 The planning application will be determined in accordance with section 70(2) of the 1990 Act, which states that in dealing with applications, local planning authorities shall have regard to the provisions of the development plan and to other material considerations.

Development Plan

4.3 The development plan that is relevant to the Application Site and surrounding area comprises the South East Lincolnshire Local Plan 2011-2036 (adopted March 2019) ('Local Plan').

4.4 The following policies from the Local Plan are considered to be of most relevance:

- Policy 1: Spatial Strategy
- Policy 2: Development Management
- Policy 3: Design of New Development
- Policy 4: Approach to Flood Risk
- Policy 5: Meeting Physical Infrastructure and Service Needs
- Policy 6: Developer Contributions
- Policy 7: Improving South East Lincolnshire's Employment Land Portfolio
- Policy 28: The Natural Environment
- Policy 30: Pollution
- Policy 31: Climate Change and Renewable and Low Carbon Energy
- Policy 32: Community, Health and Well-being
- Policy 33: Delivering a More Sustainable Transport Network
- Policy 36: Vehicle and Cycle Parking.

Other Material Considerations

National Planning Policy

4.5 The National Planning Policy Framework ('NPPF') was adopted in March 2012 and was most recently updated in July 2021. It sets out the Government's planning policies for England and how

these are to be applied. The policies contained within the NPPF are expanded upon and supported by Planning Practice Guidance ('PPG'), which was first published in March 2014 and has been periodically updated since.

4.6 The NPPF chapters considered most relevant to the Proposed Development includes:

- Chapter 1: Achieving sustainable development;
- Chapter 6: Building a strong, competitive economy;
- Chapter 8: Promoting healthy and safe communities;
- Chapter 11: Making effective use of land;
- Chapter 12: Achieving well-designed places;
- Chapter 14: Meeting the challenge of climate change, flooding and coastal change; and
- Chapter 15: Conserving and enhancing the natural environment.

4.7 The National Policy Statements ('NPSs') make up the planning policy framework for examining and determining Nationally Significant Infrastructure Projects ('NSIPs'). As the Proposed Development is not a NSIP, the NPSs are not directly relevant; however, they do form material considerations in the determination of the planning application.

4.8 The following NPSs are considered to be most relevant:

- Overarching NPS for Energy ('EN-1').
- NPS for Renewable Energy Infrastructure ('EN-3'); and
- NPS for Electricity Networks Infrastructure ('EN-5').

4.9 In September 2021 the Department for Business, Energy and Industrial Strategy released updated drafts of the Energy NPSs on which they were consulting until 29 November 2021. Parliamentary scrutiny will last until the end of February 2022 hence they will not be adopted, and are unlikely to be material to planning decisions, until March 2022 at the earliest.

5.0 ASSESSMENT OF THE PROPOSED DEVELOPMENT

5.1 This section provides an assessment of the application proposals in order to demonstrate how the Proposed Development has been influenced by and is compliant with the relevant planning policy, with reference to the other technical reports submitted alongside the planning application. The key assessment topics are considered to be as follows:

- Principle of the Proposed Development;
- Design (layout, scale & appearance) and landscape & visual impact;
- Flood risk and drainage;
- Biodiversity;
- Noise impacts;
- Ground conditions; and
- Transport and Travel.

Principle of the Proposed Development

Policy Summary

5.2 The NPPF, in Chapter 1, states that *"The purpose of the planning system is to contribute to the achievement of sustainable development"* (NPPF paragraph 7) by way of three overarching objectives: *"a)* ***an economic objective*** *- to help build a strong, responsive and competitive economy…b)* ***a social objective*** *– to support strong, vibrant and healthy communities…and c)* ***an environmental objective*** *– to protect and enhance our natural, built and historic environment…"* (NPPF paragraph 8). Paragraph 9 confirms that these objectives are not criteria against which every decision can or should be judged but decisions should play an active role in guiding development towards sustainable solutions taking into account the character, needs and opportunities of each area.

5.3 The NPPF in Chapter 6, paragraph 81 states that *"Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. This is particularly important where Britain can be a global leader in driving innovation…"*

5.4 NPPF, in Chapter 11, paragraph 120 requires that planning decision should give substantial weight to the value of using suitable brownfield land within settlements for identified needs and support opportunities to remediate land such as the Application Site.

5.5 The NPPF sets out its support for renewable energy development in Chapter 14). Paragraph 152 states that *"The planning system should support the transition to a low carbon future. It should help to … support renewable and low carbon energy and associated infrastructure."* Paragraph 158 goes on to state *"When determining planning applications for renewable and low carbon development, local planning authorities should…not require applicants to demonstrate the overall need for renewable or low carbon energy… and* [should] *approve the application if its impacts are (or can be made) acceptable…*".

5.6 The Overarching National Policy Statement for Energy (EN-1) states that *"there are a number of other technologies which can be used to compensate for the intermittency of renewable generation, such as electricity storage"*. It goes on to state that *"electrical energy storage allows energy production to be decoupled from its supply and provides a contribution to meeting peak demand".*

5.7 Local Plan Policy 1: Spatial Strategy directs new development to within the settlement boundaries.

5.8 The Application Site is allocated (under references SP037 ('Spalding Power Station') and SP038 ('Spalding Power Station B')) in Policy 7: Improving South East Lincolnshire's Employment Land Portfolio of the Local Plan as a 'Restricted Use Employment Site' *"to encourage investment in power generation-related industries"*. The supporting text at paragraph 4.2.2 notes that low carbon industries is one of the identified growth sectors.

5.9 Local Plan Policy 31: Climate Change and Renewable and Low Carbon Energy, part B, supports the development of renewable energy facilities and associated infrastructure subject to demonstrating no significant harm.

5.10 In September 2021 the Department for Business, Energy and Industrial Strategy released updated drafts of the Energy NPSs on which they were consulting until 29 November 2021. The Draft Overarching National Policy Statement for Energy (EN-1) states that it *"has a key role to play in achieving net zero and providing flexibility to the energy system, so that high volumes of low carbon power, heat and transport can be integrated"* (Draft Overarching National Policy Statement for Energy (EN-1) (September 2021) paragraph 3.3.25).

5.11 It goes on to state that *"Storage is needed to reduce the costs of the electricity system and increase reliability by storing surplus electricity in times of low demand to provide electricity when demand*

is higher. Storage can provide various services, locally and at the national level. These include maximising the usable output from intermittent low carbon generation (e.g. solar and wind), reducing the total amount of generation capacity needed on the system; providing a range of balancing services to the NETSO and Distribution Network Operators (DNOs) to help operate the system; and reducing constraints on the networks, helping to defer or avoid the need for costly network upgrades as demand increases." (Draft Overarching National Policy Statement for Energy (EN-1) (September 2021) paragraph 3.3.25).

Assessment

5.12 The principle of the Proposed Development both in terms of being located at the Application Site and in terms of its contribution to energy supply objectives and the transition to a low carbon economy is firmly supported by the NPSs, the NPPF and Local Plan policies 1, 7 and 31.

5.13 The Application Site is previously developed/brownfield land within the defined Settlement boundary of Spalding. Furthermore, the Application Site is specifically allocated under Policy 7 for power generation-related industries.

5.14 It is acknowledged that the SP037 and SP038 site allocations, which apply to the Application Site, refer to employment uses directly associated with power-generation and that operation of the Spalding Energy Park will generate limited direct employment as it will be unmanned. Nevertheless, job opportunities be supported during construction of each phase as well as for ongoing augmentation and maintenance during the lifetime of the Proposed Development. The thrust of Policy 7 is support of economic growth and the Proposed Development represents economic growth despite not falling within the traditional B class categories.

5.15 Given the clear suitability of the Application Site for a development of this nature, in part established through the extant S36 Consent, and the clear support for energy storage in supporting renewable energy and the transition to a low carbon economy set out in Local Plan Policy 31 (part B) and the NPSs and NPPF, the principle of the Proposed Development at the Application Site is considered to be in accordance with planning policy.

Design (Layout, Scale & Appearance) and Landscape & Visual Impact

Policy Summary

5.16 The NPPF at Chapter 11 paragraph 119 promotes the effective use of land in meeting identified needs.

5.17 Chapter 12 emphasises that good design is a key aspect of sustainable development and seeks to ensure that developments meet the following criteria (of relevance to the Proposed Development):

(a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development; (b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping; (c) are sympathetic to local character and history, including the surrounding built environment and landscape setting…(e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space)… f) create places that are safe, inclusive and accessible and… where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience." (NPPF paragraph 130).

5.18 NPPF Chapter 14, Paragraph 155, states to help increase the use and supply of renewable and low carbon energy, plans *"… should that provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily including cumulative landscape and visual impacts".*

5.19 Policy 2 (Development Management) of the Local Plan states that *"Proposals requiring planning permission for development will be permitted provided that sustainable development considerations are met, specifically in relation to: (1) size, scale, layout, density and impact on the amenity, trees, character and appearance of the area and the relationship to existing development and land uses; (2) quality of design and orientation; (3) maximising the use of sustainable materials and resources; (4) access and vehicle generation levels; (5) the capacity of existing community services and infrastructure; (6) impact upon neighbouring land uses by reason of noise, odour, disturbance or visual intrusion; (7) sustainable drainage and flood risk; (8) impact or enhancement for areas of natural habitats and historical buildings and heritage assets; and (9) impact on the potential loss of sand and gravel mineral resources."*

5.20 Policy 3 (Design of New Development) states that *"All development will create distinctive places through the use of high quality and inclusive design and layout and, where appropriate, make innovative use of local traditional styles and materials. Design which is inappropriate to the local area, or which fails to maximise opportunities for improving the character and quality of an area, will not be acceptable."* It goes on to state that development proposals will demonstrate how a number of issues, where relevant to the proposal, will be secured, including relating to accessibility by a choice of travel modes, provision of parking, lighting, orientation of buildings, residential amenity and flood risk.

Assessment

5.21 As noted in Section 3 of this Planning Statement, the final design of the Proposed Development is yet to be confirmed, pending factors such as the selection and appointment of a BESS integrator, detailed design, the selection and appointment of Construction Contractor (or Construction Contractors), further ground investigations, the accuracy of existing services and utilities information and agreements with existing services and utilities operators.

5.22 In particular it should be noted that the exact size, number and therefore the area to be occupied by the battery containers/enclosures and the associated control (including temperature), protection and power conversion systems and transformers and the associated layout and visual appearance, will be dependent on a number of factors. These include the selected / appointed BESS integrator; the initial BESS power capacity (MW) and duration / energy storage capacity (hours / MWh); and, the subsequent BESS augmentations.

5.23 Therefore, an appropriate degree of flexibility has been incorporated into the Application and supporting reports. To support this approach, a parameter envelope has been determined based on the required flexibility. Appropriate control is afforded by the parameter plans, in particular, by defining maximum extents (horizontal plane) and heights (vertical plane) of the Electrical Banking Station and the main BESS component, which also act to constrain the overall scale and amount of storage.

5.24 An explanation and rationale of the design of the Proposed Development is provided in Section 3 of this Planning Statement with reference to the parameter plans and Indicative Scheme. These have been derived based on technical considerations/requirements as well as seeking to demonstrate an appropriate form of the Proposed Development in terms of the relevant design criteria in the policies identified above.

5.25 Should planning permission be granted it is proposed that conditions are imposed to require the Council's approval of final details of design of each phase. Approval of the parameter plans and the imposition of other conditions provide an appropriate level of control over the form of development and its effects.

5.26 The design of the BESS in general seeks to maximise durability and reliability due to the importance of the infrastructure, in terms of both regular and long-term maintenance requirements. Materials and finishes will be selected to meet this objective and also to ensure that the appearance of the Spalding Energy Park BESS does not materially deteriorate over its operating lifetime.

5.27 Furthermore, and as described in Appendix F of the Environmental and Technical Report, the Application Site is largely surrounded by existing commercial and industrial development. Any views of the Application Site and Proposed Development from the open land to the east of the River Welland will therefore include the context of the existing significant vertical structures and massing of large commercial/industrial buildings and structures. Based on the viewpoint analysis provided in Appendix F of the Environmental and Technical Report, the visual receptors identified are consider to have low vale and low susceptibility to change and therefore it is considered unlikely that there is potential for significant visual effects / impacts, and the Spalding Energy Park BESS would be easily accommodated within its visual context / setting.

5.28 The proposed soft landscaping around parts of the Application Site perimeter will create a soft edge between the Application Site and adjacent accessible areas, creating a more visually pleasing boundary as well as providing opportunities for biodiversity enhancement.

5.29 Finally, the Environmental and Technical Report provided with the Application refers to the concept of an accepted environmental impact envelope at the Application Site, established via the extant S36 Consent for the unbuilt elements of the SEE development (referred to as 'Committed Development'). It can be seen from the description of the Proposed Development in Section 3 of this Planning Statement that compared to a CCGT Power Station (the most significant unbuilt element of the SEE development) a BESS has far fewer tall structures, moving parts, noise generating sources, and cooling systems and does not emit NO_x and CO_2. Appendix A of the Environmental and Technical Report provides a more detailed comparison of the proposed Spalding Energy Park BESS and the Committed Development. The extant S36 Consent represents a 'fallback' position which constitutes a material consideration in the assessment of the acceptability of the design and visual impact of the Proposed Development.

5.30 The Proposed Development is therefore considered to comply with Local Plan Policy 2 (Development Management) and Policy 3 (Design of New Development) as well as the principles set out sections of the NPPF identified above.

Flood Risk and Drainage

Policy Summary

5.31 The NPPF at Chapter 14 states (at paragraph 159) that *"Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere"*.

5.32 The NPPF further states (at paragraph 161) that *"All plans should apply a sequential, risk-based approach to the location of development – taking into account all sources of flood risk and the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by:*

- *applying the sequential test and then, if necessary, the exception test…*".

5.33 With regards to the sequential test, the NPPF states (at paragraph 162) that "*The aim of the sequential test is to steer new development to areas with the lowest risk of flooding from any source"*; and, (at paragraph 163) "*If it is not possible for development to be located in areas with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied"*.

5.34 With regards to the exception test, the NPPF states (at paragraph 164) that *"…To pass the exception test it should be demonstrated that:*

(a) the development would provide wider sustainability benefits to the community that outweigh flood risk; and,

(b) *the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall*".

5.35 The associated NPPG contains the following statements of relevance:

- At Paragraph 27 (Ref ID: 7-027-20140306) that "*The exception test should only be applied as set out in Table 3 and following the application of the sequential test"*; and,
- At Paragraph 66 (Ref ID: 7-066-20140306), under 'Flood Risk Vulnerability Classification' that *"Essential Infrastructure" includes "essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations, and water treatment works, that need to remain operational in time of flood".*

5.36 Local Plan Policy 4 reflects the NPPS and states that *"Development proposed within an area at risk of flooding (Flood Zones 2 and 3)…will be permitted, where:*

1. It can be demonstrated that there are no other sites available at a lower risk of flooding (i.e. that the sequential test is passed)…[but that]*… The sequential test is not required for sites allocated in the Local Plan…*

2. *It can be demonstrated that essential infrastructure in FZ3a & FZ3b…provide wider sustainability benefits to the community that outweigh flood risk.*

3. *The application is supported with a site-specific flood risk assessment, covering risk from all sources of flooding including the impacts of climate change and which:*

   (a) demonstrate that the vulnerability of the proposed use is compatible with the flood zone;

   (b) identify the relevant predicted flood risk (breach/overtopping) level, and mitigation measures …;

   (c) propose appropriate flood resistance and resilience measures…to ensure the development maintains an appropriate level of safety for its lifetime;

   (d) include appropriate flood warning and evacuation procedures where necessary…

   (e) incorporates the use of Sustainable Drainage Systems (SuDS)…and confirms how these will be maintained/managed for the lifetime of development…;

   (f) demonstrates that the proposal will not increase risk elsewhere and that opportunities through layout, form of development and green infrastructure have been considered as a way of providing flood betterment and reducing flood risk overall;

   (g) demonstrates that adequate foul water treatment and disposal already exists or can be provided in time to serve the development;

   (h) ensures suitable access is safeguarded for the maintenance of water resources, drainage and flood risk management infrastructure"

5.37 Local Plan Policy 2 (Development Management) identifies 'sustainable drainage and flood risk' as one of the sustainable development considerations that development proposals should meet.

Assessment

5.38 The Application Site is located within a Flood Risk Zone 3 (High Probability).

5.39 In respect of the sequential test, the Application Site is allocated (under references SP037 ('Spalding Power Station') and SP038 ('Spalding Power Station B')) in Local Plan Policy 7 (Improving South East Lincolnshire's Employment Land Portfolio) as a 'Restricted Use Employment Site' *"to encourage investment in power generation-related industries"* and was subject to sequential testing in the Strategic Flood Risk Assessment (March 2017). Accordingly, no further sequential testing is required.

5.40 The Spalding Energy Park BESS is considered to be essential infrastructure. Table 3 of the NPPG (paragraph 067 (Ref ID 7-067-20140306)) notes that essential infrastructure can be located within Flood Zone 3 as long as the exception test is passed / satisfied, and as long as the Spalding Energy Park BESS can be "*designed and constructed to remain operational and safe in times of flood*".

5.41 With regards to the exception test, the sustainability credentials of the Proposed Development comprise:

- The need case set out in section 3, which demonstrates an urgent national need for this type of infrastructure;
- The site selection case set out in section 3, which demonstrates the need applies in this specific location; and
- The efficient use of resources such as through the reuse of existing electrical connection infrastructure; and the efficient use of land and construction materials due to the ability to stack the containerised battery units.

5.42 In terms of the requirement for the Spalding Energy Park BESS to remain operational and safe in times of flood and the requirement for the Proposed Development not to increase flood risk elsewhere, the Flood Risk Assessment in Appendix E of the Environmental and Technical Report provides further detail on the relevant mitigation measures. These include that the relevant parts of the Application Site (i.e. the BESS, Electrical Banking Station and Welfare Compound will be raised to 6.7mAOD above the 2075 1-in-200 (0.5%) flood event tidal/water levels for the River Welland and the 1-in-1000 (0.1%) event tidal / water levels for The Wash.

5.43 Further flood resistance/resilience measures will be fully considered and incorporated where necessary and feasible at detailed design stage.

5.44 Regarding surface water drainage and as described in Section 3 of this Planning Statement any captured surface water drainage requirements will connect into the existing Spalding OCGT Power Station site drainage system, which (in turn) connects into the existing Spalding CCGT Power Station site drainage system, including a storm / surface water pond. The existing storm/surface water pond periodically discharges to the River Welland and is likely to be able to accommodate surface water drainage from the Application Site. However, if surface water attenuation within the Application Site is required, a range of potential attenuation options (SuDS techniques) could be implemented / utilised to reduce peak flows and storm volumes, and also to improve overall water quality. The Flood Risk Assessment (Appendix E of the Environmental and Technical Report) notes

that based on the Indicative Scheme's layout and maximum potential impermeable area, the undeveloped parts of the Application Site provide adequate space to accommodate the captured site drainage storage requirement.

5.45 Finally, during construction the Construction Contractor will be required to prepare and implement a CEMP. The CEMP will include a number of aspect-specific management plans, including a 'Flood Warning and Evacuation Plan', a framework of which is provided in Appendix E-3 of the Environmental and Technical Report.

5.46 On this basis the Proposed Development complies with Local Plan Policy 2 and Policy 4, the NPPF and the NPPG.

Biodiversity

Policy Summary

5.47 NPPF Chapter 15 paragraph 174 states that states that planning policies and decisions should contribute to and enhance the natural and local environment by various means, including by *"minimising impacts on biodiversity and providing net gains in biodiversity"*. Improving biodiversity is also noted as one contributing factor to the 'environmental objective' component of achieving sustainable development (NPPF Chapter 2 paragraph 8).

5.48 Local Plan Policy 2 (Development Management) identifies 'impact or enhancement for areas of natural habitats' as one of the sustainable development considerations that development proposals should meet. Policy 3 (Design of New Development) similarly requires development proposals to demonstrate *"the incorporation of existing hedgerows and trees and the provision of appropriate new landscaping to enhance biodiversity…"*

5.49 Local Plan Policy 28 (The Natural Environment) seeks to protect, enhance and manage natural assets, including internationally, nationally and locally-designated sites and protected or priority habitats and species. Part 3 seeks to ensure that all development proposals provide an overall net gain in biodiversity by: *"(i) protecting the biodiversity value of land, buildings and trees (including veteran trees) minimising the fragmentation of habitats; (ii) maximising the opportunities for restoration, enhancement and connection of natural habitats and species of principal importance; (iii) incorporating beneficial biodiversity conservation features on buildings, where appropriate; and maximising opportunities to enhance green infrastructure and ecological corridors, including water space; and (iv) conserving or enhancing biodiversity or geodiversity conservation features that will provide new habitat and help wildlife to adapt to climate change…".*

Assessment

5.50 An Ecological Impact Assessment (EcIA) has been undertaken and is provided in Appendix C of the Environmental and Technical Report. The EcIA reports the outcome of a desk study; an Extended Phase 1 Habitat Survey (including daytime inspection for bats) of a wider survey area than the Application Site; and further Phase 2 Protected Species Surveys for reptiles and riparian mammals (otter and water vole).

5.51 Habitats of more than 'negligible' importance that were assessed as having potential to be affected comprise poor semi-improved grassland (within the south-eastern part of the survey area adjacent to West Marsh Road); the earth bank (within the central part of the survey area); introduced shrub (within the southern part of the survey area); and tall ruderal vegetation (within the central and southern parts of the survey area). Insert 4-1 of the EcIA notes these features within the wider survey area.

5.52 Species that were assessed as requiring further consideration include badger (likely absent from the Application Site but highly mobile); bats (potentially present on the Application Site); birds (potentially present on the Application Site); otter (potentially present on the Application Site); and reptiles (present on the Application Site). The EcIA notes however that within the Application Site no evidence was recorded of badger or setts; no buildings /trees were present with potential to support roosting bats and only limited habitat for use by commuting/foraging bats; and there was no suitable habitat for use by otters.

5.53 The EcIA notes that the Application Site contained suitable habitat for use by breeding birds and foraging barn owl, which would be lost; however, this would represent a small area of the total nesting/foraging area, and with no replacement habitat nesting/foraging could occur elsewhere such that any habitat loss would not be expected to affect the conservation status of any species. The Application Site was assessed as containing habitat suitable for reptiles and one adult grass snake was identified during the reptile surveys.

5.54 The EcIA explains that potential impacts during construction will be mitigated by the CEMP with specific measures set out in the EcIA, such as appropriate timing of vegetation clearance i.e. outside the bird nesting season and preparation of precautionary working method statements for badgers, otter and reptiles comprising a site walk over of relevant areas and a 'Toolbox Talk' to all construction personnel.

5.55 Post-construction, impacts of the Proposed Development are to be mitigated by on-site landscaping. The application incorporates flexibility on the final layout and siting of the proposed

development; however, the Site Plan Parameter Drawing (16179-WDN-D-ZZ-DR-A-1000) that is submitted for approval reserves an area of 8,843sqm around the perimeter of the southern portion of the Application Site. Given the relatively low ecological value of the Application Site a landscaping strip of this size would be sufficient to delivery net gain provided appropriate measures are implemented. Measures proposed in the EcIA include creation for birds including bird nest boxes and a barn own nesting box and habitat creation for reptiles including south facing bunds and/or refugia within the landscaping along the western boundary adjacent to Vernatt's Drain. It is proposed that final landscaping and associated biodiversity enhancement details are secured by condition to be developed in parallel with the detailed design stage of the Spalding Energy Park BESS.

5.56 The Proposed Development is therefore considered to comply with the relevant parts of Local Plan Policy 2 (Development Management); Policy 3 (Design of New Development) and Policy 28 (The Natural Environment), as well as the NPPF.

Noise Impacts

Policy Summary

5.57 NPPF, Chapter 15 paragraph 174 states that *"Planning policies and decisions should contribute to and enhance the natural and local environment by…* [various means including]*… preventing new and existing development from contribution to, being put at unacceptable risk from, or being adversely affected by, unacceptable level …noise pollution…"*.

5.58 The NPPF goes on to state at paragraph 185 that *"Planning policies and decisions should also ensure that new development is appropriate for its location taking account the likely effects (including cumulative effects) of pollution on heath, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should (a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life"; (b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason…"*

5.59 Local Plan Policy 2 (Development Management) identifies *"impact upon neighbouring land uses by reason of noise"* as one of the sustainable development considerations that development proposals should meet.

5.60 Local Plan Policy 30 (Pollution) also requires that development proposals do not give rise to unacceptable adverse noise impacts.

Assessment

5.61 A Noise Impact Assessment (NIA) has been undertaken and is provided in Appendix G of the Environmental and Technical Report. The NIA reports that the outcome of a baseline sound survey at five 'Noise Sensitive Receptors' in the vicinity of Application Site. The NIA then identifies the main sources of noise from the proposed Spalding Energy Park BESS and notes the relevant assumptions on the number of battery units.

5.62 Without mitigation, potential impacts are identified which at four Noise Sensitive Receptors is assessed as minor adverse/not significant and at one Noise Sensitive Receptor is assessed as moderate adverse/potentially significant. The NIA then identifies specific options of features/measures to mitigate this, including an attenuated main step-up transformer and/or a noise barrier or stacked containers along the southern edge of the Electrical Banking Station. Other measures will be considered at detailed design stage as necessary; however, on the basis of these identified measures the impacts at all the Noise Sensitive Receptors is reduced to minor adverse/not significant with the specific noise levels being within the No Observed Effect Level of -10dB(a) or less as set out in BS:4142 (2014): Methods for Rating and Assessing Industrial and Commercial Sound and the Noise Policy Statement for England (2010).

5.63 It is proposed that should planning permission be granted a condition is imposed requiring an updated noise assessment following detailed design and the imposition of mitigation measures if required.

5.64 On this basis the Proposed Development complies with Local Plan Policy 2 (Development Management) and Policy 30 (Pollution) as well as the NPPF.

Ground Conditions

Policy Summary

5.65 NPPF, Chapter 15 paragraph 174 states that *"Planning policies and decisions should contribute to and enhance the natural and local environment by…* [various means including]*… preventing new and existing development from contribution to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil…pollution or land instability"*. Paragraph 183 states that *"Planning policies and decisions should ensure that: (a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination…(b) after remediation, as a minimum, land should be capable of being determined*

as contaminated land...; and (c) adequate site investigation information, prepared by a competent person, is available to inform these assessments".

5.66 Local Plan Policy 2 (Development Management) identifies *"maximising the use of sustainable materials and resources"* as one of the sustainable development considerations that development proposals should meet. The supporting text at paragraph 3.3.5 notes that this includes the *"sustainable use of existing materials on site (e.g. resuse of excavated materials for landscaping or raising ground levels)."*

5.67 Local Plan Policy 30 (Pollution) also requires that development proposals do not give rise to unacceptable adverse impacts upon surface and groundwater quality.

Assessment

5.68 As described in Section 3 of this Planning Statement, the central part of the Application Site is largely comprised of a mound of 'Made Ground', formed during the redevelopment of the former sugar beet factory when the Spalding CCGT Power Station was built. The mound which contains sugar beet washings from the factory's settlement lagoons is approximately 4m higher than the remainder of the site.

5.69 Section 3 also notes that ground clearance and levelling is due to be / is being carried out pursuant to the S36 Consent, facilitated by the recent NMA approval (ref. H16-0847-21) and discharge of conditions. Reprofiling and retaining the mound material on the Application Site will contribute to the works to raise the levels to 6.7mAOD to mitigate potential flood risks. Any excess material is proposed to be retained to create landscaped bunds of up to 2m in height in the designated landscaping/bund zone. The principle of this is supported by Local Plan Policy 2 (Development Management) criterion 3.

5.70 A Ground Conditions Phase 1 Preliminary Environmental Risk Assessment has been undertaken and is provided at Appendix D of the Environmental and Technical Report. The assessment reports the outcome of the desktop review of available evidence including information prepared as part of previous development proposals at the Application Site.

5.71 Previous ground investigations have indicated that the Application Site is not significantly contaminated and does not exhibit concentrations of contaminants / pollutants in excess of the commercial and industrial criteria. In addition, (during the previous ground investigations) the collection of groundwater samples has indicated that the groundwater is not significantly contaminated, in particular noting that the metal concentrations were low and were considered to be indicative / representative of local background levels. Ground gas is being generated by this

Made Ground, with previous ground gas monitoring investigations indicating that the ground gas concentrations and flows are reducing, as would be expected for the decomposition of the Made Ground material.

5.72 Regarding the clearance works, during detailed design / prior to construction, a geophysical survey will be used to identify any remaining underground obstructions / services with subsequent clearance of any likely to impede the BESS development. Regarding the remediation works, during detailed design / prior to construction, validation surveys will be undertaken to verify the previous remediation works, and determine the need for any further remediation works such as asbestos-in-soil testing; collection of groundwater samples and associated analysis; and further ground gas monitoring. This will inform the preparation of risk assessments and allow consideration to be given to the need for protection measures to be imported into the detailed design of the Proposed Development e.g. gas/vapour protection in structures.

5.73 Based on the above, it is considered that adequate site investigation information, prepared by a competent person, is available to inform the assessment and that further investigations, assessments, remediation and verification requirements (as required) can be appropriately secured by standard condition(s) should planning permission be granted.

5.74 On this basis the Proposed Development complies with Local Plan Policy 2 (Development Management) and Policy 30 (Pollution) as well as the NPPF.

Transport and Travel

Policy Summary

5.75 The NPPF, Chapter 9 at paragraph 104 states that *"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that the potential impacts of development on transport networks can be addressed".* Paragraph 110 advises that development proposals should ensure that "…*appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location; …safe and suitable access to the site can be achieved for all users*"; …and *"any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an appropriate degree*". Paragraph 111 confirms that *"development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residential cumulative impacts on the road network would be severe*".

5.76 Local Plan Policy 2 (Development Management) identifies *"access and vehicle generation levels"* as one of the sustainable development considerations that development proposals should meet. Local Plan Policy 5 (Meeting Physical Infrastructure and Service Needs) similarly notes that *"Planning permission will be granted for new development provided that developers can demonstrate that there is, or will be sufficient physical infrastructure and service needs capacity to support and meet the needs of the proposed development".*

5.77 Local Plan Policy 32 (Community, Health and Well-being) states that *development will not be permitted unless it (where possible and appropriate) …protects and enhanced exiting public rights of way…*". Policy 33 (Delivering a More Sustainable Transport Network) similarly notes the requirement to "*protect existing footpaths, cycle routes and public rights of way from development"* as well as seeking to mitigate congestion at pinch points on roads.

Assessment

5.78 A Transport Statement is provided in Appendix H of the Environmental and Technical Report which considers potential impacts during construction and operation of the Spalding Energy Park BESS.

5.79 The Transport Statement explains (as also set out in Section 3 of this Planning Statement) that access to the Application Site during construction and operation will be via the existing Gate C access off West Marsh Road. The Transport Statement notes that the access already takes the form of a priority junction and benefits from good visibility splays in both directions.

5.80 During the peak construction period (anticipated to be Q1 and Q2 2024) when equipment delivery and installation and electrical works and pre-commissioning activities are taking place, it is estimated that there will be approximately 100 HGV two-way movements (no more than 5 in an hour) and 290 car/van two-way movements during a day, assuming a conservative one construction personnel per vehicle.

5.81 As noted previously, the Spading Energy Park BESS will be an unmanned operational facility, noting that continuous and remote monitoring / regular inspection and maintenance visits will be undertaken, and each phase will have an operational lifetime of approximately 20 to 25 years. As such, during normal operation, the Spalding Energy Park BESS will not generate material / significant traffic movements. The augmentations that will take place to ensure that the batteries are returned to their original capacity are also not anticipated to generate material / significant additional traffic movements.

5.82 Therefore, during both normal operation and augmentation, any potential effects / impacts will be negligible.

5.83 Notwithstanding, it is proposed that the construction contractor will be required to prepare and implement a Construction Transport Management Plan (CTMP) a framework of which is provided in Appendix H-3 of the Environmental and Technical Report. It is anticipated that the requirement for a final CTMP will be secured via a condition should planning permission be granted.

5.84 The Transport Statement also notes the committed development i.e. the remaining unbuilt elements of the SEE development that would in effect be replaced by the Spalding Energy Park BESS. The Transport Statement concludes that the construction traffic movements are anticipated to be lower and experiences for a shorter duration than those associated with the committed development.

5.85 With regard to the policy requirements to protect and where possible enhance public rights of way, it should be noted that the Proposed Development does not interfere with the footpath that runs along the western boundary of the site along the bank of Vernatt's Drain. Furthermore, the proposed landscaping along part of the western boundary of the Application Site should enhance the amenity of the PRoW.

5.86 It is also relevant to note that at the time the Spalding OCGT Power Station was developed, S106 Agreement financial contributions were made by SEEL for the Council to apply towards the provision, improvement or upgrading of cycleways and footpaths lining the Application Site with Spalding.

5.87 Finally, the Indicative Scheme illustratively shows a small car park in the Welfare Compound for visiting inspection and maintenance personnel. It is proposed that these details, including cycle parking provision, are considered following detailed design and will therefore form part of the approval process anticipated to be required via condition should planning permission be granted.

5.88 In conclusion no significant residual significant effects/impacts are anticipated or considered likely. Therefore, the proposed development is compliant with the NPPF and Local Plan Policy 2 (Development Management), Policy 5 (Meeting Physical Infrastructure and Service Needs), 32 (Community, Health and Well-being), Policy 33 (Delivering a More Sustainable Transport Network) and Policy 36 (Vehicle and Cycle Parking).

6.0 SUMMARY AND CONCLUSIONS

6.1 SEPL is applying for planning permission to the Council for the Proposed Development.

6.2 The Proposed Development comprises, in summary, the construction and operation of an unmanned BESS with a power capacity of up to 550MW with associated works including control and protection systems, power conversion systems (and associated transformers), temperature regulation systems, a main step-up transformer(s) and switchgear, welfare facilities, electrical cabling and electrical connection, and other associated works.

6.3 The Application Site of 12.6 ha is located off West Marsh Road, in Spalding, to the south of the existing Spalding CCGT Power Station, and immediately to the west of the existing Spalding OCGT Power Station.

6.4 Most of the Application Site comprises the remaining part of the consented and part-implemented SEE development site. SEE was granted S36 Consent (on application by InterGen's subsidiary company, SEEL) in 2010 and Deemed Planning Permission under the 1990 Act.

6.5 The S36 Consent (as varied, most recently in 2018) permits the construction and operation of *"a combined cycle gas turbine ('CCGT') with open cycle gas turbine ('OCGT') generating station (incorporating a Battery Energy Storage System ('BESS')"* of up to 945MW.

6.6 An OCGT unit has been constructed and commenced commercial operation in 2019. However, SECL no longer intends to develop the CCGT and, rather, wishes to develop a larger scale BESS, which is the subject of this Application, submitted under the 1990 Act.

6.7 If planning permission is granted for the Spalding Energy Park BESS, it would not be possible to implement the remaining components of the SEE development. Therefore, in practical terms the Spalding Energy Park BESS will replace the unbuilt elements of the SEE development.

6.8 This Planning Statement, with reference to the Environmental and Technical Report and drawings submitted with the Application, demonstrates that the principle of battery storage development is supported by local and national planning policy. Furthermore, this form of development is appropriate for the site location and conforms with the South East Lincolnshire Local Plan 2011-2019 allocation of the under Policy 7 (SP037 ('Spalding Power Station') and SP038 ('Spalding Power Station B')) for investment in power generation-related industries. Indeed, varied forms of energy generation and storage development have been consented at this location, under the S36 Consent (as varied) that represent committed development.

6.9 It is also notable that the UK Government has committed to meeting a legally binding target of net-zero carbon emissions by 2050, and recently committed to a net zero electricity system much earlier than this (2035), which requires significant investment in the development of renewable energy infrastructure locally and throughout the UK. The contribution that the Proposed Development would make towards meeting these needs, in a suitable location near to an electrical grid connection, is a significant material consideration.

6.10 The consent for the Committed Development provides a fallback position which is a key material consideration in the determination of the Application. The Spalding Energy Park BESS has fewer impacts and more relevant benefits.

6.11 This Planning Statement explains how the Proposed Development complies with the development plan and planning policy and guidance. The substantial relevant benefits of the Spalding Energy Park BESS and the limited and controllable nature of its impacts, weigh in favour of granting planning permission. The Applicant therefore respectfully requests that planning permission is granted for the Proposed Development.