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SPALDING ENERGY PROJECT

ENVIRONMENTAL AND TECHNICAL SCHEDULE

VARIATION APPLICATION UNDER SECTION 36C OF THE ELECTRICITY ACT 1989

RAMBOLL

SPALDING ENERGY PROJECT

ENVIRONMENTAL AND TECHNICAL SCHEDULE
Variation Application under Section 36C of the Electricity Act 1989

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CONTENTS

LIST OF ABBREVIATIONS

ACC	air cooled condenser
AGP	Advanced Gas Path
BEIS	Department for Business, Energy and Industrial Strategy
BoP	balance of plant
BPEO	best practicable environmental option
CCGT	combined cycle gas turbine
CCR	carbon capture readiness
CHP	combined heat and power
CO_2	carbon dioxide
DCO	Development Consent Order
DCS	Distributed Control System
DECC	Department of Energy and Climate Change
DTI	Department for Trade and Industry
EIA	Environmental Impact Assessment
HCLG	Ministry of Housing, Communities and Local Government
HRSG	heat recovery steam generator
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
OCGT	open cycle gas turbine
Ramboll	Ramboll UK Limited
SECL	Spalding Energy Company Limited
Secretary of State	Secretary of State for Business, Energy and Industrial Strategy
SEE	Spalding Energy Expansion
SEP	Spalding Energy Project

1. OVERVIEW

1.1 The Spalding Energy Project

1.1.1 The Spalding Energy Project (SEP) is a combined cycle gas turbine (CCGT) generating station, located on West Marsh Road, in Spalding, Lincolnshire. SEP is located to the north of the newly constructed Spalding Energy Expansion (SEE) Open Cycle Gas Turbine (OCGT) generating station.

1.1.2 On 15 November 2000, the original consent was granted for SEP under Section 36 of the 1989 Electricity Act[1]. The original consent was accompanied by a direction that planning permission be deemed to be granted under Section 90 of the 1990 Town and Country Planning Act[2]. Together, these (the original consent and the direction that planning permission be deemed to be granted) comprise the existing consent for SEP. Appendix A provides further background information on the consenting history of SEP.

1.1.3 At Paragraph 2, the existing consent for SEP provides that: "*the Development shall be about 800 MW capacity*". Subsequently, in May 2001, the Department for Trade and Industry (DTI) (the predecessor to the Department of Energy and Climate Change (DECC), now the Department for Business, Energy and Industrial Strategy (BEIS)) confirmed that the tolerance provided by Paragraph 2 of the existing consent for SEP allowed for an electricity generation output of 840 MW capacity.

1.1.4 The existing consent for SEP was originally granted to InterGen. On 13 May 2002, InterGen transferred the benefit of the existing consent for SEP to Spalding Energy Company Limited (SECL) (a wholly owned subsidiary of InterGen).

1.2 The Proposed Development

1.2.1 The Proposed Development relates to the way in which SEP is authorised to operate.

1.2.2 In early 2019, SECL undertook an Advanced Gas Path (AGP) upgrade to SEP. The AGP upgrade to SEP comprised a number of changes to the existing gas turbines and associated systems, and improved both the environmental performance and electricity market competitiveness of SEP. Amongst the improvements, the AGP upgrade to SEP will allow for an increase in the maximum electricity generation output to up to 950 MW capacity. This is above the current permitted electricity generation output of about 800 MW.

1.2.3 Therefore, as enabled by the AGP upgrade to SEP, the Proposed Development comprises the increase in the maximum electricity generation output of SEP to up to 950 MW.

1.3 The Variation Application and the Purpose of this Report

The Variation Application

1.3.1 SECL is submitting a variation application under Section 36C of the 1989 Electricity Act (the variation application) to the Secretary of State for Business, Energy and Industrial Strategy (Secretary of State), via BEIS, which primarily seeks to amend Paragraph 2 of the existing consent to allow for the increase in the permitted electricity generation output of SEP to up to 950 MW capacity.

1.3.2 The variation application also seeks a direction to amend various conditions subject to which the planning permission was deemed to be granted under Section 90(2ZA) of the 1990 Town and Country Planning Act. The amendments are: to reflect the fact that the construction of SEP is complete; to allow for certain further changes to the conditions, or matters controlled by those conditions, to be agreed with the local planning authority; and, to reflect other changes in circumstances since 2000 (when the existing consent was granted).

[1] The Electricity Act 1989. Available at: https://www.legislation.gov.uk/ukpga/1989/29/contents
[2] The Town and Country Planning Act 1990. Available at: https://www.legislation.gov.uk/ukpga/1990/8/contents

1.3.3 The 2013 Variation Regulations[3] (as amended) set out the procedures for handling variation applications under Section 36C of the 1989 Electricity Act for the construction, extension and operation of electricity generating stations.

1.3.4 Specifically, Regulation 3 of the 2013 Variation Regulations (as amended) provides the required consent of a variation application under Section 36C of the 1989 Electricity Act.

1.3.5 Accordingly, the variation application is accompanied by a number of supporting documents / schedules. Table 1.1 sets out these supporting documents / schedules.

TABLE 1.1: VARIATION APPLICATION SUPPORTING DOCUMENTS / SCHEULDES

Document / Schedule Reference		***Description***
(1)	Variation Application Covering Letter	Regulation 3(1)(a) of the 2013 Variation Regulations provides that a variation application under Section 36C of the 1989 Electricity Act must be made in writing. The variation application is made in writing via the Variation Application Covering Letter.
(2)	Compliance Schedule	Regulation 3 of the 2013 Variation Regulations (as amended) provides the required content of a variation application under Section 36C of the 1989 Electricity Act. The Compliance Schedule set out this required content, along with a description of SECL's compliance.
(3)	Proposed Consultee Schedule	The proposed consultees for the variation application.
(4)	Location Plan	DOCUMENT 4 presents the location plan for the existing SEP site. **Also provided as Figure 1 in this Document.**
(5)	Application Site Plan	DOCUMENT 5 ('Plan DWD 2544/2/G') presents the original application site plan referred to in the existing consent for SEP, which identifies the area of land, shown as the area outlined black, within which SEP was authorised to be constructed and is authorised to be operated. **Also provided as Figure 2 in this Document.**
(6)	The Existing Consent	The existing consent for SEP, comprising the November 2000 Original Consent and the accompanying direction that Planning Permission be Deemed to be Granted.
(7)	Proposed Variations to the Existing Consent (Tracked Changes Version)	The proposed variations to the existing consent, shown in tracked changes.
(8)	Proposed Variations to the Existing Consent (Clean Version)	The proposed variations to the existing consent.
(9)	Draft Explanatory Memorandum	An explanatory memorandum summarising the proposed variations to the existing consent, providing the associated explanations / justifications for the proposed variations.

[3] The Electricity Generating Stations (Variation of Consents) (England and Wales) Regulations 2013. Available at: https://www.legislation.gov.uk/uksi/2013/1570/made

Document / Schedule Reference		***Description***
(10)	Environmental and Technical Schedule	**This Document**, including a number of Appendixes comprising: • (Appendix A) Consenting History of the Spalding Energy Project • (Appendix B) April 2020 Environmental Impact Assessment (EIA) Screening Report; • (Appendix C) June 2020 EIA Screening Opinion; • (Appendix D) Supporting Carbon Capture Readiness (CCR) Assessment / Information; and, • (Appendix E) Supporting Combined Heat and Power (CHP) Assessment / Information.
(11)	Associated Authorisations	The associated authorisations include: • DOCUMENT 11A (Associated Authorisation: Gas Connection Above Ground Installation (AGI) Renewal): Planning permission renewal (Ref: H22/0019/02) under the 1990 Town and Country Planning Act, dated 11 February 2002, for the AGI and ancillary development near Wragg Marsh; • DOCUMENT 11B (Associated Authorisation: Gas Connection): Consent under Section 1 of the 1962 Pipelines Act, dated 15 December 2000, for the 7.4 km underground gas pipeline from the AGI to the site; • DOCUMENT 11C (Associated Authorisation: Electrical Connection): Consent under Section 37 of the 1989 Electricity Act, dated 11 October 2001, for the electrical substation and the 5.8 km overhead electricity line; and, • DOCUMENT 11D (Associated Authorisation: Environmental Permit): Environmental Permit (Reference: EPR/BK0701IW). The latest version (V005) was issued in May 2020 (under the 2016 Environmental Permitting (England and Wales) Regulations). • DOCUMENT 11E (Associated Authorisations: Relevant Planning Permission (Deemed to be Granted) Condition Discharge Documents): Approval of Details under Conditions (4), (13), (17) and (33) on various dates in 2001.

The Purpose of this Report

1.3.6 This is Document (10), the Environmental and Technical Schedule.

1.3.7 Ramboll UK Limited (Ramboll) have been appointed by SECL to prepare this Environmental and Technical Schedule.

2. RELEVANT CONTEXT

2.1 Introduction

2.1.1 This Section has been prepared by DWD, and considers the relevant legislative, energy policy and planning policy context for the variation application.

2.2 Legislative Context

2.2.1 Section 36C[4] of the 1989 Electricity Act provides that:

> *"(1) The person for the time being entitled to the benefit of a section 36 consent may make an application to the appropriate authority for the consent to be varied.*
>
> […]
>
> *(4) On an application for a section 36 consent to be varied, the appropriate authority may make such variations to the consent as appear to the authority to be appropriate, having regard (in particular) to—*
>
> *(a) the applicant's reasons for seeking the variation;*
>
> *(b) the variations proposed;*
>
> (c) *any objections made to the proposed variations, the views of consultees and the outcome of any public inquiry*".

2.2.2 The 'appropriate authority' in this case is the Secretary of State for Business, Energy and Industrial Strategy (the Secretary of State) as provided by Section 36C(6) of the 1989 Electricity Act.

2.2.3 Section 90(2ZA)[5] of the 1990 Town and Country Planning Act provides that: *"On varying a consent under section 36 or 37 of the Electricity Act 1989 in relation to a generating station or electric line in England or Wales, the Secretary of State may give one or more of the following directions (instead of, or as well as, a direction under subsection (2))—*

> *(a) a direction for an existing planning permission deemed to be granted by virtue of a direction under subsection (2) (whenever made) to be varied as specified in the direction;*
>
> *(b) a direction for any conditions subject to which any such existing planning permission was deemed to be granted to be varied as specified in the direction;*
>
> (c) *a direction for any consent, agreement or approval given in respect of a condition subject to which any such existing planning permission was deemed to be granted to be treated as given in respect of a condition subject to which a new or varied planning permission is deemed to be granted".*

2.2.4 The 2013 Variation Regulations (as amended) set out the procedures for handling variation applications under Section 36C of the 1989 Electricity Act for the construction, extension and operation of electricity generating stations.

Government Guidance

2.2.5 In July 2013, DECC (now BEIS) published the 2013 Variation Guidance[6].

2.2.6 Paragraph 21 of the 2013 Variation Guidance states that: *"The power conferred on the Secretary of State … by section 36C of the 1989 Act is a broad and discretionary one to make "such variations … as appear to [the Secretary of State …] to be appropriate". Each application to vary section 36 consent will be considered on its merits on a case by case basis …"*.

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[4] Inserted by Section 20 of the 2013 Growth and Infrastructure Act. Available at: http://www.legislation.gov.uk/ukpga/2013/27/section/20/enacted

[5] Inserted by Section 21 of the 2013 Growth and Infrastructure Act. Available at: http://www.legislation.gov.uk/ukpga/2013/27/section/21/enacted

[6] 'Varying Consents granted under Section 36 of the Electricity Act 1989 for Generating Stations in England and Wales: A Guidance Note on the New Process' (DECC, July 2013).

2.2.7 Paragraph 22 of the 2013 Variation Guidance states that: *"… it should be noted that there are two broad categories of case in which it is likely that the Secretary of State … may consider it appropriate to exercise the power in section 36C – namely, to enable:*

(a) The construction or extension of a generating station (whose construction or extension has either not yet commenced or has not yet been completed) along different lines from those set out in the existing consent;

(b) the operation of a generating station (whether or not it is already operational) in a way that is different from that specified in the existing consent (this may sometimes involve making limited physical alterations to a generating station, but should not involve work that could be characterised as an "extension" of an existing generating station which has been granted section 36 consent [footnote]".

2.2.8 The associated footnote to part (b) explains that: *"the extension of an existing [onshore] generating station which has been granted section 36 consent requires development consent under the* [Planning Act 2008] … [and] *Section 36(9) of the Electricity Act 1989 provides that "'extension', in relation to a generating station, includes the use by the person operating the station of any land … for a purpose directly related to the generation of electricity by that station and 'extend' shall be construed accordingly*".

2.2.9 Paragraph 23 of the 2013 Variation Guidance states that: *"Determining that any given proposed variation is "appropriate" to be made under section 36C(4) potentially requires the Secretary of State … to exercise judgement on two distinct questions:*

(a) Whether the change proposed to the generating station (or proposed generating station) concerned is of a kind that it would be reasonable to authorise by means of the variation procedure (regardless of its merits in planning / energy policy terms);

(b) If the answer to question (a) is positive, whether (from a planning / energy policy point of view) the variation should in fact be made, thereby authorising whatever development the making of the variation will permit to be carried out".

2.2.10 Paragraph 24 of the 2013 Variation Guidance goes on to state that detailed consideration of question (b) is largely beyond the scope of the 2013 Variation Guidance and it will be necessary for applicants to make the case for the changes in planning and energy policy terms.

2.2.11 In relation to question (a), paragraph 25 of the 2013 Variation Guidance states that the scope of what can be authorised under the variation procedure will depend on the provisions of the existing consent, the specific circumstances of the project, and the nature and extent of the proposed development and their environmental effects. The paragraph also makes the point that given: *"…the potentially very large range of different cases that could arise, it is not possible to give definitive guidance in advance on the scope of the variation procedure*".

2.2.12 Paragraph 26 of the 2013 Variation Guidance states that the key point to note is that the variation procedure is not intended as a way of authorising any variation in a developer's plans that would result in development that would be fundamentally different in character or scale from what is authorised by the existing consent. However, the 2013 Variation Guidance goes on to state a number of circumstances which would necessitate a variation under the procedure. Of particular relevance, the third bullet point states: *"Changes in the design of generating stations which have been consented but not constructed which would allow them to generate an amount of power that would be inconsistent with the original consent are likely to be appropriate subject matter for a variation application, provided there are no major changes in the environmental impact of the plant. Similar changes to an existing plant could be appropriate subject matter for a variation application only if they did not involve physical extension of the generation station, relocation of generating plant, or the installation of new equipment that would amount to the construction of a new generating station*" (emphasis added).

The Variation Application

2.2.13 The Proposed Development relates to the way in which SEP is authorised to operate. In particular, as enabled by the AGP upgrade to SEP, the Proposed Development comprises the increase in the maximum electricity generation output of SEP to up to 950 MW.

2.2.14 As such, SECL is submitting the variation application which primarily seeks to amend increase in the permitted electricity generation output of SEP to up to 950 MW capacity.

2.2.15 The variation application also seeks a direction to amend various conditions subject to which the planning permission was deemed to be granted under Section 90(2ZA) of the 1990 Town and Country Planning Act. The amendments are: to reflect the fact that the construction of SEP is complete; to allow for certain further changes to the conditions, or matters controlled by those conditions, to be agreed with the local planning authority; and, to reflect other changes in circumstances since 2000 (when the existing consent was granted).

2.2.16 The AGP upgrade to SEP resulted in no external changes to any building / equipment / stack dimensions, elevations, footprints or locations. As such, the AGP upgrade to SEP does not affect the design, size or shape of the existing SEP and does not amount to an 'extension' of the existing SEP as defined in Section 36(9)[7] of the 1989 Electricity Act. By the same logic, the AGP upgrade to SEP is consistent with the 2013 Variation Guidance, most notably paragraph 22(b) and paragraph 26 in that there is no "*physical extension of the generating station, relocation of generating plant or the installation of new equipment that would amount to the construction of a new generating station*".

2.3 Energy Policy Context

The National Policy Statements for Energy Infrastructure

2.3.1 The 2008 Planning Act[8] introduced a new system for the consenting of national significant infrastructure projects (NSIPs). This includes projects within the energy sector, including onshore generating stations with a capacity of more than 50 MW. Before such a NSIP can proceed, an application must be submitted for a Development Consent Order (DCO).

2.3.2 In July 2011, the Secretary of State for DECC (now BEIS) designated a number of National Policy Statements (NPSs) relating to nationally significant energy infrastructure. These included an Overarching NPS for Energy (EN-1)[9], which sets out the Government's overall policy for the delivery of nationally significant energy infrastructure, in addition to five technology-specific NPSs. Where relevant, EN-1 and the relevant technology-specific NPSs should be read in conjunction. Of most relevance to the variation application is the technology-specific NPS for Fossil Fuel Electricity Generating Infrastructure (EN-2)[10].

2.3.3 While the variation application would not fall to be determined under the Planning Act 2008, paragraph 24 of the 2013 Variation Guidance indicates that the NPSs for energy are of relevance to the Secretary of State's consideration of such applications. This has been confirmed through a Secretary of State decision (on 16 September 2015) to grant consent under Section 36 of the 1989 Electricity Act for a new 1,800 MW CCGT generating station on land at Sutton Bridge[11]. In considering the application the Secretary of State stated that the: "*…Overarching National Policy Statement for Energy (EN-1) and National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2)... sets out the national need for development of new nationally significant electricity generating infrastructure of the type proposed by the Applicant in order to maintain security of supply. Though made under the Planning Act 2008 regime, the National Policy Statements (NPSs) are material to the Secretary of State's consideration of the proposed development*" (emphasis added).

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[7] Section 36(9) provides that: "*In this Part "extension", in relation to a generating station, includes the use by the person operating the station of any land or area of waters (wherever situated) for a purpose directly related to the generation of electricity by that station and "extend" shall be construed accordingly*".

[8] The Planning Act 2008. Available at: https://www.legislation.gov.uk/ukpga/2008/29/contents

[9] 'Overarching National Policy Statement for Energy (EN-1)' (DECC, July 2011). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf

[10] 'National Policy Statement for Fossil Fuel Electricity Generating Station (EN-2)' (DECC, July 2011). Available at : https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/37047/1939-nps-for-fossil-fuel-en2.pdf

[11] Decision available at: https://itportal.beis.gov.uk/EIP/pages/projects/Sutton.htm

The Need for New Fossil Fuelled Electricity Generation

2.3.4 Part 3 (The Need for New Nationally Significant Energy Infrastructure Projects) of EN-1 confirms the need that exists in the UK for nationally significant energy infrastructure, and as such, increases in electricity generation output and improvements in generation efficiency from existing generating stations.

2.3.5 With regards to the urgent need for further electricity infrastructure, Section 3.3 (also The Need for New Nationally Significant Energy Infrastructure Projects) of Part 3 of EN-1 sets out various themes, or components, including:

- **Future increases in electricity demand**, with EN-1 stating that it is expected that electricity demand will increase as significant sectors (such as industry, heating and transport) switch from being powered by fossil fuels to using electricity. As a result of this, total electricity consumption could double by 2050 and, depending upon the choice of how electricity is supplied, total installed capacity may need to more than double for the overall system to be sufficiently robust to all weather conditions.
- **The urgency of the need for further electricity capacity**, with EN-1 stating that in order to secure energy supplies that enable us to meet our obligations for 2050, there is an urgent need for further generation efficiency improvements and new (particularly low carbon) energy NSIPs to be brought forward as soon as possible, and certainly in the next 10 to 15 years. To minimise risks to energy security and resilience, the Government believes it is prudent to plan for a minimum need of 59 GW of new electricity capacity by 2025, with 18 GW to come from new non-renewable capacity.

2.3.6 Therefore, when considering applications for electricity infrastructure, paragraph 3.1.4 of EN-1 states that the Secretary of State should give substantial weight to the contribution that all projects would make toward satisfying this urgent need.

2.3.7 With regards to the use of natural gas:

- Paragraph 3.6.1 of EN-1 states: "*Fossil fuel power stations play a vital role in providing reliable electricity supplies: they can be operated flexibly in response to changes in supply and demand, and provide diversity in our energy mix. They will continue to play an important role in our energy mix as the UK makes the transition to a low carbon economy, and Government policy is that they must be constructed, and operate, in line with increasingly demanding climate change goals*";
- Paragraph 3.6.2 of EN-1 notes that gas will continue to play an important role in the electricity sector, providing vital flexibility to support an increasing amount of low-carbon generation and to maintain security of supply;
- Paragraph 3.6.3 of EN-1 highlights that gas-fired generation, although not low-carbon, produces about half as much carbon dioxide as coal per unit of electricity generated; and,
- Paragraph 3.6.8 of EN-1 summarises the need for further efficient fossil fuel generation noting that: "*… a number of fossil fuel generating stations will have to close by the end of 2015. Although this capacity may be replaced by new nuclear and renewable generating capacity in due course, it is clear that there must be some fossil fuel generating capacity to provide back-up for when generation from intermittent renewable generating capacity is low and to help with the transition to low carbon electricity generation…*".

2.3.8 Therefore, when considering the use of the use of fossil fuels, EN-1 indicates that natural gas clearly provides a cleaner means by which to provide the required flexibility and resilience within the UK's generation fleet.

The Variation Application

2.3.9 EN-1 is clear in establishing the need that exists for increases in electricity generation output and improvements in generation efficiency from existing natural gas fired generating stations, such as that of the variation application, which would allow SEP to provide a valuable contribution towards meeting this established, identified national need.

2.3.10 Therefore, is it considered that the variation application is consistent with the relevant energy policy.

Carbon Capture Readiness / Combined Heat and Power

2.3.11 In addition to the above energy policy:

- Section 6 (Relevant Carbon Capture Readiness Requirements) (and Appendix D (Supporting Carbon Capture Readiness (CCR) Assessment / Information)) considers the relevant CCR policy context for the variation application; and,
- Section 7 (Relevant Combined Heat and Power Requirements) (and Appendix E (Supporting Combined Heat and Power (CHP) Assessment / Information)) considers the relevant CHP policy context for the variation application.

2.4 Planning Policy Context

National Planning Policy Framework (and Associated Planning Practice Guidance)

2.4.1 The National Planning Policy Framework (NPPF) was first adopted in March 2012 and updated in February 2019 with a further update in June 2019 by the Ministry of Housing, Communities and Local Government (HCLG). The policies contained within the NPPF are expanded upon and supported by the 'Planning Practice Guidance', which was first published online in March 2014 (also by the Ministry of HCLG) and has been updated periodically since.

2.4.2 The NPPF sets out the Government's planning policies for England and how these are to be applied. It is a material consideration in planning decisions.

2.4.3 Paragraph 5 of the NPPF makes it clear that the document does not contain specific policies for applications under the 2008 Planning Act for NSIPs because such applications are to be determined in accordance with the decision-making framework set out in the 2008 Planning Act and the relevant NPSs.

2.4.4 By the same logic, the NPPF does not contain specific policies for applications under the 1989 Electricity Act (such as the variation application). Nevertheless, the NPPF is considered to form part of the overall framework of national policy against which such applications are to be considered.

2.4.5 Notwithstanding this, many of the NPPF policies would not be directly relevant to the variation application as they apply more explicitly to new development, rather than an increase in permitted electricity generation output and associated improvement in generation efficiency of an existing development. Nevertheless, for the variation application consideration can be given to the following objectives of the NPPF:

- (Chapter 2) Contributing to achieving sustainable development most notably by supporting growth and innovation and the provision of infrastructure (paragraph 8's economic role) and contributing to protecting and enhancing the natural environment by using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy (paragraph 8's environmental role);
- (Chapter 14) Meeting the challenge of climate change by supporting low-carbon energy; and,
- (Chapter 15) Conserving and enhancing the natural environment.

2.4.6 It is considered that the variation application is consistent with these objectives of the NPPF.

Local Planning Policy

2.4.7 On 5 July 2011, South Holland District Council, Boston Borough Council and Lincolnshire County Council requested that the Government create a new joint planning authority. As a result, the 2011 South East Lincolnshire Joint Strategic Planning Committee Order [SI: 2011, No. 1455] came into force.

2.4.8 Subsequently, on 8 March 2019, the South East Lincolnshire Local Plan 2011 – 2036 was adopted. The Plan sets out a range of policies and allocations across the area, promoting inward investment and economic growth while protecting environmental and cultural assets.

2.4.9 Of particular relevance to the variation application:

- Policy 7 'Improving South East Lincolnshire's Employment Land Portfolio' identifies the existing SEP site as a 'restricted use employment site' (reference SP037) to encourage investment in power generation-related industries.
- Policy 30 'Pollution' states that development proposals will not be permitted where, taking account of any proposed mitigation measures, they would lead to unacceptable adverse impacts on health and safety, air quality, lighting, noise and vibration.
- Policy 31 'Climate Change and Renewable and Low Carbon Energy' states that all development will be required to demonstrate that the consequences of current climate change has been addressed, minimised and mitigated by measures such as high-quality design, sustainable transport, flood risk and enhanced biodiversity.

2.4.10 It is considered that the variation application is consistent with these policies as:

- Under Policy 7, the variation application will enable the ongoing investment in power generation-related industries.
- Under Policy 30, the variation application process has confirmed that, following the AGP upgrade to SEP, the likely effects will not materially differ from those of the existing SEP, and will remain not significant.
- Under Policy 31, the variation application is consistent with the Government's overarching objectives for combatting climate change, including reducing CO_2 emissions and the CO_2 emission intensity of fossil-fuelled power generation, and increasing the proportion of renewable power generation.

3. THE EXISTING SPALDING ENERGY PROJECT / THE PROPOSED DEVELOPMENT

3.1 Introduction

3.1.1 This Section provides a description and comparison of the existing SEP and the Proposed Development.

3.2 The Existing Spalding Energy Project

3.2.1 SEP is a CCGT generating station, located on West Marsh Road, in Spalding, Lincolnshire.

3.2.2 At Paragraph 2, the existing consent for SEP provides that: *"the Development shall be about 800 MW capacity and comprise:*

(a) two gas turbines and heat recovery steam generators;

(b) one steam turbine;

(c) one bank of air cooled condensers;

(d) ancillary plant and equipment; and,

(e) the necessary buildings (including administration buildings) and civil engineering works".

3.2.3 Subsequently, in May 2001, the DTI confirmed that the tolerance provided by Paragraph 2 of the existing consent for SEP allowed for an electricity generation output of 840 MW capacity.

3.2.4 SEP burns natural gas, which is supplied to the site via a connection into the National Grid Gas Transmission System Feeder 7 Pipeline. Natural gas is the primary fuel, and no back-up fuel is required.

3.2.5 During operation, SEP burns the natural gas in the combustion chamber of the gas turbines from where the resulting hot gases expand and generate sufficient power to drive the air compressor sections and gas turbine generators to produce electrical power. The hot exhaust gases still contain recoverable energy and are used in heat recovery steam generators (HRSGs) to generate steam which is expanded in common steam turbine plant to drive the common steam turbine generator to produce additional electrical power. The steam exhausting the steam turbine plant is passed to an air-cooled condenser (ACC) where it is condensed. The resulting condensate is returned to the HRSGs to continue the steam cycle. Subsequently, the flue gases are discharged from the HRSGs via dedicated 78 m high stacks. Overall, the energy demand and heat used is typical of a CCGT generating station.

3.2.6 The gas turbine generators and common steam turbine generator produce electrical power at approximately 19 kV which is stepped up to 400 kV through the three main transformers, and the electricity generated is dispatched to the National Grid Electricity Transmission System.

3.2.7 The use of a combined gas and steam cycle configuration increases the overall fuel efficiency of the generating station compared to an open (gas) cycle configuration, where the hot exhaust gases are directly discharged.

3.2.8 At Paragraph 4(2), the existing consent for SEP provides that: *"the construction or the Development shall only take place within the boundary of the Site"*. Figure 1 presents the location plan for the existing SEP site, Figure 2 ('Plan DWD 2544/2/G') presents the original application site plan referred to in the existing consent for SEP (which identifies the area of land (i.e. "*the Site*"), shown as the area outlined black, within which SEP was authorised to be constructed and is authorised to be operated), and Figure 3 presents a layout plan of the existing SEP site.

3.2.9 SEP is located to the north of the newly constructed SEE OCGT generating station.

3.3 The Proposed Development

3.3.1 The Proposed Development relates to the way in which SEP is authorised to operate.

3.3.2 In early 2019, SECL undertook an AGP upgrade to SEP. The AGP upgrade to SEP comprised a number of changes to the existing gas turbines and associated systems, including:

- An upgrade of the gas turbine combustion system;
- The replacement of some gas turbine components (e.g. gas turbine blades) with the latest proven designs;
- The modification of some Balance of Plant (BoP) components;
- An upgrade of the main generator transformer cooling system; and,
- An upgrade of some Distributed Control System (DCS) components with the latest digital software platforms.

3.3.3 Providing the rationale for development, the AGP upgrade to SEP improved both the environmental performance and electricity market competitiveness of SEP by:

- Allowing for an increase in the maximum electricity generation output to up to 950 MW capacity (this is above the current permitted electricity generation output of about 800 MW);
- Allowing for an improvement (increase) in the electricity generation efficiency (thus also reducing the specific CO_2 emissions associated with electricity generation);
- Increasing the overall flexibility (by reducing the start-up times and increasing the operational load range); and,
- Extending the availability (by extending the maintenance intervals).

3.3.4 Therefore, as enabled by the AGP upgrade to SEP, the Proposed Development comprises the increase in the maximum electricity generation output of SEP to up to 950 MW.

3.3.5 The AGP upgrade to SEP resulted in no external changes to any building / equipment / stack dimensions, elevations, footprints or locations. As such the AGP upgrade to SEP does not affect the design, size or shape of the existing SEP and does not amount to an 'extension' of the existing SEP as defined in Section 36(9)[12] of the 1989 Electricity Act.

3.3.6 The Proposed Development is wholly contained within the existing SEP.

[12] Section 36(9) provides that: *"In this Part "extension", in relation to a generating station, includes the use by the person operating the station of any land or area of waters (wherever situated) for a purpose directly related to the generation of electricity by that station and "extend" shall be construed accordingly"*.

4. CONSULTATION

4.1 Introduction

4.1.1 This Section sets out a summary of the consultation by the applicant about the variation application, what account has been taken of views expressed and, where relevant, a summary of the subsequent actions taken and links to additional information.

4.2 Consultation undertaken as part of the Original Application

4.2.1 Extensive consultation was undertaken as part of the preparation of the original application. This included meetings with the following stakeholders:

- The DTI (the predecessor to DECC, now BEIS);
- South Holland District Council (Planning and Environmental Services);
- Lincolnshire County Council (Planning); and,
- The Environment Agency.

4.2.2 This also included telephone meetings with the following stakeholders:

- Lincolnshire County Council (Archaeology);
- Lincolnshire County Council (Highways);
- English Nature (now Natural England);
- British Trust for Ornithology;
- Royal Society for the Protection of Birds;
- Lincolnshire Trust for Nature Conservation; and,
- Welland and Deeping Drainage Board.

4.2.3 Details of the consultation undertaken as part of the preparation of the original application is provided in Section 4 (Scoping of Environmental Issues) of the August 1996 Environmental Statement (Environmental Statement Volume 1: Main Report[13]).

4.3 Additional Consultation undertaken as part of the Variation Application

4.3.1 Additional consultation has been undertaken as part of the preparation of the variation application. This has included both informal consultation (via face-to-face meetings and telephone meetings) and formal consultation (via an EIA screening exercise).

Informal Consultation

4.3.2 Informal consultation was undertaken via face-to-face meetings and telephone meetings.

4.3.3 Table 4.1 sets out the summary of the informal consultation including the views expressed and, where relevant, a summary of the subsequent actions taken and links to additional information.

[13] 'Spalding Energy Project: Environmental Statement Volume 1 – Main Report' (Environmental Resources Management, 16 August 1996).

TABLE 4.1: SUMMARY OF INFORMAL CONSULTATION

Stakeholder	***Views Expressed***	***Action / Link***
BEIS	Throughout 2018, 2019 and 2020, a number of meetings were held with BEIS to discuss the variation application. BEIS noted that the AGP upgrade to SEP is suitable in principle for a variation application under Section 36C of the 1989 Electricity Act, as long as the overall development is not fundamentally different in character or scale to that authorised under the existing consent.	N / A
South Holland District Council	In July 2019, a face-to-face meeting was held with South Holland District Council covering the variation application, including the proposed changes to the existing consent, and discussed the need for updated assessment / information. In terms of the need for updated assessment / information, it was noted that the AGP upgrade to SEP: • Altered the flue gas emission parameters; and, • Altered the noise emission parameters.	South Holland District Council reviewed the draft proposed changes to the existing consent, and noted that the proposed changes were considered appropriate. As part of the EIA screening exercise, an air quality impact assessment and noise information assessment were undertaken. The air quality impact assessment demonstrated that operation of the Proposed Development will not release flue gas emissions in a way which materially differs from that of the existing SEP, and the noise information assessment demonstrated that operation of the Proposed Development will not release noise emissions in a way which materially differs from that of the existing SEP. Therefore, the likely effects of the Proposed Development will not materially differ from those of the existing SEP, and will remain not significant.
Lincolnshire County Council	In July 2019, a telephone meeting was held with Lincolnshire County Council's Officer covering flood risk, and traffic services and infrastructure aspects. The meeting covered the variation application, and discussed the need for updated assessment / information on flood risk / traffic services and infrastructure aspects.	Lincolnshire County Council's Officer noted that the variation application was considered appropriate, and no updated assessment / information on flood risk / traffic services and infrastructure aspects was requested.

Stakeholder	***Views Expressed***	***Action / Link***
Environment Agency	In June 2019, a telephone meeting was held with the Environment Agency's Regulatory Officer for SEP. The meeting covered the variation application, and discussed the need for updated assessment / information. In terms of the need for updated assessment / information, it was noted that the AGP upgrade to SEP: • Altered the flue gas emission parameters; and, • Altered the noise emission parameters.	As part of the EIA screening exercise, an air quality impact assessment and noise information assessment were undertaken. The air quality impact assessment demonstrated that operation of the Proposed Development will not release flue gas emissions in a way which materially differs from that of the existing SEP, and the noise information assessment demonstrated that operation of the Proposed Development will not release noise emissions in a way which materially differs from that of the existing SEP. Therefore, the likely effects of the Proposed Development will not materially differ from those of the existing SEP, and will remain not significant.

Formal Consultation

4.3.4 Formal consultation was undertaken via an EIA Screening exercise.

4.3.5 Regulation 10(1) of the 2017 EIA Regulations[14] provides that: *"A person (the "developer") who intends to make an application for a section 36 or 37 consent, or a section 36 variation, for development may request the relevant authority to make a screening decision*". Further regulations (within the 2017 EIA Regulations) provide the required content of a request for a screening decision (i.e. the required content of an EIA Screening Report).

4.3.6 Accordingly, in April 2020, SECL submitted an EIA Screening Report[15] to the Secretary of State, via BEIS. The EIA Screening Report supported SECL's request that the Secretary of State adopt a screening decision (i.e. an EIA Screening Opinion) to the effect that the Proposed Development is not EIA Development. Appendix B provides the EIA Screening Report.

4.3.7 Subsequently, on 26 June 2020, the Secretary of State adopted an EIA Screening Opinion that the Proposed Development is not EIA Development, noting that: "*the proposed development* […] *would not result in any materially new of materially different environmental impacts from those already assessed from the original development"*. Appendix C provides the letter containing the Secretary of State's EIA Screening Opinion.

[14] The Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2017. Available at: https://www.legislation.gov.uk/uksi/2017/580/contents/made
[15] 'Spalding Energy Project: Environmental Impact Assessment Screening Report' (Ramboll, 22 April 2020)

5. RELEVANT ENVIRONMENTAL ASSESSMENT REQUIREMENTS

5.1 Introduction

5.1.1 The 2013 Variation Guidance (at paragraph 36) states, when considering a variation application under Section 36C of the 1989 Electricity Act, that: *"Before an application* […] *is granted by the Secretary of State or MMO, both the decision maker and the applicant must have complied with the relevant* [environmental assessment] *requirements"*.

5.1.2 This Section presents the relevant environmental assessment requirements.

5.2 Context / Consideration of Environmental Assessment Requirements

5.2.1 With regards to the relevant environmental assessment requirements, the 2017 EIA Regulations apply to variation applications.

5.2.2 In particular, Regulation 10(1) of the 2017 EIA Regulations provides that: *"A person (the "developer") who intends to make an application for a section 36 or 37 consent, or a section 36 variation, for development may request the relevant authority to make a screening decision*". Further regulations (within the 2017 EIA Regulations) provide the required content of a request for a screening decision (i.e. the required content of an EIA Screening Report).

5.2.3 Accordingly, in April 2020, SECL submitted an EIA Screening Report to the Secretary of State, via BEIS. The EIA Screening Report supported SECL's request that the Secretary of State adopt a screening decision (i.e. an EIA Screening Opinion) to the effect that the Proposed Development is not EIA Development. Appendix B provides the EIA Screening Report.

5.2.4 Subsequently, on 26 June 2020, the Secretary of State adopted an EIA Screening Opinion that the Proposed Development is not EIA Development, noting that: "*the proposed development* […] *would not result in any materially new of materially different environmental impacts from those already assessed from the original development"*. Appendix C provides the letter containing the Secretary of State's EIA Screening Opinion.

5.2.5 The letter containing the EIA Screening Opinion also noted that:

- "*Lincolnshire County Council and South Holland District Council were consulted by the Secretary of State on 22 May 2020. The Secretary of State received Lincolnshire Country Council's response on 17 June 2020 and South Holland District Council's response on 19 June 2020*";
- Lincolnshire County Council "*are agreeable with the applicants conclusions that the proposed variation would not constitute EIA Development and therefore would not require an Environmental Impact Assessment to be carried out*";
- South Holland District Council "*confirmed it is of the view that the proposed changes to the generating station does not comprise EIA Development as they are not likely to have significant adverse effects on the environment*"; and,
- In adopting the EIA Screening Opinion, the Secretary of State took into account that: "*Lincolnshire County Council and South Holland District Council consider that the proposed variation does not constitute EIA Development and therefore would not require an Environmental Impact Assessment to be carried out*".

5.3 Conclusions

5.3.1 The Proposed Development is not EIA Development, and the variation applications does not include an updated Environmental Impact Assessment or Environmental Statement. Therefore, it is considered that the variation application is compliant with the relevant environmental assessment requirements.

6. RELEVANT CARBON CAPTURE READINESS REQUIREMENTS

Appendix D provides supporting CCR assessment / information, which has:

(a) Under Regulation 6(2)(a) of the 2013 CCR Regulations[16], presented the results of the CCR Assessment for the variation application; and,

(b) Under Regulation 6(2)(b) of the 2013 CCR Regulations, presented other available information on the protection of the environment and human health relevant to the variation application.

Concerning the results of the CCR Assessment, it is concluded that:

- Regarding potential CO_2 storage areas / sites, it is considered that there are no major barriers to demonstrating potential CO_2 storage sites are available;
- Regarding the technical retrofitting of CO_2 capture equipment requirements, it is considered that there are barriers to demonstrating technical feasibility of retrofitting for CO_2 capture equipment (as there are barriers to demonstrating available space on the existing SEP / Proposed Development site);
- Regarding the technical CO_2 transport requirements, it is considered that there are no major barriers to demonstrating the technical feasibility for CO_2 transport; and,
- Regarding the economic assessment, it is considered that there are barriers to demonstrating economic feasibility.

Concerning other available information, it is noted that:

- Regarding the protection of the environment and human health, it is considered that:
  - The Proposed Development is not EIA Development, and "*the proposed development* […] *would not result in any materially new of materially different environmental impacts from those already assessed from the original development"*; and,
  - Should it be the case that the Secretary of State cannot vary the existing consent for SEP should he determine that the CCR conditions are not met, the principles of the BAT Conclusions for LCP would not be achieved;
- Regarding previous European Union precedence, this includes successful applications for new generating stations (i.e. where the original consent (i.e. original construction / operation licence) is granted after the entry into force of the 2009 CCS Directive) where the CCR conditions are not met;
- Regarding previous UK precedence, this includes (in particular) specific consents / situations where there was consideration of CCR, but CCR conditions were not applied / the CCR conditions were not met; and,
- Regarding the UK Government's commitments in respect of the '2050 Net Zero' target, whilst the CCR Assessment has demonstrated that the CCR conditions are not met (as there are barriers to demonstrating technical feasibility of the retrofitting for CO_2 capture equipment and barriers to demonstrating economic feasibility), this does not preclude a demonstration that an alternative decarbonisation option would be technically and economically feasible.

[16] The Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013. Available at: https://www.legislation.gov.uk/uksi/2013/2696/made

7. RELEVANT COMBINED HEAT AND POWER REQUIREMENTS

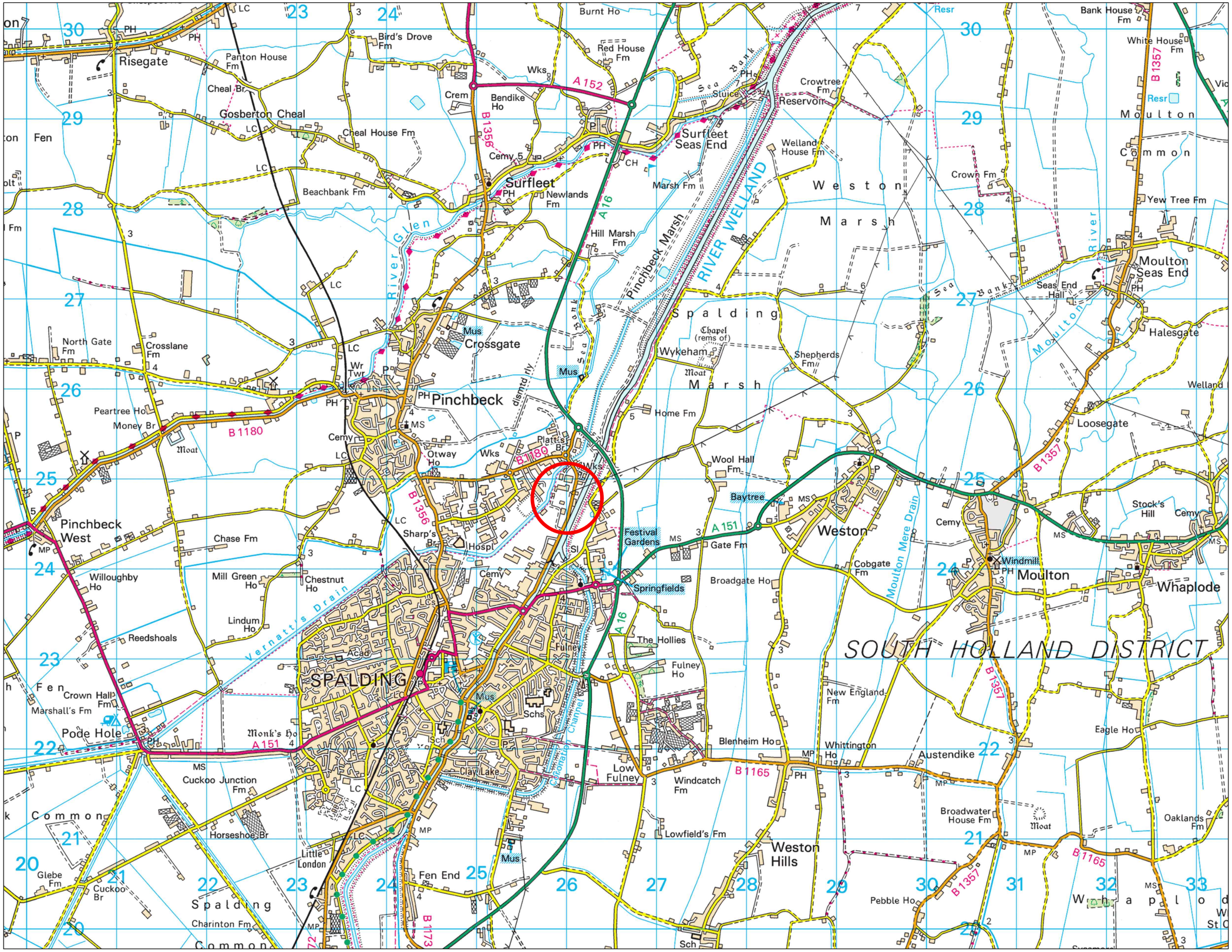
Appendix E provides supporting CHP assessment / information.

In summary, whilst the possibilities for CHP have been explored and updated, there remain no viable CHP opportunities. Therefore, it is considered that the variation application is compliant with the relevant CHP requirements.

FIGURES

The following Figures are provided:

- Figure 1: Location Plan for the Existing SEP Site.
- Figure 2 ('Plan DWD 2544/2/G'): Original Application Site Plan referred to in the Existing Consent for SEP.
- Figure 3: Layout Plan of the Existing SEP and Proposed Development Site.



Notes

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Rev	Description	Date	By / Chk	App
P01	FOR INFORMATION	13/01/21	ML / EA	EA

INTERGEN

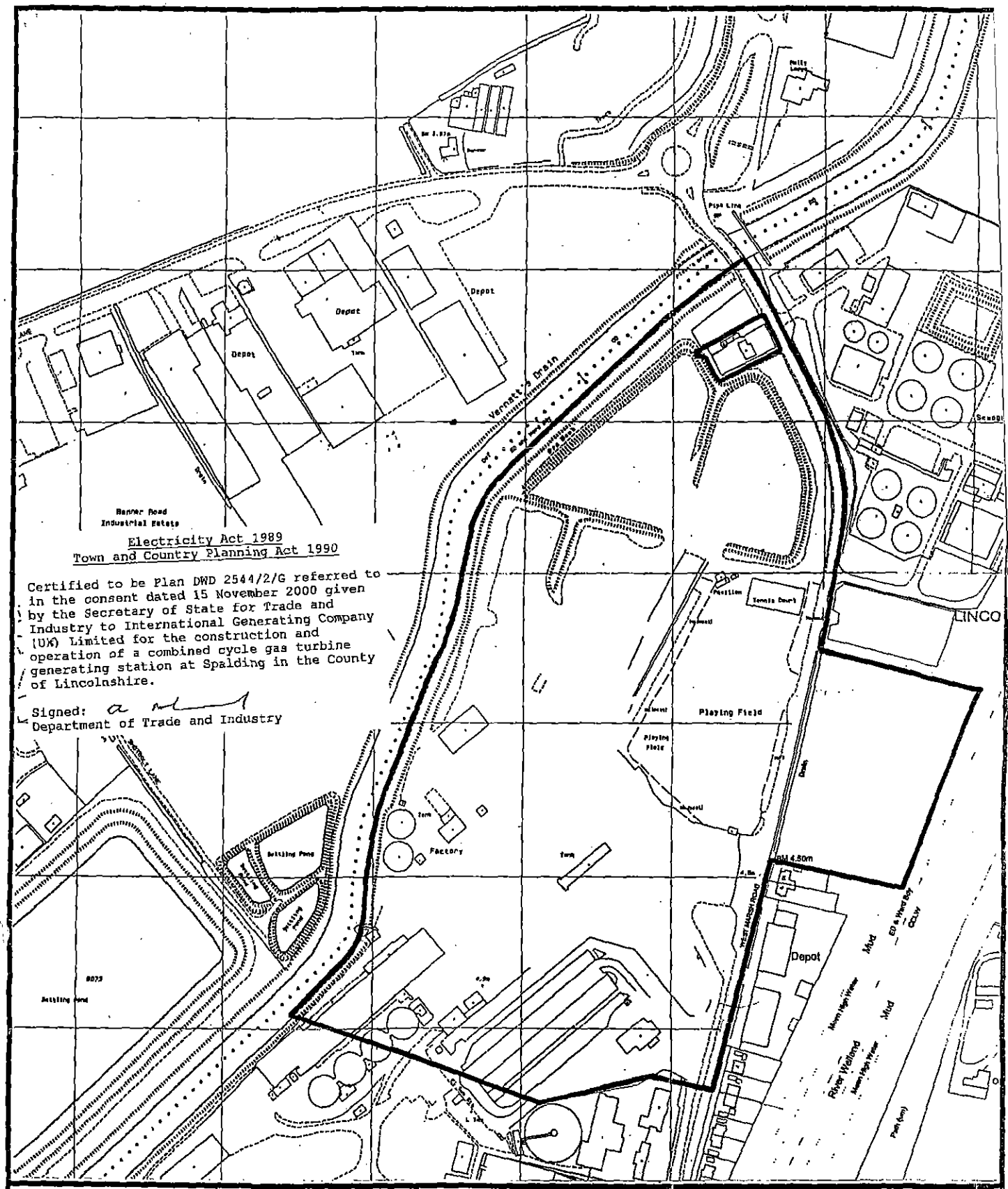
SPALDING ENERGY PROJECT

RAMBOLL
tel 020 7462 5281 fax 020 7323 4645 london@ramboll.co.uk
www.ramboll.co.uk

FIGURE 1
LOCATION PLAN

Scale:	Date:	Drawn:	Checked:
1:5000 / A3	13/01/2021	ML	EA

Drawing No.:	Rev:
1620002349-019-002	P01



Electricity Act 1989
Town and Country Planning Act 1990

Certified to be Plan DWD 2544/2/G referred to in the consent dated 15 November 2000 given by the Secretary of State for Trade and Industry to International Generating Company (UK) Limited for the construction and operation of a combined cycle gas turbine generating station at Spalding in the County of Lincolnshire.

Signed: a
Department of Trade and Industry

Dalton Warner Davis

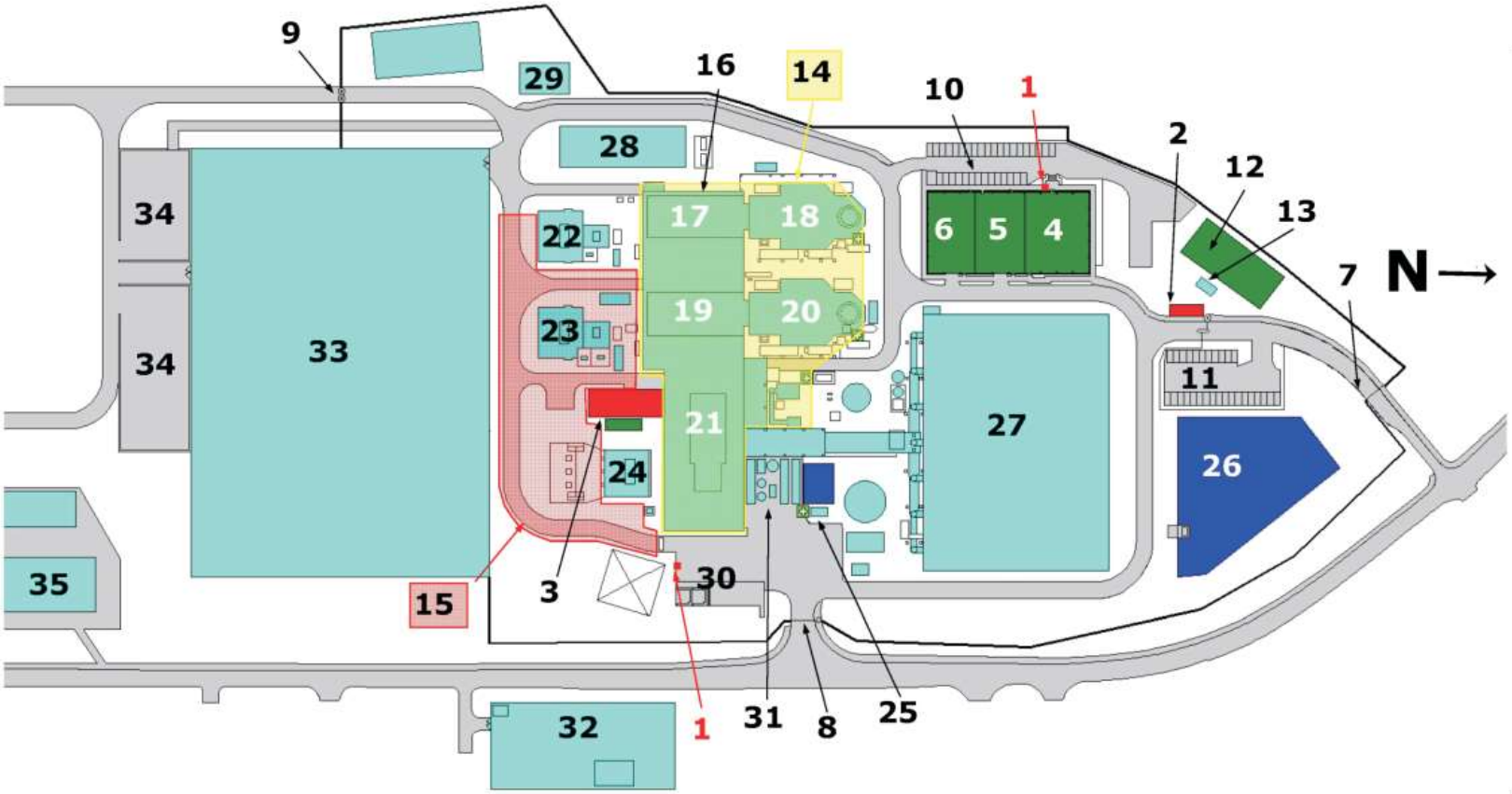
Chartered Surveyors
Commercial Property & Town Planning Consultants
19/20 Garlick Hill, London. EC4V 2AH.
Telephone : 0171 489 0213
Facsimile : 0171 248 4743

TITLE SPALDING ENERGY PROJECT - INTERNATIONAL GENERATING CO (UK) LTD : APPLICATION PLAN DWD 2544/2/G

ADDRESS WEST MARSH ROAD, SPALDING, LINCOLNSHIRE

SCALE 1 : 2,500

DATE 20.08.96



RAMBOLL

Figure 3:
Layout Plan of the
Existing Spalding Energy Project and
Proposed Development Site

Project No.:	1620002349-017
Drawing ID:	1282016-6
Drawing Version:	**P01**
Date:	07/08/2020