

Heckington Fen Solar Park

EN010123

Statement of Reasons

Applicant: Ecotricity (Heck Fen Solar) Limited

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STATEMENT OF REASONS

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1 EXECUTIVE SUMMARY

Overview

1.1.1 This Statement of Reasons ("**Statement**") relates to an application by Ecotricity (Heck Fen Solar) Limited to the Secretary of State under the Planning Act 2008 for a Development Consent Order ("**DCO**") to construct, operate, maintain and decommission a solar park on land approximately 3.7km east of Heckington and 8.9km west of Boston in the county of Lincolnshire (the "**Proposed Development**").

1.1.2 The Proposed Development constitutes a Nationally Significant Infrastructure Project and comprises a solar photovoltaic array with a gross electrical output capacity of over 50 megawatts comprising solar modules, fixed to mounting structures, with inverters, transformers and a network of cable circuits and associated development.

1.1.3 This Statement has been prepared to comply with Regulation 5(2)(h) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 which provides that the application must be accompanied by:

*"if the proposed order would authorise the compulsory acquisition of land or an interest in land or right over land, a **statement of reasons** and a statement to indicate how an order that contains the authorisation of compulsory acquisition is proposed to be funded"(our emphasis).*

1.1.4 Paragraph 32 of the Department of Communities and Local Government guidance, 'Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land' (September 2013) (the "**Guidance**") states that the statement of reasons should seek to justify the compulsory acquisition sought, and explain in particular why in the applicant's opinion there is a compelling case in the public interest for it. This includes the reasons for the creation of new rights.

1.1.5 Section 122 of the Planning Act 2008 ("**PA 2008**") provides that an order for development consent may include the compulsory acquisition of land only if the Secretary of State is satisfied that the land:

1.1.5.1 is required for the Proposed Development;

1.1.5.2 is required to facilitate or is incidental to the Proposed Development;

1.1.5.3 is replacement land;

1.1.5.4 and there is a compelling case in the public interest for the land to be acquired compulsorily.

1.1.6 This Statement explains why it is necessary, proportionate and justifiable for the Heckington Fen Solar Park Order (the "**Order**") to include compulsory acquisition powers, and why there is a compelling case in the public interest for Ecotricity (Heck Fen Solar) Limited (the "**Applicant**") to be granted these powers.

1.1.7 The Applicant seeks to create and acquire rights (easements) over land (mostly rights to lay electricity cables) to carry out works and access land for such purposes. Temporary rights are sought to construct the Proposed Development. Rights are also sought to impose restrictions over land and to acquire existing rights, that if exercised would conflict with the construction, operation, maintenance or decommissioning of the Proposed Development.

1.1.8 The Applicant has been seeking to acquire these rights (and restrictions) over land by voluntary agreement, in order to ensure implementation of the Proposed Development. However, it has not yet been possible (at the time of writing) to acquire all of the land and the rights required by agreement, although negotiations are still ongoing.

1.1.9 The powers authorising the acquisition of land, or of interests in and/or rights over land, are principally contained in Articles 18 and 20 of the Order.

1.1.10 The powers are being sought in order for the Applicant to be able to construct, operate and maintain the Proposed Development without impediment. There are a number of other articles in the Order which grant the Applicant powers, the exercise of which may result in interference with property rights and private interests in land.

1.1.11 The land over which new rights (including the imposition of restrictions) are being compulsorily sought is shown edged red and shaded blue or yellow on the Land and Crown Land Plan (document reference 2.1). This land is described in more detail in the Book of Reference (document reference 4.4).

1.1.12 Where the Applicant is seeking to compulsorily acquire new rights over land, powers for temporary use of such land pursuant to Articles 27 and 28 of the Order are also being sought.

1.1.13 Where these powers of compulsory acquisition are exercised, owners of the relevant land or rights in land may be entitled to compensation under the Compensation Code, where a valid claim is made out. Any dispute in respect of the compensation payable would be referred to and determined by the Lands Chamber of the Upper Tribunal.

1.1.14 The Applicant has explored reasonable alternatives to compulsory acquisition and made reasonable attempts to acquire the rights over land by agreement.

1.1.15 Articles 1 and 8 of the European Convention on Human Rights have been considered and the Applicant considers that the interference with rights is for a legitimate purpose, is necessary and is proportionate.

1.1.16 The urgent need for renewable energy generation is set out in National Policy Statement EN-1. Furthermore, the UK government's commitment to sustained growth in solar photovoltaic energy generation is outlined in National Policy Statement EN-3. The Proposed Development would materially contribute to meeting these needs. The Proposed Development offers a cost-effective contribution to decarbonising the UK's electricity sector, provides energy security through diversity in supply, will assist the operation of the National Energy Transmission System ("**NETS**") through its energy storage facility and will lower costs to consumers.

1.1.17 The Order land includes land, rights or other interests owned by Statutory Undertakers. Adequate protection for the statutory undertakers will be included within protective provisions in the Order and/or asset protection agreements between the parties. The Applicant therefore considers that the statutory undertakers will not suffer serious detriment to the carrying on of their undertakings as a result of the compulsory acquisition of land or rights over land or powers of temporary possession.

1.1.18 Section 135 of the PA 2008 provides protection for Crown Land against compulsory acquisition. The Order land includes land owned by the Crown or subject to Crown Interests. The Applicant is in discussions with the Crown Estate Commissioners in order to obtain their consent to the inclusion of these provisions as required under section 135 of the PA 2008.

1.1.19 The rights over the land (including restrictions) being sought are required for the purposes of, to facilitate, or are incidental to, the Proposed Development and are no more than are reasonably necessary. Furthermore, there is a compelling case in the public interest for the rights over the land to be acquired given the positive benefits that the Proposed Development will generate particularly in view of current UK policy in relation to renewable energy.

2 INTRODUCTION

2.1.1 This Statement relates to the DCO application by the Applicant for the Proposed Development submitted to the Secretary of State under the PA 2008 for the Order (document reference 3.1). If approved, the Order will grant consent for the Proposed Development and authorise compulsory acquisition of rights in land.

2.1.2 The Proposed Development is an electricity generating plant with an average gross electrical output in excess of 50 MW and falls within the definition of a "*nationally significant infrastructure Proposed Development*" ("**NSIP**") under Section 15(2) of the PA 2008. It is therefore necessary for the Applicant to apply to the Secretary of State for the Order to construct, operate and maintain the Proposed Development under Section 31 of the PA 2008.

2.1.3 This Statement has been prepared in accordance with the requirements of Regulation 5(2)(h) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the "**APFP Regulations**") and the Guidance).

2.1.4 This Statement forms part of the suite of documents accompanying the application for a DCO (the "**DCO Application**") submitted in accordance with Section 37 of the PA 2008 and Regulation 5 of the APFP Regulations.

2.1.5 This Statement explains why it is necessary to acquire and/or create rights and impose restrictions over land, override, suspend or extinguish rights over land and to temporarily use land for the purposes of the Proposed Development, if necessary by compulsion. It also explains the reasons for the inclusion of compulsory acquisition and related powers in the Order and sets out why there is a clear and compelling case in the public interest, in accordance with Section 122 of the PA 2008, for the Order to include such powers.

2.1.6 The land over which powers of compulsory acquisition and temporary use are being sought for the Proposed Development is referred to as the 'Order land' and is described in more detail in Section 5 of this Statement and is shown edged in red on the Land and Crown Land Plan (document reference 2.1).

2.1.7 Negotiations for the purchase of rights and interests are ongoing in respect of the new rights required for the Proposed Development. Nonetheless, it is necessary for the Applicant to seek compulsory acquisition powers to secure such rights and interests and to ensure that any third-party interests or encumbrances affecting such rights and interests may be acquired, overridden or extinguished pursuant to the Order, thereby ensuring that the Proposed Development can be constructed, operated and maintained.

2.1.8 The following documents have been submitted as part of the DCO Application in order to meet the requirements of the APFP Regulations and the Guidance:

2.1.8.1 This Statement;

- 2.1.8.2 A Funding Statement (document reference 4.3) which explains how the construction of the Proposed Development as well as the acquisition of interests is expected to be funded;
- 2.1.8.3 A Land and Crown Land Plan showing the land over which it is intended to use the compulsory acquisition powers (document reference 2.1); and
- 2.1.8.4 A Book of Reference (document reference 4.4) which identifies those persons with an interest in the Order land or who may be eligible to make a relevant claim.
- 2.1.9 This Statement explains and justifies the inclusion of the compulsory acquisition powers contained within the Order. The structure of this Statement is set out below and also addresses each of the requirements of the Guidance:
 - 2.1.9.1 An introduction to the Applicant is contained in Section 3;
 - 2.1.9.2 A summary of the Proposed Development is set out in Section 4;
 - 2.1.9.3 A brief description of the Order land, its location, topographical features and present use is contained in Section 5;
 - 2.1.9.4 An outline of the need to compulsorily acquire rights over land, and the specific purpose for which the rights are to be compulsorily acquired, is contained in Section 6;
 - 2.1.9.5 A statement of the justification for compulsory acquisition including reference to funding and the need for the Proposed Development is included in Sections 7 and 8;
 - 2.1.9.6 Any special considerations affecting the rights to be compulsorily acquired, e.g. statutory undertaker land and Crown land, are included in Section 9;
 - 2.1.9.7 Details of the other consents needed before the Proposed Development can be implemented are included in Section 9.11 and 9.12;
 - 2.1.9.8 How regard has been given to the provisions of Articles 1 and 8 of the European Convention on Human Rights is included in Section 10; and
 - 2.1.9.9 Any other information which would be of interest to someone affected by the Order, such as an address, telephone number and email address where further information on these matters can be obtained, is included in Section 11.

3 THE APPLICANT

- 3.1.1 The Applicant is a limited company registered at Companies House under company number 13225224 and whose registered office is at Lion House, Rowcroft, Stroud, England, GL5 3BY.
- 3.1.2 The Applicant is an Ecotricity group company, which has been formed for the purpose of developing the Proposed Development.
- 3.1.3 Further details about the Applicant can be found in Section 2 of the Funding Statement (document reference 4.3).
- 3.1.4 The Applicant will apply for an electricity generation licence pursuant to Section 6 of the Electricity Act 1989 by the Gas and Electricity Markets Authority post consent. More

detail on the electricity generation licence can be found in the Consents and Licenses Required Under Other Legislation document (document reference 7.5).

4 THE PROPOSED DEVELOPMENT

4.1.1 The Proposed Development consists of:

4.1.1.1 A ground mounted solar photovoltaic generating station with a gross electrical output capacity of over 50 megawatts (Work No. 1 (including 1A and 1B)) (the "**Solar Park**");

4.1.1.2 An energy storage facility (Work No. 2);

4.1.1.3 Works to create reception areas, cabins, temporary construction compounds and service areas in connection with Work No. 1, Work No. 2, Work No. 4, and Work No. 5 (Work No. 3);

4.1.1.4 An onsite substation and works in connection with the onsite substation (Work No. 4);

4.1.1.5 Works to lay electrical cables between Work No. 4 and Work No. 6 (Work No. 5 (including 5A and 5B));

4.1.1.6 Creation of a new generation bay and associated works at the existing substation (Work No. 6A);

4.1.1.7 Extension to the existing substation (Works No 6B);

4.1.1.8 Works in connection with the extension to the existing substation (Works No 6C);

4.1.1.9 Two temporary laydown areas in connection with Work No. 5 and Work No. 6 (Work No. 7);

4.1.1.10 Works to create and maintain a permanent means of access from the A17 to Work No. 1A, Work No. 1B, Work No. 2, Work No. 3 and Work No. 4 (Work No. 8);

4.1.1.11 Works to create, enhance and maintain green infrastructure and create biodiversity net gain areas (Work No. 9A);

4.1.1.12 Works to create a permissive path including installing up to two footbridges, fencing, gates, boundary treatment and other means of enclosure (Work No. 9B); and

4.1.1.13 Works to existing streets to facilitate access to Work Nos 1 to 9B (Work No. 10).

4.1.2 The '*Associated Development*', for the purposes of Section 115 of the PA 2008 comprises Work Nos 2 to 10 of the Proposed Development.

4.1.3 A more detailed description of the Proposed Development is provided at Schedule 1 ('*Authorised Development*') of the draft DCO and Chapter 4 ('*Proposed development/Project Description*') of the Environmental Statement (Application Document Ref. 6.1.4) and the areas within which each of the main components of the Proposed Development are to be built is shown by the coloured and hatched areas on the Works Plans (Application Document Ref. 2.2).

4.1.4 Full details of the Proposed Development, including the proposed construction methods and phasing, can be found in Chapter 4 (*Proposed development/Project Description*) of the Environmental Statement (Application Document Ref. 6.1.4) accompanying the DCO Application.

5 DESCRIPTION OF LAND SUBJECT TO COMPULSORY ACQUISITION

5.1.1 The Proposed Development Site (forming the Solar Park, energy storage and associated development) lies within the administrative boundary of North Kesteven District Council and Boston Borough Council.

5.1.2 There are three key areas of land included in the Order Land:

5.1.2.1 the Solar Park;

5.1.2.2 the existing National Grid Substation; and

5.1.2.3 the Cable Route Corridor.

Solar Park

5.1.3 The Solar Park (Work No.1) is located on land approximately 3.7km east of Heckington and 8.9km west of Boston in the county of Lincolnshire.

5.1.4 The total area of the Solar Park is 524 hectares (ha) and comprises arable, agricultural land subdivided into rectilinear parcels by long linear drainage ditches that lie principally north-south, connected east-west by shorter ditches including Labour in Vain Drain. The ditches have an engineered profile, colonised in part by emerging aquatic plant species. The Solar Park is bounded by Head Dike to the north, a smaller watercourse to the east, agricultural land to the south and B1395 Sidebar Lane and further agricultural land to the west. There are 3 access points to the south of the Solar Park which connect to the A17 Sleaford to Holbeach road.

5.1.5 The main vehicular access point is provided via access off the A17 frontage at Rectory Farm and at Elm Grange, with tracks connecting to Crab Lane toward the northwest corner of the Solar Park, and then to Sidebar Lane. A further third access point is off the A17 towards Six Hundreds Farm. The access tracks follow ditch alignments. Six Hundreds Farm lies in the eastern third of the Solar Park.

5.1.6 The Solar Park is very flat and low-lying at between 2m and 3m Above Ordnance Datum across the entire Solar Park. The Energy Park is situated on the Lincolnshire Fens, a coastal plain in the east of England which comprises a large area of broad flat marshland supporting a rich biodiversity.

5.1.7 Overhead lines supported on wooden poles traverse the Solar Park, running parallel to Six Hundreds Drove and the A17 in the south, and near the north-western boundary of the Solar Park. An underground gas pipeline bisects the Solar Park, extending south-north to the east of Rectory Farm.

5.1.8 The Solar Park comprises the following plots identified on the Land and Crown Land Plan (document reference 2.1): 282, 283, 330 and 331.

5.1.9 There are two small areas of white land within plot 282 identified on the Land and Crown Land Plan (document reference 2.1) that fall outside of the option area for the Solar Park. These areas comprise a barn (informally known as the Beef Barn) and land owned by National Grid Gas PLC that comprises a gas valve associated with the gas pipeline which runs north-south through the Solar Park. Both are not included in the Order Limits.

Existing National Grid Substation

5.1.10 An extension to the existing National Grid Substation (Works No 6A, 6B and 6C), the Bicker Fen Substation, is required to facilitate connection of the Proposed Development to the NETS. The Bicker Fen Substation is located to the South of the Solar Park. The Order land for the Bicker Fen Substation extension area (Works No. 6A, 6B, and 6C) is 27,160m².

5.1.11 This extension will include a new generation bay, a new generation bay control room amid a section of perimeter access road, a busbar extension comprising a section breaker, a bus coupler, a feeder circuit and a new cable sealing end compound. All electrical equipment required for connection to the NETS will be within the new Generation Bay.

5.1.12 The existing National Grid Substation comprises the following plots identified on the Land and Crown Land Plan (document reference 2.1): 99A, 99B, 99C, 99D, 99E, 99F, 99G, 99H and 99I.

Cable Route Corridor

5.1.13 The Cable Route Corridor (Works No. 5, 5A and 5B and associated Works No. 2,3 and 4) is required to lay below ground cables from the Solar Park's onsite 400kv substation to the Bicker Fen Substation. Heading South, the Cable Route Corridor crosses arable land, roads, drainage ditches, a railway line and a Local Wildlife Site.

5.1.14 The Cable Route Corridor is 25m wide, with wider areas to facilitate the drilling rig associated with directional drilling, with launch pits of 30m x 30m. Joining bays of 20m x 3m are required every 400-500m to join sections of cable, with a maximum of 15 no. jointing bays along the route. In addition, cable design may require earthing link boxes of 2m x 2m to transpose the cable earthing along the route. There are 2 no. construction compounds, 80m x 80m in area, along the length of the Cable Route Corridor located to the North of the Triton Knoll Access Track and at the existing National Grid Substation.

5.1.15 The Cable Route Corridor is broken down at the southern end into Work No. 5A and Work No. 5B to reflect alternative route options for laying the electricity cables across a short section of land near to the existing National Grid Substation. This optionality is required due to ongoing discussions with NGET, and the landowner/wind farm operator, however, the Applicant can and will only install either Works No.5A or Work No. 5B. Further details on the Works No.5A and Work No. 5B options is set out in the Explanatory Memorandum (document reference 3.3).

5.1.16 The Cable Route Corridor comprises the following plots identified on the Land and Crown Land Plan (document reference 2.1): 12, 60A, 60B, 60C, 63A, 63B, 66B, 67B, 68C, 69, 72, 75D, 75I, 76B, 100A, 101A, 101C, 104A, 104D, 104E, 108A, 108B, 108C, 124, 184, 190, 245, 248, 255, 266A, 266B, 269, 284, 285, 286, 288, 293A, 293B, 295, 302A, 303, 304, 316, 323, 329, 334, ~~345~~, 346, 347, 348.

Public right of way

5.1.17 There is one public right of way located within the Proposed Development Site which crosses the northern boundary for approximately 280metres and this is set out in further detail on the Rights of Way Plan (document reference 2.3) and Chapter 11 (Socioeconomics, Tourism, Recreation and Land Use) of the Environmental Statement (document reference 6.1.11).

No rights sought

~~5.1.18 The Land and Crown Land Plan (document reference 2.1) at submission identified land over which no rights were sought as it was identified shortly prior to submission that it would not be proportionate or justifiable to acquire land or rights within that plot (plot 275B) as a building had recently been constructed on that plot. This plot is now edged red and shaded grey in the Land and Crown Land Plan (document reference 2.1) as no rights are sought over that plot.~~

~~5.1.19~~ 5.1.18 In addition, ~~t~~The Applicant identified during the Change Application that it would not require compulsory rights over plot 99I which forms part of National Grid's Bicker Fen Substation. This plot is also now edged red and shaded grey in the Land and Crown Land Plan (document reference 2.1) as no rights are sought over that plot.

~~5.1.20 In addition, the Applicant is no longer seeking to acquire compulsory rights over two additional plots adjacent to plots 275B (plots 275A and 299) edged red and shaded grey in the Land and Crown Land Plan (document reference 2.1) as this land is no longer required as an access to the Proposed Development.~~

~~5.1.21~~ 5.1.19 These changes ~~is~~are consistent with the requirements of the Guidance as the Applicant has designed the Proposed Development in order to minimise the land that is subject to compulsory acquisition and ensure that the rights that are required are no more than is necessary for the construction, operation and maintenance of the Proposed Development.

~~5.1.22~~ 5.1.20 Full details of the Solar Park, the National Grid Substation and the Onsite and Offsite Cable Route Corridor can be found in Chapter 4 (Proposed development/Project Description) of the Environmental Statement (document reference 6.1.4) accompanying the DCO Application.

6 REQUIREMENT OF COMPULSORY ACQUISITION

Introduction

6.1.1 The purpose for the acquisition powers sought by the Applicant in the Order is to enable the installation, use, maintenance and decommissioning of the Solar Park, the Grid Connection and associated development including the sub-station works at Bicker Fen to connect the development to the National Grid.

6.1.2 The Order (document reference 3.1) contains powers that are both permanent and temporary. In summary, the powers sought under the Order enable the creation and acquisition of new rights over land and the imposition of restrictions. Where the necessary rights over land cannot be acquired by agreement with the requisite landowners and occupiers, the Order enables the rights over land to be acquired compulsorily. In addition, existing rights, restrictions, easements or servitudes can be overridden, suspended and/or extinguished to enable the Proposed Development to be delivered without impediment.

6.1.3 The principal compulsory acquisition powers are set out in Articles 18 and 20 of the Order, in addition temporary rights are set out in Articles 27 and 28 of the Order and

the power to extinguish or suspend private rights are set out in Article 21 and 24 of the Order.

6.1.4 A description of the class rights sought over the Order land and the justification for why the rights are required is set out below in this Statement. Reference is made to plot numbers detailed on the Land and Crown Land Plan (document reference 2.1) and described in the Book of Reference (document reference 4.4).

6.1.5 Whilst rights and interests required for the Proposed Development will be secured by agreement wherever possible, and negotiations continue with all identified owners, it is essential that compulsory acquisition powers are available to the Applicant to enable the Proposed Development to proceed at the earliest opportunity to enable the Proposed Development to contribute to the UK’s energy supply. In addition, a complete list of negotiations with owners and occupiers, including the current status of negotiations, is included as the Schedule of Negotiations with Statutory Undertakers and Landowners (document reference 4.4).

6.1.6 Plot 99I has been included in the Order Limits but the Applicant is not seeking any compulsory acquisition rights for this plot. The Applicant requires development consent over this land for the construction of a cable sealing end compound and associated infrastructure (Work No. 6C). However, these are works to be undertaken by NGET on land owned and under the control of NGET. The Applicant and NGET have therefore agreed that no compulsory rights are required for this plot.

Classes of rights

6.1.7 There are four classes of land rights sought by the Applicant in the Order, as outlined below in table 1.

TABLE 1: Class rights sought by the applicant

| Class of Rights | Description | Plot numbers |
|-----------------|-------------------------------|---|
| 1 | Permanent easement and access | 12, 60A, 60B, 60C, 63A, 63B, 66B, 67B, 68C, 69, 72, 75D, 75I, 76B, 99B, 99C, 99D, 100A, 101A, 101C, 104A, 104D, 104E, 108A, 108B, 108C, 124, 184, 190, 245, 248, 255, 266A, 266B, 269, 284, 285, 286, 288, 293A, 293B, 295, 302A, 303, 304, 316, 323, 329, 334, 345 , 346, 347, 348, 99G, 99H. |
| 2 | Permanent access only | 63C, 63D, 64, 66A, 67A, 67C, 67D, 68A, 68B, 68D, 68E, 68F, 73A, 73B, 75A, 75B, 75C, 75E, 75F, 75G, 75H, 75J, 76A, 89, 90, 94, 97, 99E, 99F, 104B, 104C, 107A, 107B, 109A, 109B, 173, 265, 273, 274, 275A , 279, 287, 289, 290, 294, 296, 297, 298, 299 , 301, 302B, 307, 312, 313, 317, 322, 324, 325, 326, 335, 337, 338, 339, 341, 349. |

| | | |
|---|--|---|
| 3 | Temporary use | Order Limits (excluding 282, 283, 330, 331, 275B and 99I). |
| 4 | Override private rights or extinguish other rights | Order Limits (excluding 275B and 99I). |

6.1.8 The justification for and explanation of each right class is discussed below.

Class 1 – permanent easement and access

6.1.9 Article 20 of the Order is relied upon in respect of the Class 1 rights sought. The land over which compulsory acquisition powers are sought for rights and the creation of new rights (including restrictions) is shown edged red and shaded blue on the Land and Crown Land Plan (document reference 2.1). This land is described in more detail in the Book of Reference (document reference 4.4).

6.1.10 A number of new rights are sought to facilitate the Applicant and all persons authorised on its behalf to construct, use and maintain the Proposed Development. This includes rights to construct, use and maintain the underground cables, rights of access, rights for drainage and rights for services. There is also a need to impose restrictive covenants in relation to new rights required in connection with the Class 1 rights.

6.1.11 Planning Inspectorate guidance in Advice Note 15 concerning the drafting of DCOs (paragraphs 24.1-24.3) advises that it may be appropriate to include a power to impose restrictive covenants over part of the land which is subject to compulsory acquisition or use under a DCO. The guidance states that before deciding whether or not such a power is justified the Secretary of State will need to consider issues such as proportionality; the risk that use of land above or below a structure could be sterilised if it has to be acquired outright in the absence of a power to impose restrictive covenants; or whether there is for example a policy of establishing a continuous protection zone for the infrastructure network which could be secured more efficiently with the benefit of this power.

6.1.12 The guidance states that the power to impose restrictive covenants over land above a buried cable or pipe, or where a slope contains artificial reinforcement has been granted in DCOs. The guidance advises that in order to enable the Secretary of State to consider whether the imposition of restrictive covenants is necessary for the purposes of implementing an NSIP and appropriate in human rights terms, applicants should be prepared to fully explain and justify the need for including such powers.

6.1.13 The Applicant has had regard to this guidance in preparing the Order. Article 20 includes power to impose restrictive covenants in relation to land over which new rights are acquired. The Applicant considers the imposition of such a power to be justified and proportionate in the circumstances of this case, in order to protect and preserve the integrity of the underground cables and to ensure that the Proposed Development can be accessed.

6.1.14 The intended purpose and justifications for which new rights are sought under Article 20 of the Order is set out in Table 2 below.

TABLE 2: Justifications for the creation and acquisition of rights and imposition of restrictions: Class 1 – permanent easement and access

| Class 1 | Rights sought | Justification |
|---------|---------------|---------------|
|---------|---------------|---------------|

| | | |
|-------------------------------------|---|---|
| <p>Cable rights</p> | <p>(a) to install, use, support, protect, inspect, alter, remove, replace, retain, renew, improve and maintain electrical underground cables, earthing cables, optical fibre cables, data cables, telecommunications cables and other services, works associated with such cables including bays, ducts, protection and safety measures and equipment, and other apparatus and structures;</p> <p>(b) to alter, improve, form, maintain, retain, use (with or without vehicles, plant and machinery), remove, reinstate means of access to the authorised development including visibility splays and to remove impediments to such access;</p> <p>(c) to install, use, support, protect, inspect, alter, remove, replace retain, renew, improve and maintain watercourses, public sewers and drains and drainage apparatus and equipment; (d) to remain, pass and repass on foot, with or without vehicles, plant and machinery (including rights to lay and use any temporary surface or form a temporary compound) for all purposes in connection with the authorised development;</p> <p>(e) to restrict and remove the erection of buildings or structures, restrict the altering of ground levels, restrict and remove the planting of trees or carrying out operations or actions (including but not limited to blasting and piling) which may obstruct, interrupt or interfere with the exercise of the rights or damage the authorised development; and</p> <p>(f) to install, use, support, protect, inspect, alter, remove, replace, retain, renew, improve and maintain soft landscaping and biodiversity measures.</p> | <p>To enable the Applicant to construct, use and maintain the underground cables.</p> |
| <p>Substation connection rights</p> | <p>(g) in connection with and for the purposes of facilitating Work No. 6A, to install, use, support, protect, inspect, alter, remove, replace, retain, renew, improve and maintain electrical cables, earthing cables, optical fibre cables, data cables, telecommunications cables and other services, works associated with such cables including bays, ducts, protection and safety measures and equipment, and other apparatus and structures and to connect such cables and services to the National Grid Bicker Fen substation;</p> <p>(h) in connection with and for the purposes of facilitating Work No. 6A , to install, use, support, protect, inspect, alter, remove, replace, retain,</p> | <p>To enable the Applicant to construct, use and maintain all electrical cables and equipment forming part of and connecting to, the National Grid Bicker Fen Substation.</p> |

| | | |
|--|---|--|
| | <p>renew, improve and maintain watercourses, public sewers and drains and drainage apparatus and equipment;</p> <p>(i) to remain, pass and repass on foot, with or without vehicles, plant and machinery (including rights to lay and use any temporary surface or form a temporary compound) for all purposes in connection with Work No 6A;</p> <p>(j) in connection with and for the purposes of facilitating Work No. 6A to restrict and remove the erection of buildings or structures, restrict the altering of ground levels, restrict and remove the planting of trees or carrying out operations or actions (including but not limited to blasting and piling) which may obstruct, interrupt or interfere with the exercise of the rights or damage the authorised development;</p> <p>(k) to install, use, support, protect, inspect, alter, remove, replace, retain, renew, improve and maintain soft landscaping and biodiversity measures; and</p> <p>(k) remove landscaping measures.</p> | |
|--|---|--|

Class 2 – Permanent access only

6.1.15 Article 20 of the DCO is also relied upon in respect of the class 2 rights sought. The land over which compulsory acquisition powers are sought for access rights is shown edged red and shaded yellow on the Land and Crown Land Plan (document reference 2.1). This land is described in more detail in the Book of Reference (document reference 4.4).

6.1.16 Access only rights are sought to facilitate access to the Proposed Development Site for the Applicant and all persons authorised on its behalf to construct, use and maintain the Proposed Development. There is also a need to impose restrictive covenants in relation to new access rights required in connection with the Class 2 rights.

~~6.1.16~~ 6.1.17 [In addition, provision has been made in Article 20 of the DCO for the creation and acquisition of new rights and the imposition of restrictive covenants for the benefit of NGET. The Applicant has worked with NGET to identify the access requirements for the Bicker Fen Substation Extension works that are to be undertaken on land owned and under the control of NGET. The provision will enable the Applicant to acquire access rights for NGET to use the Triton Knoll access track and surrounding highway network in accordance with the mitigation commitments in the Outline Construction Traffic Management Plan \(document reference 7.10\).](#)

6.1.18 The intended purpose and justifications for which new access rights are sought under Article 20 of the Order and Table 3 below.

~~6.1.17~~

TABLE 3: Justifications for the creation and acquisition of rights and imposition of restrictions: Class 2 – permanent access only

| Class 2 | Rights sought | Justification |
|---------------|---|---|
| Access rights | <p>(a) to alter, improve, form, maintain, retain, use (with or without vehicles, plant and machinery), remove, reinstate means of access to the authorised development including visibility splays and to remove impediments to such access;</p> <p>(b) to pass and repass on foot, with or without vehicles, plant and machinery (including rights to lay and use any temporary surface) for all purposes in connection with the authorised development; and</p> <p>(c) to restrict the erection of buildings or structures, restrict the altering of ground levels, restrict the planting of trees or carrying out operations or actions which may obstruct, interrupt or interfere with the exercise of the access rights.</p> | To enable the Applicant to access and remain on land necessary for the construction and maintenance of the authorised development and otherwise for the exercise of the class 1 rights. |

Class rights 3 – Temporary use

~~6.1.18~~[6.1.19](#) Temporary use of land pursuant to Articles 27 and 28 of the Order is required in order to facilitate the use of land by the Applicant and all persons authorised on its behalf during the construction period and maintenance period of the Proposed Development. The maintenance period is defined in Article 28 of the Order as " five years beginning with the date of final commissioning of the part of the authorised development for which temporary possession is required under this article except in relation to landscaping where "the maintenance period" means such period as set out in the landscape ecological management plan which is approved by the relevant planning authority pursuant to requirement 8 beginning with the date on which that part of the landscaping is completed"

~~6.1.19~~[6.1.20](#) The land over which compulsory acquisition powers are sought for access rights is shown edged red and shaded blue, green, purple and yellow on the Land and Crown Land Plan (document reference 2.1). This land is described in more detail in the Book of Reference (document reference 4.4).

~~6.1.20~~6.1.21 The reason for seeking temporary use powers over this land is that it allows the Applicant to enter on to land for particular purposes (including site preparation works) in advance of any vesting of the relevant land/rights. This enables the Applicant to only compulsorily acquire the minimum amount of rights over land required to construct, operate and maintain the Proposed Development, which demonstrates the proportionate approach that the Applicant is taking in the exercise of compulsory acquisition of rights (as discussed below).

~~6.1.21~~6.1.22 The intended purpose and justifications for which temporary use rights are sought under Article 27 and 28 of the Order is set out in Table 4 below.

TABLE 4: Justifications for the creation and acquisition of rights and imposition of restrictions: Class 3 – Temporary use

| Class 3 | Rights sought | Justification |
|-------------------------|---|---|
| Construction and access | <p>(a) to remove any buildings, agricultural plant and apparatus, drainage, fences, debris and vegetation from that land;</p> <p>(b) to construct temporary works, haul roads, security fencing, bridges, structures and buildings on that land;</p> <p>(c) to use the land for the purposes of a temporary working site with access to the working site in connection with the authorised development;</p> <p>(d) to construct any works, on that land as are mentioned in Schedule 1 (authorised development) of the Order; and</p> <p>(e) to carry out mitigation works including reinstatement required under the requirements in Schedule 2 (requirements) of the Order.</p> | To enable the Applicant temporary access to the Order Land and place temporary works on the land to construct the Proposed Development. |

| | | |
|------------------------|--|--|
| Maintenance and access | <p>(a) to enter on and take temporary possession of any land within the Order land if such possession is reasonably required for the purpose of maintaining the authorised development;</p> <p>(b) to enter on any land within the Order land for the purpose of gaining such access as is reasonably required for the purpose of maintaining the authorised development; and</p> <p>(c) to construct such temporary works (including the provision of means of access) and buildings on the land as may be reasonably necessary for that purpose.</p> | To enable the Applicant temporary access to the Order Land to undertake any necessary maintenance works during the maintenance period. |
|------------------------|--|--|

Class rights 4 – Private rights

~~6.1.22~~6.1.23 Articles 21 and 24 of the Order is relied upon in respect of the Class 4 rights sought. The Applicant has included powers to ensure that easements and other private rights identified as affecting the land are extinguished or suspended, so as to facilitate the construction and operation of the Proposed Development without hindrance. In addition, there may be unknown rights, restrictions, easements or servitudes affecting that land which also need to be extinguished in order to facilitate the construction and operation of the Proposed Development. On this basis the Applicant is seeking Class 4 rights over all of the Order land (with the exception of Plots ~~275B and~~ 99I).

~~6.1.23~~6.1.24 Articles 21 and 24 of the Order provides that any existing rights, restrictions, easements or servitudes can be overridden, suspended and/or extinguished if required to exercise the powers under Articles 18 and 20 of the Order. Part 3 of the Book of Reference (document reference 4.4) identifies those plots where rights may be overridden, suspended or extinguished under Article 21 and 24.

~~6.1.24~~6.1.25 The intended purpose and justifications for which the overriding, extinguishment or suspension of rights are sought under Article 21 and 24 of the Order is set out in Table 5 below.

TABLE 5: Justifications for the creation and acquisition of rights and imposition of restrictions: Class 4

| Class 4 | Rights sought | Justification |
|----------------|---|--|
| Private rights | Easements and other private rights identified as affecting the land are | To facilitate the construction and operation of the Proposed Development without |

| | | |
|--|--|--|
| | overridden, extinguished or suspended. | hindrance and to extinguish unknown rights, restrictions, easements or servitudes affecting that land in order to facilitate the construction and operation of the Proposed Development. |
|--|--|--|

~~6.1.25~~[6.1.26](#) Through agreement with the landowner, it has been decided that the Applicant is not seeking compulsory acquisition powers to secure freehold rights to the Solar Park or new rights (including restrictive covenants) over the Solar Park; the Applicant has a good longstanding relationship with the landowner and an option agreement is in place to secure the rights to construct and maintain the Proposed Development. The Applicant is, however, seeking Class 4 rights over the Solar Farm to ensure that title can be secured with certainty and to protect the deliverability of the Proposed Development from circumstances which may otherwise cause a delay including a general right to acquire any unknown freehold or leasehold rights over the land is included.

Additional powers within the Order

~~6.1.26~~[6.1.27](#) In respect of the public highways and streets that will be affected by the Proposed Development, the Applicant is also relying on Articles 8, 9, 10, 11, and 26 of the Order in relation to street works (to enter onto them and to lay and maintain apparatus in them), to construct means of access and to create temporary prohibitions and restrictions of the use of such streets.

~~6.1.27~~[6.1.28](#) The Applicant has also included powers to allow the acquisition of subsoil only rights. These rights are sought to ensure that the minimum amount of rights under the land required to construct and operate the Proposed Development are compulsorily acquired. Article 23 of the Order is relied upon in respect of the subsoil only rights.

~~6.1.28~~[6.1.29](#) Any interference with rights, restrictions etc. over the Order land arising from the exercise of any Articles in the Order which provide statutory access and/or use of land within the Order land are captured in Part 3 of the Book of Reference (document reference 4.4).

~~6.1.29~~[6.1.30](#) Access to all premises adjoining public highways affected by the Proposed Development will be maintained at all times during the construction and operation of the Proposed Development and will not be materially affected by the operation of the Proposed Development.

~~6.1.30~~[6.1.31](#) The Order contains the following additional powers which may constitute an interference with land and/or rights over land and as such are captured in Part 3 of the Book of Reference (document reference 4.4):

~~6.1.30.1~~[6.1.31.1](#) Article 14 – Discharge of water;

~~6.1.30.2~~[6.1.31.2](#) Article 16 – Protective works to buildings;

~~6.1.30.3~~[6.1.31.3](#) Article 17 - Authority to survey and investigate the land; and

~~6.1.30.4~~[6.1.31.4](#) Article 36 – Felling or lopping of trees and removal of hedgerows.

7 JUSTIFICATION FOR USE OF COMPULSORY ACQUISITION

7.1.1 Section 120 and Part 1 of Schedule 5 of the PA 2008 make provision for a DCO to grant powers for the creation, suspension and extinguishment of interests or rights over land.

7.1.2 Section 122(2) of the PA 2008 provides that an order granting development consent may only include provision authorising the compulsory acquisition of land (which includes any interest in or right over land) where:

7.1.2.1 the land is required for the development to which the DCO relates;

7.1.2.2 the land is required to facilitate or is incidental to the development; or

7.1.2.3 the land is replacement land for commons, open spaces, or fuel or field garden allotment.

7.1.3 Section 122(3) of the PA 2008 requires that there be a compelling case in the public interest for the land to be acquired compulsorily. The Guidance states at paragraph 12 and 13 that the decision-maker must be satisfied of this and that there is compelling evidence that the public benefits of the compulsory acquisition would outweigh the private loss.

7.1.4 In addition to the above statutory requirements, paragraphs 8 to 10 of the Guidance provide general guidance that the Applicant must be able to demonstrate the following in order to justify the development:

7.1.4.1 that all reasonable alternatives to compulsory acquisition have been explored (including modifications to the scheme);

7.1.4.2 that the interference with rights is for a legitimate purpose, is necessary and is proportionate;

7.1.4.3 how the land will be used;

7.1.4.4 that there is a reasonable prospect of the requisite funds becoming available; and

7.1.4.5 that Articles 1 and 8 of the European Convention on Human Rights have been considered.

7.1.5 At paragraph 11, the Guidance states that the decision-maker needs to be satisfied that the land to be compulsorily acquired does not extend beyond the extent to which it is reasonably required for the purposes of development, and the Applicant should be able to demonstrate that the land in question is needed for the development for which consent is sought. Any land that is incidental to or is required to facilitate the development should also be limited to that which is no more than reasonably necessary and it should be made clear to the decision-maker that this is the case.

7.1.6 The powers to compulsorily acquire rights over land (including restrictions) in the Order are required for the construction, operation and maintenance of the Proposed Development. The power to compulsorily acquire rights over land is required to ensure there is no impediment to the delivery of this NSIP.

7.1.7 The location and extent of the rights has been carefully considered and designed in order to take the minimum amount of rights required, and is therefore proportionate and necessary.

7.1.8 The Applicant's justification for seeking compulsory acquisition powers, in accordance with the provisions of the PA 2008, is to secure new rights over land, the imposition of restrictions and the temporary use of land required to enable the Applicant to construct, operate and maintain the Proposed Development within a reasonable commercial timeframe. The inclusion of powers of compulsory acquisition in the Order (document reference 3.1) is sought in order to ensure that this can be achieved.

7.1.9 The Proposed Development is a NSIP and the public benefits associated with the Proposed Development are set out in Section 8 of this Statement. The Applicant considers that there is a compelling case in the public interest for the power to compulsorily acquire rights over land (together with the imposition of restrictions) to be included in the Order. Compensation is payable to all affected landowners and occupiers.

7.1.10 There is also a compelling case in the public interest for the power to extinguish, suspend or interfere with private rights to the extent necessary to deliver the Proposed Development. The extent of the Order land is no more than is reasonably necessary for the construction, operation and maintenance of the Proposed Development and therefore any interference with private rights is proportionate and necessary. Compensation is payable to anyone whose rights are extinguished, suspended or interfered with.

7.1.11 The Applicant has completed an option agreement for that part of the Proposed Development Site on which the Solar Park and Energy Storage Facility is to be located. However, the Applicant is including this land within the Order land in order to ensure that land assembly and title to the Proposed Development Site can be secured with certainty. The Applicant is also including this land within the Order land so as to ensure that certain easements and other private rights identified as affecting that land are extinguished, so as to facilitate the construction and operation of the Proposed Development without hindrance (see the Book of Reference (document reference 4.4)). In addition, there may be unknown rights, restrictions, easements or servitudes affecting that land which also need to be overridden, removed and/or extinguished in order to facilitate the construction and operation of the Proposed Development without hindrance.

7.1.12 The Applicant has been seeking to acquire the remaining rights (and restrictions) over land by voluntary agreement, in order to ensure implementation of the Proposed Development. However, it has not yet been possible to acquire all of the rights required by agreement at the point of submitting the DCO Application. In addition, the Applicant requires certain rights to be suspended, overridden or extinguished within the Order land so as to ensure there are no impediments to the construction, operation and maintenance of the Proposed Development.

7.1.13 The Applicant will continue to endeavour to purchase the rights and other interests by agreement wherever possible. This approach of making the application for powers of compulsory acquisition in the DCO Application and, in parallel, conducting negotiations to acquire land by agreement, accords with paragraph 26 of the Guidance.

7.1.14 There are a number of interests identified in the Book of Reference where it has not been possible to identify ownership. The statement "Unknown" is given in the Book of Reference when diligent enquiries have been carried out and it has still not been possible to obtain information. The Applicant has carried out searches and enquiries with the Land Registry, site visits and notices have been and will be erected on site to seek to identify unknown landowners or persons with an interest in the land.

7.1.15 For the reasons set out in this Statement, the Applicant considers that the conditions of Section 122 of the PA 2008 have been met.

Alternatives to Compulsory Acquisition

7.1.16 In designing the Proposed Development and determining the land to be subject to compulsory acquisition and temporary possession powers, the Applicant has considered alternatives and modifications to the Proposed Development to minimise the potential rights and interests that are required.

7.1.17 A range of technical, environmental and economic factors have been considered when investigating and assessing the potential sites for the Proposed Development. This process is described in detail in Chapter 3 (Site description/selection) of the Environmental Statement (document reference 6.1.3). In addition, the Grid Route Selection Report, that explains the optioneering undertaken, selection process and alternative routes considered to identify the Cable Route Corridor, is set out in Appendix A to this Statement.

7.1.18 Key factors for consideration include:

7.1.18.1 Solar irradiation levels;

7.1.18.2 Proximity to an available grid connection;

7.1.18.3 Proximity to local population;

7.1.18.4 Topography;

7.1.18.5 Field size / shading;

7.1.18.6 Access to the site for construction;

7.1.18.7 Archaeological interest;

7.1.18.8 Agricultural land classification;

7.1.18.9 Landscape designations and visual impact;

7.1.18.10 Nature conservation designations;

7.1.18.11 Flood risk; and

7.1.18.12 The potential for a commercial/land agreement with landowners.

7.1.19 Following consideration of the above factors, the Proposed Development Site was identified as being suitable for the Proposed Development. Chapter 3 (Site description/selection) of the Environmental Statement (document reference 6.1.3) also sets out how the Applicant has considered other sites in the UK and alternative designs.

7.1.20 The Consultation Report (document reference 5.1) explains further how community and statutory consultees and negotiations with landowners have influenced considerations as to the design and layout of the Proposed Development.

7.1.21 None of the alternatives or modifications considered for the Proposed Development would remove the need for powers of compulsory acquisition powers and temporary possession over the Order land.

7.1.22 The Applicant therefore considers that all reasonable alternatives have been considered prior to the making of the DCO Application and such consideration has included reasonable factors at relevant stages, such as consultee comments, technical feasibility, economic factors and the minimisation of environmental and visual impacts and rights and interests that are required.

Availability of Funds for Compensation

7.1.23 The Funding Statement (document reference 4.3) confirms that the Applicant has the ability to procure the financial resources required for the Proposed Development, including the cost of acquiring any rights and the payment of compensation, as applicable.

7.1.24 The Applicant therefore considers that the Secretary of State can be satisfied that the requisite funds for payment of compensation will be available at the appropriate time.

8 NEED FOR THE PROPOSED DEVELOPMENT

8.1.1 The Statement of Need and Planning Statement (document reference 7.3) is included as part of the DCO Application.

8.1.2 The Statement of Need and Planning Statement explains how the Proposed Development will materially contribute to the UK government's urgent need for renewable energy generation, and its commitment to the sustained growth in solar photovoltaic energy generation, as set out in National Policy Statements EN-1 and EN-2. Chapter 4 (Development Description) of the Environmental Statement (document reference 6.1.4) also explains the need for the Proposed Development.

8.1.3 In addition, the Statement of Need and Planning Statement explains how the Proposed Development is supported by international, national and local planning policies.

8.1.4 It is for the reasons outlined in the Statement of Need and Planning Statement that the Applicant considers that there is a compelling case in the public interest to be granted compulsory acquisition powers.

9 SPECIAL CONSIDERATIONS

Special Category Land – Crown Land

9.1.1 Section 135 of the PA 2008 provides protection for Crown Land against compulsory acquisition. The Order land includes land owned by the Crown or subject to Crown Interests. This land is described in Part 4 of the Book of Reference (document reference 4.4) and shown on the Land and Crown Land Plan (document reference 2.1). The Book of Reference clearly states that any interests owned by the Crown are excluded from the ambit of the compulsory acquisition powers contained in the Order (document reference 3.1). In addition, in response to a section 55 request from the Planning Inspectorate, a separate Crown Land Plan is provided (document reference 2.10).

9.1.2 Section 135 of the PA 2008 provides that a DCO may include provisions authorising the compulsory acquisition of an interest in Crown Land which is for the time being held otherwise than by or on behalf of the Crown, or any other provisions relating to the Crown Land, only if the Crown consents to the inclusion of the provisions.

9.1.3 The Applicant is in discussions with the Crown Estate Commissioners in order to obtain their consent to the inclusion of these provisions as required under section 135 of the PA 2008.

9.1.4 The Crown Land comprises the following plots identified on the Land and Crown Land Plan (document reference 2.1): 69, 184, 283, 293A, 293B.

Statutory Undertakers Land and Apparatus

9.1.5 The interests held by each statutory undertaker identified by the Applicant as having a right to keep or access apparatus within the Order land are identified in Part 1 and Part 2 of the Book of Reference (document reference 4.4).

9.1.6 Article 29 of the Order gives the Applicant the authority to acquire rights from Statutory Undertakers, and to extinguish or suspend their rights, and to remove or reposition their apparatus, subject to the provisions of Schedule 13 of the Order (document reference 3.1) which contains protective provisions for their benefit.

9.1.7 Section 127(5) of the PA 2008 states that an order granting development consent may only include provision authorising the compulsory acquisition of a right over statutory undertaker's land by the creation of a new right over land to the extent that:-

9.1.7.1 the right can be purchased without serious detriment to the carrying on of the undertaking; or

9.1.7.2 any detriment to the carrying on of the undertaking, in consequence of the acquisition of the right, can be made good by the undertakers by the use of the other land belonging to or available for acquisition by them.

9.1.8 Section 138(4) of the PA 2008 provides that an order granting development consent may only include provisions for the extinguishment of:

9.1.8.1 right of way, or a right of laying down, erecting, continuing or maintaining apparatus on, under or over the land, which is vested in or belongs to statutory undertakers for the purpose of the carrying on of their undertaking, or is conferred by or in accordance with the electronic communications code on the operator of an electronic communications code network; or

9.1.8.2 apparatus vested in or belonging to statutory undertakers for the purpose of the carrying on of their undertaking, or electronic communications apparatus kept installed for the purposes of an electronic communications code network, where the Secretary of State is satisfied that the extinguishment or removal is necessary for the purpose of carrying out the development to which the order relates.

9.1.9 Adequate protection for the statutory undertakers will be included within protective provisions in the Order and/or asset protection agreements between the parties. The Applicant therefore considers that the statutory undertakers will not suffer serious detriment to the carrying on of the undertaking as a result of the compulsory acquisition of rights over land or powers of temporary possession or extinguishment of rights or removal of apparatus.

9.1.10 A complete list of negotiations with each statutory undertaker, including the current status of negotiations, is included as the Schedule of Negotiations with Statutory Undertakers and Landowners (document reference 4.4).

Other Consents

9.1.11 Other consents are required in order for the Proposed Development to be constructed and become operational. The Consents and Licences Required Under Other

Legislation document (document reference 7.5) sets out the additional consents required and when for which they will be applied. These include but are not limited to:

9.1.11.1 Generation Licence

As required under the Electricity Act 1989, the Applicant will submit an application for a Generation Licence to the Gas and Electricity Markets Authority on-post consent.

9.1.11.2 Connection Agreement

A sibling group company of the Applicant (Ecotricity Generation Limited) accepted a grid connection offer from National Grid Electricity System Operator Limited on 19 July 2022, further details of which are given in the Grid Connection Statement (Document Ref: 5.4).

9.1.11.3 European Protected Species Mitigation Licence

Discussions with Natural England will be commenced if a licence pursuant to the Conservation of Habitats and Species Regulations 2017 is required.

9.1.11.4 Specific Protected Species Licence

When the design of the Proposed Development is being finalised, discussions of the final Proposed Development details will be undertaken with Natural England and a licence will be applied for if required.

9.1.11.5 Science, Education & Conservation or Class licence

When the design of the Proposed Development is being finalised, discussions of the final Proposed Development details will be undertaken with Natural England and a licence will be applied for if required.

9.1.11.6 Request permission for works or an activity on an SSSI

Discussions with Natural England will be commenced if permission pursuant to the Wildlife and Countryside Act 1981 is required.

9.1.11.7 Health and Safety related consents

Applications to be made by the Applicant's contractor before construction commences as appropriate.

9.1.11.8 Permit for transport of abnormal loads (relating to the delivery by road of loads that fall outside standard practice) (if required)

Appropriate applications and notifications, in accordance with the Construction Traffic Management Plan, will be made by the Applicant's contractor in advance of the delivery of any abnormal loads.

9.1.11.9 Notice of Street Works

Applications to be made by the Applicant's contractor before construction commences as appropriate.

9.1.11.10 Temporary Road Traffic Orders (if required, i.e. if construction phase requires closure of any public highway).

Applications to be made by the Applicant's contractor before construction commences as appropriate.

9.1.11.11 Section 61 Consent (relating to the control of noise on construction sites)

Any applications required will be made by the Applicant's contractor before construction commences.

9.1.11.12 Water abstraction or impoundment licence

If groundwater pumping/dewatering is required, then applications to be made by the Applicant's contractor before construction commences as appropriate.

9.1.11.13 Water discharge permit

If water discharge activities are required then an application for water discharge activity environmental permit will be made by the Applicant's contractor before water is discharged.

9.1.11.14 Hazardous Substance Consent

Applications to be made by the Applicant's contractor following detailed design, if that is necessary. The Applicant is not aware of any reason why a consent would not be granted should one be required.

9.1.11.15 Crown Consent

Consent to acquire interest other than the Crown in Crown land to be sought post-submission of the Application.

9.1.12 The Applicant is not aware of any reasons why the above consents and licences would not be granted.

10 HUMAN RIGHTS

10.1.1 The Human Rights Act 1998 incorporated into UK law the European Convention on Human Rights (the "**Convention**"). The Convention includes provisions in the form of Articles, the aim of which is to protect the rights of the individual.

10.1.2 The following Articles of the Convention are relevant to the Secretary of State's decision as to whether the Order (document reference 3.1) should be made so as to include powers of compulsory acquisition:

10.1.2.1 Article 1 – protects the rights to peaceful enjoyment of possessions and provides that no one can be deprived of their possessions except in the public interest.

10.1.2.2 Article 6 – entitles those affected by the compulsory acquisition powers sought in the Order to a fair and public hearing.

10.1.2.3 Article 8 – protects private and family life, home and correspondence. Interference with this right can be justified if it is in accordance with law and is necessary in the interests of, among other things, national security, public safety or the economic wellbeing of the country.

10.1.3 The Secretary of State, as the decision-maker, is under a duty to consider whether the exercise of powers interacts with the rights protected by the Convention.

10.1.4 The Order has the potential to infringe the rights of persons who hold interests in land within the Order land under Article 1 of the Convention. Such an infringement is authorised by law so long as:

10.1.4.1 the statutory procedures for making the Order are followed and there is a compelling case in the public interest for the inclusion of powers of compulsory acquisition in the Order; and

10.1.4.2 the interference with the convention right is proportionate.

10.1.5 In preparing the DCO Application, the Applicant has considered the potential infringement of the Convention rights in consequence of the inclusion of compulsory acquisition powers within the Order and has sought to minimise the amount of land over which it requires powers of compulsory acquisition. The Applicant considers that there would be a very significant public benefit arising from the grant of the Order. The benefit is only realised if the Order is accompanied by the grant of powers of compulsory acquisition. The Applicant has concluded on balance that the significant public benefits outweigh the effects upon persons who own property within the Order land. For those affected by expropriation or dispossession, compensation is payable in accordance with the statutory compensation code.

10.1.6 In relation to Article 6, there has been opportunity to make representations regarding the preparation of the DCO Application. In accordance with Part 5 of the PA 2008, the Applicant has consulted with persons set out in the categories contained in Section 44 of the PA 2008, which includes owners, lessees, tenants and occupiers within the Order land and those with an interest in the Order land. The Applicant has also consulted with those persons who may be able to make a relevant claim under Section 10 of the Compulsory Purchase Act 1965, Part 1 of the Land Compensation Act 1973 or Section 152(3) of the PA 2008.

10.1.7 Furthermore, representations can also be made in response to any notice given under Section 56 of the PA 2008 for consideration at examination of the DCO Application by the Examining Authority and in any written representations procedure which the Examining Authority decides to uphold or at any compulsory acquisition hearing held under Section 92 of the PA 2008.

10.1.8 Should the Order be made, any person aggrieved may challenge the Order in the High Court if they consider that the grounds for doing so are made out pursuant to Section 118 of the PA 2008.

10.1.9 Any person affected by the exercise of compulsory acquisition powers or by the exercise of temporary possession, may be entitled to compensation. In relation to matters of compensation, affected persons have the right to apply to the Upper Tribunal (Lands Chamber), which is an independent judicial body, to determine the compensation payable.

10.1.10 For the above reasons, any infringement of the Convention rights of those whose interests are affected by the inclusion in the Order of powers of compulsory acquisition, is proportionate and legitimate and is in accordance with national and European law. For the reasons set out in Sections 8 of this Statement, the Applicant considers that there is a compelling case in the public interest for the exercise of such powers of compulsory acquisition.

10.1.11 The Applicant considers that the Order strikes a fair balance between the public interest in the Proposed Development going ahead and the interference with the rights that will be affected. The Applicant considers that it would, therefore, be appropriate and

proportionate for the Secretary of State to make the Order, including the grant of compulsory acquisition powers.

11 FURTHER INFORMATION

The Negotiation of Sale/Rights

11.1.1 Landowners and occupiers of property which are affected by the Order and whom wish to discuss the subject of compensation should contact:

[11.1.1.1 Martin Williams \(Director of Renewable Energy – England and Wales\) of Ardent Management](#)

[11.1.1.2 Email: MartinWilliams@ardent-management.com](#)

[11.1.1.3 Telephone: 0203 693 2500](#)

~~11.1.1.1~~ [11.1.1.4](#) Simon Tarr (Senior Director (Land & Property) at Pegasus Group:

~~11.1.1.1.1~~ [11.1.1.4.1](#) Email: Simon.Tarr@pegasusgroup.co.uk

~~11.1.1.1.2~~ [11.1.1.4.2](#) Telephone: 0151 317 5220.

~~11.1.1.2 Harry Travis (Principal Acquisition Surveyor at Pegasus Group~~

~~11.1.1.2.1~~ ~~— Email: Harry.Travis@pegasusgroup.co.uk~~

~~11.1.1.2.2~~ ~~— Telephone: 0151 317 5220~~

Compensation guidance

11.1.2 Provision is made by statute with regard to compensation for compulsory acquisition and the depreciation value of properties. Helpful information is given in guidance published by Department of Levelling Up, Housing and Communities entitled "Compulsory Purchase and Compensation" listed below:

11.1.2.1 Guide 1 - Procedure;

11.1.2.2 Guide 2 - Compensation to Business Owners and Occupiers;

11.1.2.3 Guide 3 - Compensation to Agricultural Owners and Occupiers; and

11.1.2.4 Guide 4 - Compensation for Residential Owners and Occupiers.

11.1.3 Copies of these guides are obtainable, free of charge, from: <https://www.gov.uk/government/collections/compulsory-purchase-system-guidance>

12 CONCLUSIONS

12.1.1 This Statement demonstrates that the inclusion of powers of compulsory acquisition in the Order for the purposes of the Proposed Development meets the requirements of Section 122 of the PA 2008 as well as the considerations in the Guidance.

12.1.2 A description of the intended use of the rights to be acquired compulsorily has been provided.

12.1.3 In summary, the compulsory acquisition of the rights over the Order land (including restrictions), together with the overriding of interests, rights and restrictive covenants and the suspension or extinguishment of private rights, is required for the purposes of, to facilitate, or are incidental to, the Proposed Development and are proportionate and no more than is reasonably necessary.

12.1.4 Furthermore, there is a compelling case in the public interest for the rights over the land to be compulsorily acquired given the positive benefits that the Proposed Development will generate particularly in view of current UK policy in relation to renewable energy.

12.1.5 All reasonable alternatives to compulsory acquisition have been explored. Given the national need for the Proposed Development and the support for it found in policy, the compulsory acquisition of the rights and the temporary use of land, together with the proposed interference with existing rights, for the Proposed Development are necessary and justified.

12.1.6 An explanation has been provided as to how it is expected that the construction of the Proposed Development and the acquisition of the rights over the land will be funded, as well as compensation in respect of the exercise of powers of compulsory acquisition, which demonstrates that there is a reasonable prospect of the requisite funds being available.

12.1.7 Articles 1 and 8 of the Convention have been considered. The Applicant considers that the very substantial public benefits to be derived from Proposed Development would outweigh the private loss that would be suffered by those whose land is to be acquired or whose rights would be interfered with.

12.1.8 It is therefore submitted that the Order be made and any compulsory acquisition powers and powers of temporary possession sought within the Order be granted.

|

APPENDIX A

Grid Route Selection Report

GRID ROUTE SELECTION REPORT

| Document Properties | |
|--|--|
| Regulation Reference | Regulation 5(2)(h) |
| Planning Inspectorate Scheme Reference | EN010123 |
| Application Document Reference | Appendix C to Statement of Reasons 4.1 |
| Title | Grid Route Selection Report |
| Prepared By | Heckington Fen Energy Park Project Team (Ecotricity) |

| Version History | | |
|-----------------|----------------|--|
| Version | Date | Version Status |
| 1 | September 2021 | Internal - identified options to Bicker Fen Substation from Heckington Fen |
| 2 | January 2022 | Internal - identified three indicative routes through a generic area for connection, shared in the Scoping Report – summarised at Appendix 1 |
| 3 | April 2022 | Internal - identified two indicative routes, ruling out the western route following a design workshop in March 2022, the reduced area for connection was shared in the Preliminary Environmental Information Report - – summarised at Appendix 2 |
| 4 | October 2022 | Internal - identified a single working swathe following a design workshop in September 2022, the swathe will form the DCO Order Limits assessed as part of the Environmental Statement - – summarised at Appendix 3 |
| 5 | February 2023 | External – Version for DCO |

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GLOSSARY

| | |
|-------|---|
| AC | Alternating Current at a frequency of 50Hz. This is the form of electricity used for the transmission and distribution of electrical power. |
| BFWF | Bicker Fen Wind Farm, a 13 turbine, 26MW scheme owned by EDF Renewables built in 2008 |
| BSIDB | Black Sluice Internal Drainage Board |
| CA | Compulsory Acquisition |
| DC | Direct Current, this is the form of electricity to which Solar Cells and Batteries operate. |
| DCO | Development Consent Order |
| DNO | District Network Operator |
| EIA | Environmental Impact Assessment is governed by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 |
| SED | Special Engineering Difficulty |
| SFFD | South Forty Foot Drain, the main channel for land drainage of the Black Sluice level in the Lincolnshire Fens |
| SoS | Secretary of State |
| TO | Transmission Owner |
| XLPE | Cross linked polyethylene cable |

1. INTRODUCTION

1.1.1. Ecotricity (Heck Fen Solar) Limited (the 'Applicant') has prepared this report to support its Development Consent Order (DCO) application under the Planning Act 2008 for a new solar park and energy storage facility at Heckington Fen in Lincolnshire. The development will connect to the transmission network at National Grid's Bicker Fen substation, located some 5.5km to the south of the site (as the crow flies).

1.1.2. The purpose of this report is to:

- Explain the optioneering undertaken to identify the selected cable corridor;
- Describe the selection process and alternative routes considered for the offsite connection between the development site to the National Grid Bicker Fen Substation;
- Outline the considerations and selection criteria that have been applied in the initial selection;
- Support the statement of reasons justifying that compulsory acquisition of land and/or rights within the selected cable corridor is required for the development and that the compulsory acquisition is necessary and proportionate; and
- Support the site selection review with the environmental assessment.

2. BACKGROUND AND EXECUTIVE SUMMARY

2.1.1. The Proposed Development is expected to comprise over 50MW of solar power modules, up to 200-400MW of energy storage and associated infrastructure on land at Six Hundreds Farm, Six Hundreds Drove, East Heckington ("the Site"). The grid connection, forming an element of the Proposed Development, will have a capacity in the region of 400MW (AC), and comprise underground cabling between the Site and the existing Bicker Fen Substation. An import connection of 250MW is also secured with National Grid, which will be utilised by the energy storage facility to provide energy shifting and grid services.

2.1.2. An export grid connection of 400MW has been selected as this represents an optimal AC capacity for the anticipated DC capacity of the Proposed Development. The DC capacity is approximately 500MW. It is normal for solar park design to have a lower AC capacity than the DC capacity of the installed modules as the peak power output on which the DC is defined occurs for only a small proportion of the day during the sunniest months. A lower AC capacity allows for a more economic design of AC infrastructure without material loss of generation at the sunniest parts of the day and year.

2.1.3. The area between the Proposed Development and the existing Bicker Fen Substation has previously been considered for the grid connection for the approved wind park (approved by the SoS in 2013 - Ref:09/1067/S36). A grid offer was received and accepted for the DNO to connect the wind park to the grid, however Ecotricity considered the possibility of undertaking the planning exercise to make that connection itself. Whilst that application did not come forward due to other factors, predominantly the ongoing radar work, the exploratory work completed was still a useful consideration for this DCO application.

2.1.4. The connection between the Proposed Development and Bicker Fen Substation has been selected because:

- The capacity of the connection exceeds the availability on the local distribution network;
- There is sufficient capacity on the transmission network at Bicker Fen; and

- Bicker Fen Substation is the closest connection to the transmission network.

2.1.5. Therefore, the proposed connection point is the most direct and economic without any insurmountable obstacles. No other suitable connection point is reasonably available.

2.1.6. Connection to the transmission system requires a formal grid connection offer from 'National Grid ESO'. Exploratory discussions in October 2020 and again in August 2021 indicated capacity at Bicker Fen Substation and a workable connection within the project timescales. A budgetary quotation using National Grid's ConnectNow system was also modelled and found to be favourable. A formal grid offer for connection was submitted in September 2021 and the resulting offer accepted on 19th July 2022.

2.1.7. As part of the connection, some equipment within the Bicker Fen Substation will be designed, constructed and operated by Ecotricity and some will be designed, constructed and operated by 'National Grid TO'.

2.1.8. The DCO will include a works package for the works in connection with an extension to the Bicker Fen Substation. As is ordinary for a statutory undertaker of this nature, National Grid TO may also need to undertake minor works pursuant to its Permitted Development Rights within the Bicker Fen Substation (as operational land).¹ Any works undertaken by National Grid TO as Permitted Development on its operational land would fall within the envelope of the environmental assessment.

2.1.9. An offsite overhead connection was discounted at the early stages of optioneering. The proposed connection route will therefore be an underground connection. Further explanation is contained in this report (at Section 4) but the primary reasons for going underground include:

- Mitigation of the visual impact associated with overhead lines;
- A precedent set locally for underground cables, in the form of Viking Link and Triton Knoll;
- Likely landowner resistance to overhead lines impacting on surface land use; and
- Preference to avoid placing overhead lines over Network Rail land and drainage channels.

2.1.10. In developing the offsite cable corridor, several in situ constraints have been considered. These include:

- Residential properties
- Crossing the A17 public highway
- Crossing existing electrical power cables owned and operated by Triton Knoll Offshore Wind Farm, Viking Link interconnector and Bicker Fen Wind Farm (BFWF)
- Crossing the Sleaford to Boston railway line
- Crossing the South Forty Foot Drain (SFFD)
- Crossing a high-pressure gas pipeline.

2.1.11. Other infrastructure projects have recently been constructed in the local area, including Triton Knoll and shortly, Viking Link. It is not possible to utilise their cable connections due to the different stages that the projects are at, for example both are

¹ See Part 15 Class B Schedule 2 The Town and Country Planning (General Permitted Development) (England) Order 2015

approved schemes, have been designed for purpose, and have landowner agreements in place.

2.1.12. Triton Knoll is a wind farm off the Lincolnshire coastline with an installed capacity of 857MW. It is connected via an underground cable to a new substation approximately 1.3km northwest of Bicker Fen substation. The connection passes the eastern boundary of the solar park, before crossing underneath the A17, the SFFD and the railway, and then running adjacent to the SFFD before connecting to a new substation on the north-western boundary of BFWF. Works on the National Grid substation started in 2018 and were completed in 2021.

2.1.13. The Viking Link Interconnector is a 1400MW high voltage direct current electricity link between the UK and Denmark, some 765km long. The interconnector is expected to be completed in 2023. The Viking Link passes to the west of the SFFD before crossing it near to the BFWF. A new interconnector station is under construction (in 2022) to the south of Bicker Fen Substation, where the cables will finally connect.

2.1.14. Bicker Fen Wind Farm is a 26MW scheme comprising 13 wind turbines, located adjacent to the 132kV and 400kV substations on the eastern side of the SFFD. It is owned and operated by EDF's Renewables and has been in operation since 2008. It connects to National Grid Electricity Distribution's 132kV substation.

2.1.15. Other cumulative energy schemes have been considered in the Environmental Impact Assessment, including the Vicarage Drove Solar Farm which is the west of the Bicker Fen Substation, close to the wind turbines. A further solar park is proposed at Northorpe, this site was screened as non-EIA in September 2021. Following the submission of the Preliminary Environmental Information Report in June 2022 consultation responses from Statutory Consultees advised of further cumulative schemes at Temple Oaks Solar Farm (18km southwest), the onshore cable for the Outer Dowsing Offshore Wind Farm which is expected to be situated within the area between the Site and Bicker Fen Substation, Bicker Solar Farm adjacent to Bicker Fen Substation, and Land west of Cowbridge Road close to Bicker Fen Substation. Further from the Substation are solar farms at Little Hale, Ewerby Thorpe, North of White Cross Lane, Land South of Gorse Lane, and Land west of Mallows Lane.

3. ENVIRONMENTAL CONSIDERATIONS

3.1.1. The initial assessments in preparation of the Preliminary Environmental Information Report (PEIR) and final Environmental Statement consider a wide range of environmental factors and a summary is provided below in relation to the grid connection search area.

3.1.2. The landscape and visual impact of the Proposed Development has been considered, including residential amenity of the closest properties. Overhead lines are considered to have a greater landscape impact than an underground cable, and unlike the bulk of the Proposed Development it would not be possible to screen them. However overhead lines are commonplace across the countryside and are a cost effective and established means to supply electricity to homes and businesses.

3.1.3. Ecological and ornithological factors have been considered and the baseline has been assessed through several onsite studies, such as a Phase I habitat survey, bat and bird surveys. North Kesteven District Council (NKDC) as one of the host authorities, has also noted water vole presence on the grid route which should be considered. Due to the ecological designations of the SFFD and Great Hale Eau a proportionate assessment of the impact will be undertaken.

3.1.4. The majority of the area, with exception of the A17, is in flood zone 2 or 3, which has the highest probability of flooding. A flood risk assessment will accompany the Environmental Statement, and will include specialist hydraulic modelling from a breach of the Head Dike. There are engineering solutions for critical infrastructure such as substations and control buildings. It is anticipated that such infrastructure will be built on the highest areas of land and protected with flood protection, such as raising or bunding. Under the National Planning Policy Framework (2021) solar farms are considered essential infrastructure².

3.1.5. Cultural heritage and archaeology relate to both the above ground and below ground heritage assets, and this is considered in the ES. A geophysical survey of the Site has been undertaken in Spring 2022 and trial trenching in Autumn 2022. The grid route geophysical survey has been completed in Autumn 2022.

3.1.6. Noise, air quality and vehicle movements are recognised to be important factors to local residents, particularly during the construction period. Construction work for the off-site connection will result in noise and air quality impacts to nearby receptors which will need to be managed.

3.1.7. Transport and access will use existing routes so far as practical and will be by agreement with the landowner for the remainder. During the operational phase of the project there will be little to no noise or air quality impacts or vehicle movements, although during repair work following a fault on equipment some disruption may occur.

3.1.8. The Proposed Development would see solar panels and associated infrastructure installed on land currently used for arable crops. A grid connection is required, and this predominantly crosses similar agricultural land. Following the initial construction phase the land for the grid cable corridor would be returned to agriculture; however there may be small areas along the route (approximately 2m x 2m) where earth link boxes are required at ground level. In areas where it is not possible to place these along field boundaries or where a constraint on agricultural use would result, these link boxes may be installed below ground.

3.1.9. A series of miscellaneous issues including major accidents and disasters, security, public access, health and safety at work, telecommunications, TV and utilities will be considered as appropriate and relevant management plans will be available prior to construction. These will be in line with best practice and industry guidance as is commonplace on working on solar parks and grid connections.

4. TRANSMISSION TECHNOLOGY AND DESIGN SELECTION

4.1 General Principles and Methodology

4.1.1. The technology choice and design of the grid connection has an impact on a number of criteria that have been considered in the selection process. It affects the cost and complexity of the installation, the construction methods and land required which in turn affects the environmental and local residence impact.

4.1.2. An important criterion in considering the technology and design is on reducing complexity, as this directly reduces costs and environmental impact. Solutions which minimise the number of obstacles crossings which require drilling are preferable.

² Annex 3 available at: <https://www.gov.uk/guidance/national-planning-policy-framework/annex-3-flood-risk-vulnerability-classification>

4.1.3. To maintain the support of local residents, the visual aesthetic and access requirements are important considerations. Above ground infrastructure should be sympathetic to the landscape and vehicular access should be fit for purpose.

4.1.4. Environmental impacts by the construction method of the chosen technology are also a key consideration. Although this is a short-term effect, a solution that minimises both the duration and disturbances in the local area are preferable.

4.1.5. The design must be fit for purpose and provide the Proposed Development with a secure and reliable connection to the transmission system to reliably export renewable generation. This requires it to be protected from damage and easily accessible for repair and maintenance.

4.2 Electrical Architecture

4.2.1 The voltage at which the connection will be designed has a fundamental impact on the cable size and consequently the construction impacts. The connection point operates at the extra high voltage (EHV) of 400kV and the Solar Park distribution will be at High Voltage (HV) and therefore a transformer is required.

4.2.2 A grid connection cable operating at 400kV has been selected as this allows a single cable circuit and therefore the smallest cable corridor to be used. A 132kV operating voltage was considered but this would require double the number of cables and a transformer to be installed at Bicker Fen which was not possible within the National Grid land area.

4.2.3 Furthermore, a double circuit arrangement whereby some redundancy in the design was considered to provide additional security and reliability to the connection. This option was discounted following a cost benefit analysis as the increase in cost outweighed the prospective likelihood from outages.

4.2.4 As a result, a single circuit 400kV architecture has been selected as this provides the most economic solution, minimises the required swathe and resulting construction impacts and is compatible with the National Grid Infrastructure at Bicker Fen.

4.3 Overhead Line

4.3.1 An overhead line connection would primarily be installed on steel lattice towers. As a result, overhead lines will have a greater visual impact compared to underground cables. The construction of an overhead line would involve the erection of towers along a route followed by stringing of the conductors. As a general rule, the overall cost of an overhead line is considered to be 2-3 times cheaper than an underground cable over the lifetime of the project.

4.3.2 The towers will take up land from ongoing agricultural use and will need to have sufficient height in order to allow safe clearance for farming activities. For this reason, crossing the SFFD and the railway line may not be acceptable to the Environment Agency or Network Rail due to clearance requirements and the impact to operational activities.

4.3.3 The National Policy Statement for Electricity Networks Infrastructure (EN-5)³ and Draft EN-5⁴ notes a number of factors to consider in relation to new overhead lines, including visual impacts, ecological impact of bird collisions, resilience during storms and higher average temperatures and the creation of electric and magnetic fields (EMFs).

4.3.4 A precedent has been set locally whereby Triton Knoll and Viking Link have connected via underground cables. Utilising overhead lines was considered to create a greater risk to consent than underground.

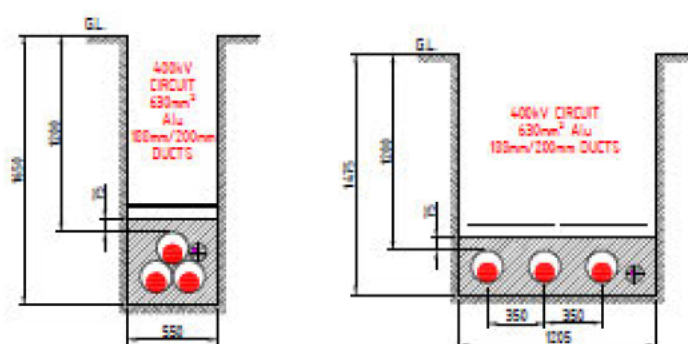
4.3.5 Overall, an overhead line solution is not being progressed. Despite the cost savings, the visual impact to local residents and the anticipated difficulty in securing easements with local farmers, the Environment Agency and Network Rail, pose a greater consenting risk than underground cable.

4.4 Underground Cable

4.4.1 A cabled connection would consist of a single circuit 400kV connection. The exact number and voltage was assessed by a specialist design consultant and following a cost benefit analysis this connection type was confirmed. The alternatives included a double circuit (2 x 400kV cables) and a smaller double circuit (2 x 132kV) to ensure there was redundancy in the design should a fault develop (100% and 50% redundancy respectively). The downtime, increase in cost, land take and resources were considered alongside the repair profile and loss of revenue, and a single circuit has been developed further.

4.4.2 The cable will be a cross linked polyethylene cable (XLPE) design which consists of a metallic conductor surrounded by solid insulating material with a protecting metal and plastic outer sheath. Design work during 2022 concluded a trefoil formation trench configuration is the most likely along the majority of the route, shown on the left-hand side below. The alternative is a 'flat' configuration, shown on the right below, of three equally spaced ducts. This may be considered in some areas of SEDs where the depth might adversely affect the cable rating due to thermal effects.

Plate 1- Examples of how cables could be laid underground⁵



³ National Policy Statement for Electricity Networks Infrastructure (EN-5) dated July 2011, available at <https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure>

⁴ Draft National Policy Statement for Electricity Networks Infrastructure EN-5 dated September 2021, available at <https://www.gov.uk/government/consultations/planning-for-new-energy-infrastructure-review-of-energy-national-policy-statements>

⁵ Freedom Group

4.4.3 The cable would be undergrounded along the length of the route other than at each substation end where the cable will terminate via cable sealing ends onto above ground switchgear with a substation compound. These compounds will be within the existing Bicker Fen Substation site boundary and on the Site.

4.4.4 The design makes provision for earthing link boxes which may be required to achieve adequate margins on capacity of the circuit. These would be located at each jointing bay at ground level and be approximately 2m by 2m.

4.4.5 Whilst there is some shorter term, potentially greater, impacts associated with construction of an underground cable compared to overhead, it is considered in the long term that this would result in a lower impact environmentally. The preferred solutions for crossing obstacles, such as the railway, is also more compatible with an underground cable as additional infrastructure such as cable sealing ends are not needed. A cabled design is therefore the preferred solution as it offers a reliable connection whilst having almost no visual impact. It is also commensurate with the design used by other utilities in the area.

4.4.6 The construction options for the underground cable vary according to the ease of access and need to cross obstacles. The most cost effective is open cut, whereby a swathe is excavated along the route and either the cables are placed directly in trenches or ducting is installed and the cables pulled through after the trenches are backfilled. It is expected the majority of the route will be constructed with this method. For areas where SED exist, drilling with specialist equipment may be needed. This requires a 'launch pit' and 'receive pit' for drilling equipment to bore a hole above or below an obstacle and install ducting. Depending on the obstacle and complexity this may be required, for example it is considered highly likely for the SFFD and the railway. For either construction method, once completed the land may be returned to its previous use.

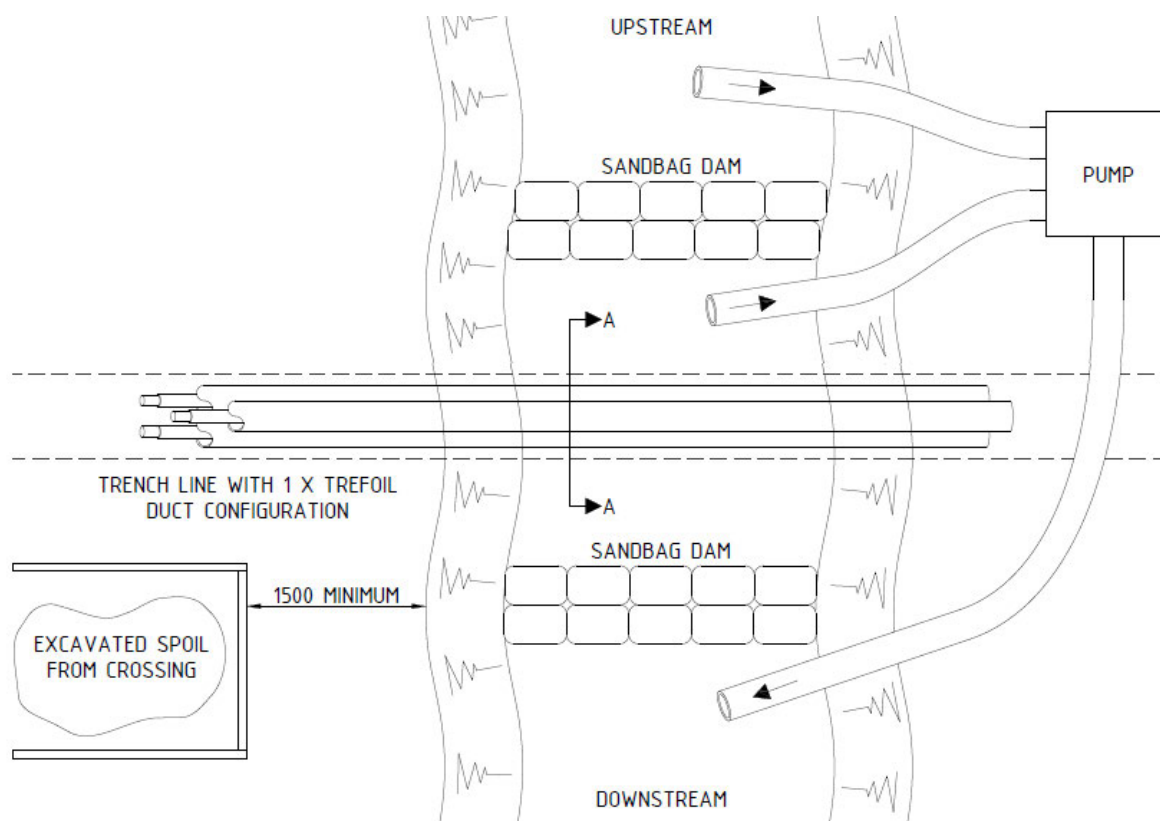
4.4.7 Following work completed by the a specialist design consultant a minimum of seven HDDs are required as follows:

- A17 and ditches alongside it;
- Railway, SFFD and ditches and electrical infrastructure in the area;
- Black Sluice Internal Drainage Board ditches.

4.4.8 The assessment has considered up to 22 HDD's along the off-site route in order to bound as a worst case the EIA for noise and vibration. Alternative crossing methods are detailed below.

4.5 Open Cut Crossings – Watercourses

4.5.1 Most minor watercourse/ditch crossings will be carried out using a dry open cut trench methodology. In dry open cut methods water flow is maintained by damming and over pumping or using temporary "flume" pipes installed in the bed of the watercourse. An example of damming and over pumping are shown below.

Plate 2- Examples of how cables could be laid across watercourses⁶

4.5.2 The banks are then reformed to their original profile in accordance with both the Environment Agency / Internal Drainage Board (IDB) / Local Lead Flood Authority (LLFA) and the landowners' requirements.

4.6 Open Cut Crossings – Roads

4.6.1 Minor roads may also be open cut, involving the excavation of the trench across a road. The method is likely to be applied to small single-track roads which will typically require a temporary road closure during the crossing works.

4.6.2 Where required traffic lights or signals may be used to allow work on alternate halves of the road while maintaining the flow of traffic. After excavating the first half, steel plates are placed across the trench for traffic to pass while the second half of the road is excavated. A prefabricated section of pipe is then threaded through the trench under the steel plates. The trench is then backfilled and the road re-surfaced.

4.7 Trenchless Crossings

4.7.1 There are several non-excavation construction techniques. These include auger boring, groundram, tunnelling including pipe-jacks, microtunnelling, and horizontal directional drilling. These techniques vary in the method used to install the cable ducting without disturbing the surface.

⁶ Freedom Group

Auger Boring

4.7.2 The auger bore is a well proven technique that can be utilised for short and medium length crossings of up to 120m. The technique requires the excavation of pits on either side of the crossing to aid the installation of the pipeline. The depth of the pits depends on the nature of the crossing and the local ground conditions. De-watering and sheet piling may be utilised if required to ensure a safe crossing design. A launch pit is excavated on one side of the crossing, following this a smaller reception pit is excavated on the opposite side of the crossing to receive the bore. Additional land is required on both sides of the crossing to accommodate the excavated material from the pits and the pipe, and to allow for the construction plant associated with the crossing. For auger bore, a pipe string is welded above ground and an auger drill inserted into it. A 'cutting head' is fixed to the auger drill at the front of the pipe string and rails installed in the floor of the pit for the unit to run on. Power is transmitted to the auger drill via a power unit that is temporarily fastened to the rear of the pipe string and attached on to the rails. This pipe string is lowered into the thrust pit and is supported by crane-type side booms. Surveyors then line and level the pipe string to ensure it is installed in the correct location and at the correct depth. A combination of the rotation of the auger drill within the pipe string and a hydraulic thrust located on the power unit installs the pipe string. The excavated material is drawn from the cutting head, down the auger drill flutes exiting from the rear of the pipe string adjacent to the power unit.

4.7.3 Depending on the ground conditions and length of crossing the auger bore crossing technique is used for non-major highway crossings, ditch crossings, minor river and canal crossings. Ground conditions dictate where this technique can be best utilised. Should ground conditions not be suitable an alternative for short crossings is the Grundoram crossing technique.

Grundoram

4.7.4 The Grundoram crossing technique is utilised on short crossings such as minor roads, drains and services. This technique is more suited to soft ground conditions. A pneumatic piston drives the pipe from one pit to a receiving pit at the other side of the crossing. The risk of settlement is low as there is no overcutting of the tunnel when installing the pipeline.

Tunnelling - Pipe- Jack

4.7.5 Pipe-jacking uses a hydraulic ram or jack to thrust an open-ended pipe under the obstacles. The hydraulic jacks are used to push specifically designed pipes through the ground behind a shield, at the same time as excavation is taking place.

Microtunnelling

4.7.6 Microtunnelling is a broadly similar technique to pipe-jacking. The method involves the use of steerable remote control pipe-jacking. As with previous methods it requires additional temporary land take for launch and reception pits, drilling fluid management and to accommodate associated equipment.

4.7.7 Pre-cast concrete jacking pipes are placed behind a microtunnelling machine with a cutting head lubricated with water or a mud mix. Small quantities of bentonite may also be used to reduce friction. As the tunnel progresses new segments of pipe are attached at the launch pit until the microtunnel reaches the reception pit, where the drill bit is detached from the tunnel and removed.

Horizontal Directional Drilling (HDD)

4.7.8 With horizontal directional drilling (HDD) the pipeline is bored under the crossing to emerge at a target point on the opposite side. A temporary land take is required on either side of the proposed crossing to accommodate the equipment, drilling fluid management system and laydown area for the pipe.

4.7.9 The directional drilling unit is placed at the start location and is elevated at the rear to the correct entrance angle. The rig is then anchored in position. The drilling operation begins by drilling a pilot hole using the drill bit, the drill head and the pressure injection of drilling fluid. The drilling is carried out continuously in intervals equivalent to one length of drill pipe.

4.7.10 Location of the drill bit is monitored using the HDD locating system. An electronic transmitter in the drill head sends information to the locator operator's receiver. This system is used to ensure the HDD is in the right place.

4.7.11 The bore is checked to ensure it is clear of debris and ready for the pipe. The pipe is then pulled through. All drilling fluids used for HDD will be sampled, analysed and disposed of in accordance with duty of care requirements of the Environmental Protection Act, 1990. The HDD crossing technique can be used for long crossings such as rivers and multiple crossings where trenching or open excavation is not feasible.

Direct Pipe

4.7.12 The direct pipe technique can be utilised as an alternative to the HDD and microtunnel crossing techniques. This method uses the product pipe directly (rather than a concrete carrier sleeve) which is welded to the end of the microtunnelling machine. It is pushed forward by rams which push the pipe and the microtunnelling machine forward together. The microtunnelling machine has interchangeable cutting bits so it can deal with a variety of ground conditions. This technique tends to be used on longer crossings where there may be a number of obstacles to navigate.

5. CABLE CORRIDOR AND ROUTE SELECTION

5.1 General Principles and Methodology

5.1.1. In selecting a preferred cable route, the primary optioneering criteria are:

- Engineering requirements and complexity;
- Proximity to residences and businesses;
- Likely environmental impacts;
- Economic factors; and
- Landowner considerations and/or constraints.

5.1.2. The engineering feasibility has been a key consideration given the number of obstacles the grid route must cross. Focus on the appropriate ways and locations to cross these obstacles has therefore driven the identification of initial corridors.

5.1.3. To minimise disruption to residences and businesses, endeavours have been made to keep 200m from all properties.

5.1.4. The environmental impacts relate primarily to the effect of the construction element of the project. Once operational, no environmental impacts are anticipated other than in

the event of a fault and subsequent repair work. In these instances, the preferred option would be to remove the cables via the earth linking boxes.

5.2 Public Highway Route

5.2.1 A route which was predominately in the public highway has been considered due to the merits of minimising the number of landowners affected by the grid connection. This route would follow the existing roads around Bicker Substation before joining the A17. However, given the circa 11km length of the route, difficulty in crossing the level crossing at Swineshead, and the significant disruption to traffic and residents during construction this route was discounted at an early stage.

Plate 3 – Public Highway Route⁷



- Legend**
- ⋯⋯⋯ Road Option
 - Heckington Fen Solar Park
 - Triton Knoll Cable Route Area
 - Housing Buffer 200m
 - Public Rights of Way
 - Key Wildlife Sites
 - ▲ Bicker Fen Wind Farm
 - Viking Link
 - High Pressure Gas Network
 - ⋯⋯⋯ Triton Knoll Access

⁷

5.3 Western Route

5.3.1 A western route was considered, named due to its relation to the SFFD. The cable would leave the site near the proposed site entrance on the A17 travelling down the western side of the SFFD before crossing it, and the Viking Link cabling close to the BFWF. At this location it would travel east and enter the Bicker Fen Substation.

5.3.2 The western route has the benefit of minimising the number of obstacles that require to be crossed. The crossing of Triton Knoll cabling is avoided and a route avoiding BFWF cabling appears possible.

5.3.3 There are fewer properties along the western route, with the majority being along the A17 which, despite crossing at the point with least properties still falls within the 200m buffer zone.

5.3.4 There would be fewer but longer drilled sections meaning less drill pits and the route is longer than the alternative eastern route by around 1,000m (~15%). This will increase the trenched area compared with other route options. There are also a larger number of Local Wildlife Sites on the western route compared to the others.

5.3.5 Although there could be less landowners to engage with along this route, initial engagement has shown there is a notable lack of support for allowing a cable easement. This is considered a significant disadvantage at this stage.

Plate 6 – Western Route⁸



⁸ Source for mapping: ESRI, Maxar, Earthstar Geographics, and the GIS User Community

5.3.6 There are additional complexities for the Western route with the possibility of a new reservoir which was being proposed by Anglian Water Services. The exact location was underdetermined until it was formally released into the public domain in September 2022.

5.3.7 Several locations were considered and from a review of the documentation one those areas was west of the SFFD close to the villages of Helpringham and Little Hale. Whilst the documentation did not list this location exactly, a review of Google Earth and local knowledge identified the site under review. The project timeline for this scheme has noted similar timeframes to the Proposed Development at Heckington Fen, and should this final location be chosen it is likely to be an added constraint to the western route for the grid connection.

Plate 4 – Proposed reservoir location in documentation dated July 2021⁹

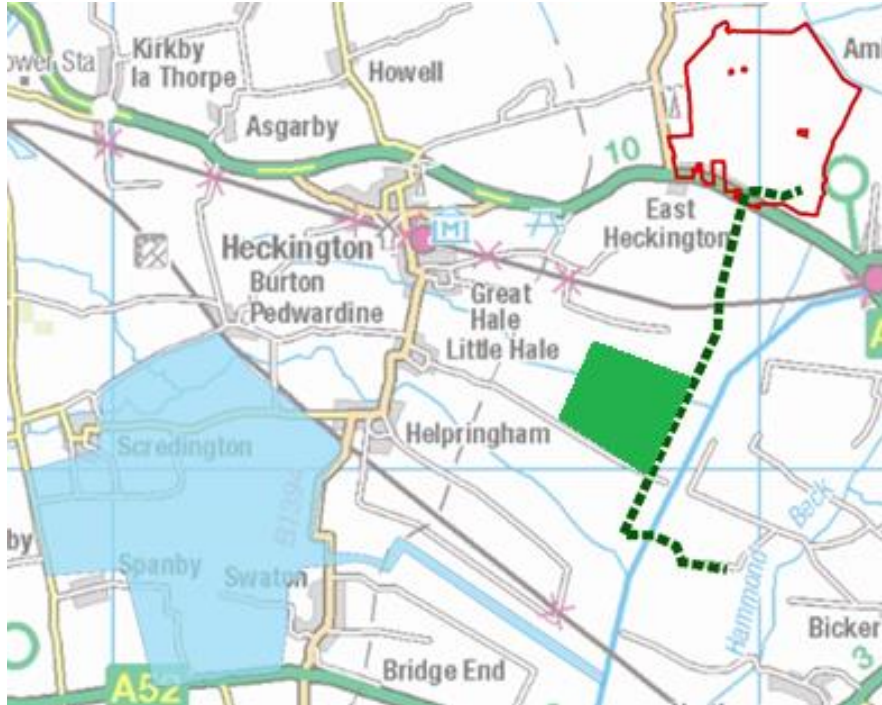


5.3.8 In September 2022 the proposed location was publicly announced and was situated further west, closer to Screddington, however the pipe will travel back to the SFFD. The image below is taken from Anglian Water's Website in October 2022.¹⁰

⁹ Anglian Water, Affinity Water Strategic Solution Gate One Submission: Preliminary Feasibility Assessment – South Lincolnshire Reservoir dated 5 July 2021, source: [REDACTED] Accessed December 2021.

¹⁰ Anglian Water South Lincolnshire Reservoir dated 2 September 2022, source: [REDACTED] Accessed October 2022.

Plate 5 – Proposed reservoir location in documentation dated September 2022 (in blue)¹¹ and approximate location taken from the documentation dated July 2021 (in green)



¹¹ Anglian Water South Lincolnshire Reservoir dated 2 September 2022, source: [REDACTED] Accessed October 2022.

5.4 Eastern Route

5.4.1 A Eastern route is being considered, named due to its relation to the SFFD. Two sub-options have been considered for the Eastern route that capture different options for entry into Bicker Fen substation from the north and the south. Option A is an all eastern entry into the Energy Park and into Bicker Fen Substation whilst Option B is an all Western entry into the Energy Park and Bicker Fen Substation.

5.4.2 At the Bicker Fen Substation, these options allowed flexibility for entry into the substation in lieu of National Grid assigning which generator bay would be allocated for the project. During development of the connection offer, both a North-East and South-West generator bay were possibilities.

5.4.3 At the Energy Park boundary, the options allowed flexibility for the means of crossing the main obstacles at the SFFD, namely the railway, Triton Knoll and Viking Link. Depending on the means of crossing the SFFD, the onward route to the Energy Park provided options for the location of the A17 crossing.

5.4.4 The eastern routes are likely to require more drilled crossings than the western route and in the case of Option B requires crossing of the Triton Knoll circuit twice. Although there are more properties along this route, the spacing is such that the 200m buffer can be maintained along the full length, including at the A17 crossing.

5.4.5 The environmental impacts are similar to the other route options. There would likely be more drilled sections, so more drill pits, but the route is shorter by ~1km which results in a reduction in trenched area.

5.4.6 A key advantage of this route is the positive initial response from landowners. The use of Compulsory Acquisition (CA) powers is hoped to be avoided and so a route which has less landowner constraints is preferable.

5.4.7 Eastern Route Option A

5.4.7.1 For this route the cable would leave the Energy Park to the east and cross both Viking Link then Triton Knoll before travelling south and crossing the A17 close to the Triton Knoll road crossing. The route then continues south to cross the railway line and the SFFD, followed by the gas main. A slight divergence towards the east allows an entry into the Bicker Fen Substation from the north east direction.

5.4.7.2 This route allows for relatively uncomplex crossing of Viking Link, Triton Knoll, A17 and the SFFD & railway. A 200m boundary from properties is achieved with the exception to the SFFD crossing where proximity to residential properties (Royalty Farm) may reduce to approximately 165m.

5.4.7.3 This route benefits from a positive initial response from landowners. The use of CA powers is hoped to be avoided and so a route which has less landowner constraints is preferable.

5.4.8 Plate 7 – Eastern Route - A¹²



¹² Source for mapping: ESRI, Maxar, Earthstar Geographics, and the GIS User Community

5.4.9 Eastern Route - B

5.4.10 For this route the cable would leave the site on its south-western boundary close to the proposed site entrance and would pass on the eastern side of the existing gas pipeline. From this location it would travel south east and cross Viking Link, before reaching the railway, SFFD and Triton Knoll. The cable would then travel south on the eastern side of the SFFD before crossing the gas main followed by a second crossing of Triton Knoll, passing through EDF's Bicker Fen wind farm and entering the substation in the south western corner.

5.4.11 This route could potentially cross a number of complex constraints via one directional drill (railway, SFFD and Triton Knoll), with the remainder of directional drills being required for Viking Link, a second crossing of Triton Knoll, the gas pipe and the watercourse crossings.

5.4.12 The proposed crossing of the A17 would be close to some properties, but still with a buffer of approximately 145m. Another property, for which the cable would cross through their land is some 165m from the proposed cable route. The road crossing would also occur in close proximity to the gas main where it also crosses the A17.

5.4.13 The environmental impacts are similar to the other route options, but access south of the A17 is more problematic due to the proximity of properties.

5.4.14 As with the eastern route option A, an advantage of this route is the positive initial response from landowners. The use of CA powers is hoped to be avoided and so a route which has less landowner constraints is preferable.

Plate 8 – Eastern Route - B¹³

5.4.15 In October 2021 a new solar farm development adjacent to the Bicker Fen substation was submitted to Boston Borough Council. The Vicarage Drove Solar Farm was granted planning permission in February 2022 and included a redline boundary which impinged upon the Western cable route approach to Bicker Fen.

5.4.16 As a result, two additional routes in Bicker Fen have been considered. One which passed through the Vicarage Drove development with minimal impact to the solar farm and another which ran through National Grid land.

5.4.17 The route through the National Grid land has additional engineering challenges due to the proximity of the 400kV transmission tower to the east, the IDB drain running parallel to the west and the proximity of the NGED 132kV substation and associated 132kV cables.

5.4.18 The route through the Vicarage Drove Solar Farm has therefore been selected as the preferred option and initial discussions indicate a feasible route which minimises impacts to either party is possible.

5.5 Route to Progress

5.5.1 The Route to Progress for the DCO application was confirmed in October 2022 following Statutory Consultation which ran from June to September. The route can be seen indicatively on Plate 9 below. This route combines elements of the Eastern Route - A and Eastern Route - B and was advised by a specialist design consultant and informed by National Grid discussions.

5.5.2 The benefit of this route is:

¹³ Source for mapping: ESRI, Maxar, Earthstar Geographics, and the GIS User Community

- There is no crossing of the A17 in proximity to the gas pipeline near the site entrance.
- An eastern entry into Energy Park allows for uncomplex, perpendicular crossing of Viking Link and Triton Knoll cables.
- Reduced impact on local residents as noted during the statutory consultation – key concern was access to the cable route in close proximity to properties.
- Ongoing discussions with National Grid confirmed the bay assigned to Heckington Fen Energy Park would be in the southwest corner of Bicker Fen Substation, so entering from this side is a shorter cable length and reduces interactions with other services in and around the substation.
- The route through Vicarage Drove Solar Farm has less engineering challenges than through National Grid land which has a number of critical assets in close proximity.
- Access from the A17 could utilise existing field accesses, which were also used by Triton Knoll.
- Access from the Triton Knoll access track is possible for a majority of the route south of the SFFD – also raised during the statutory consultation.

5.5.3 The cable route will terminate at the onsite substation and Bicker Fen Substation. When considering the onsite layout following comments on the Preliminary Environmental Information Report an amendment to the location and design of the onsite substation was progressed. This relocated the energy storage and substation further north within the Energy Park to increase distances to residential receptors, primarily due to noise, but with an added landscape benefit. The result was an increase in cabling.

Plate 9 –Route to Progress¹⁴



5.6 Summary of Routes

5.6.1 The following summary considers the selection criteria to date:

| Considerations | Western | Eastern Route A | Eastern Route B | Route to Progress |
|---|------------------|------------------|------------------|-------------------------------------|
| Length | 7.5 – 8.5km | 6.5km - 7.5km | 6.5km - 7.5km | 8.5km due to movement of substation |
| Number of major land parcels | Approximately 14 | Approximately 18 | Approximately 16 | Approximately 15 |
| Number of special engineering crossings | Approximately 9 | Approximately 11 | Approximately 12 | Approximately 11 |

¹⁴ Source for mapping: ESRI, Maxar, Earthstar Geographics, and the GIS User Community

| Considerations | Western | Eastern Route A | Eastern Route B | Route to Progress |
|--|--|---|--|--|
| Residential amenity (distance / separation from residential dwellings) | Generally greater than 200m with the exception of the A17 crossing | 200m | 140m on A17, 165m afterwards | 200m with the exception of Royalty Farm |
| Access | Access to West side of SFFD via A17 / B1394. May need to utilise Park Farm Lane and access near the Farm Shop. | Access to east side of SFFD via A17, potentially using Triton Knoll Access. | Access to West side of SFFD via A17 and to the east side via A17, and potentially using Triton Knoll Access. | Access from A17 and using Triton Knoll Access. |
| Topography | Predominantly flat except for the SFFD crossing | | | |
| Gas pipeline crossing | For ease crossing this within the solar park land boundary is preferable. | South of Timms Drove. East of SFFD. | South of Timms Drove. East of SFFD. | South of Timms Drove. East of SFFD. |
| Ecological | SFFD, Great Hale Eau, Broadhurst Drain East, Willow Farm Drain, Old Forty Foot Drain – all LWS | SFFD LWS | SFFD LWS | SFFD LWS |

ANNEX 1 - PREFERRED GRID CORRIDOR OPTION AT JANUARY 2022

A1.1 At the time of writing, a preliminary design and route is being developed by specialist contractors. This work is due to be completed in early 2022.

A1.2 In lieu of the outcomes of the specialist contracts work, initial work undertaken by Ecotricity has identified a preferred technology and design solution to be:

- An underground cable of either 400kV or 132kV XLPE
- A single or double circuit comprising of either 3 or 6 cables in total
- In open field, an open trench construction with installation of cable ducts
- For each obstacle crossing horizontal directional drilling

A1.3 The area considered incorporated an option for a Public Highway, Western and Eastern Route. The wider area allowed for other areas to be considered. The preference was the Eastern Route due to the ease of access and a shorter overall cable. Furthermore, the landowners had been more receptive and a preference to avoid compulsory purchase rights and the associated issues around gaining early access for survey placed the western route at significant disadvantage.

ANNEX 2 - APRIL 2022 UPDATE

A2.1 A preliminary design and route were considered by specialist design contractors. This work concluded a single circuit underground 400kV XLPE was preferable when compared to a double circuit of either 400kV or 132kV. A double circuit would have provided a 100% redundancy should one cable fail, but over the lifetime of the scheme this was not considered to be a long-term saving in costs.

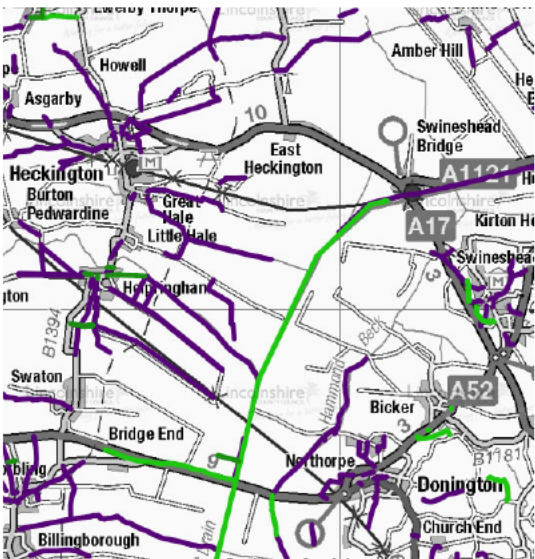
A2.2 The work identified a preferred cable route following the eastern corridor. This route is marginally shorter which is economically preferable, and whilst it has a larger number of obstacles to cross this is considered feasible and achievable. A secondary route was identified which followed the Eastern Route - B, which had an advantage should the main substation be in a more central location on the Site. This route would be closer to properties and access south of the A17 is considered more complex, as existing accesses would be shared with residents.

A2.3 Initial indications during National Grid pre-application meetings was that a connection in the south west corner at Bicker Fen Substation would be offered. However, this was not yet confirmed and a north east connection is considered a possibility so this has been considered by the technical authors for the purposes of the Preliminary Environmental Information Report. National Grid would have the final say on which bay is assigned to the proposed development.

A2.4 A design workshop was completed with the authors of the technical chapters in March 2022. The feedback from each consultant on the three routes was considered, resulting in two narrower corridors (the eastern A and B routes).

| Considerations | Western | Eastern Route A | Eastern Route B |
|----------------------------------|---|---|-----------------|
| Air quality | Construction related impact associated with proximity to homes in Heckington, Great Hale, Little Hale and Helpringham. Overall, potentially less receptors, but more PROW users. PROW users are considered less sensitive than residential properties as they are moving through the area and the impact is over a shorter time period. Preference for western route, unless Bicker village can be avoided. | If vehicles required to use Bicker, this route would have a bigger impact than western route. Bicker is not an Air Quality Management Area, and numbers proposed (likely to be 20-40 vehicles per day for the cable install, assumed at 100m cable laid per day, this would not trigger a detailed assessment of Bicker village. However, opportunity to avoid the village with the use of the Triton Knoll Access. | |
| Agricultural land classification | No preference as land will be restored following the cable being laid. | | |
| Climate change | Shortest route preferable for embodied carbon and other carbon emissions. Preference therefore eastern route. | | |

| Considerations | Western | Eastern Route A | Eastern Route B |
|-----------------------------------|---|--|---|
| Community | Traffic movements through Bicker will result in local and parish council objections. However, opportunity to avoid the village with the use of the Triton Knoll Access. | | |
| Cumulative | Requires crossing through BFWF, potential reservoir being considered in this location and proposed Vicarage Solar Park. | Final route into Bicker Fen Substation could require crossing BFWF and solar park (if enter from the west) or additional crossing of Viking Link if entering from the east. | |
| Ecology | More LWS on western route. | Access via west of Bicker Fen Substation further from the pond on site. Connecting to the north east would be further from the area of woodland on the southern side of Bicker Fen Substation. | Access via east of Bicker Fen Substation is in closer proximity to the pond onsite. |
| Flood risk | <p>There is little to differentiate between the grid connection routes. All routes lie within the Water Framework Directive area administered by Anglian River Basin Management Plan.</p> <p>All routes need to cross the SFFD.</p> <p>The majority of the connection corridors lie within the floodplain (albeit there are flood defences so, on the assumption that the defences operate as intended, the principal issue is 'residual' flood risk, i.e. the impact of defence failure/breaching). However, from the EA's perspective, construction works would be taking place within the floodplain. Any flood risk related issues would typically be addressed via the consenting/permitting process (i.e. suitable method statements, etc).</p> <p>There are numerous ditches / drains to cross and it may be possible to configure / optimise the route to minimise the number of crossing points.</p> | | |
| Heritage - no overall preference. | Considered less listed buildings on this route. | From data available - Roman pottery found on these routes. More listed buildings however not likely to be significant. Access for Geophysical Teams with field interconnectability to be | |

| Considerations | Western | Eastern Route A | Eastern Route B |
|---|---|--|---|
| | | considered. Existing data for Triton Knoll and Viking Link considered. | |
| Noise – no preference. Transport noise less concerning, impact of HDD in the short term, but manageable and can be mitigated. | Further from properties which could be affected by drilling (and associated vibration during the night) | Noise impact on Royalty Farm to be considered, predominantly HDD requirements. Noise impact can be mitigated, so not to rule out this route on noise grounds. | |
| Landowners | Less receptive to approaches made, likely to need to use compulsory purchase powers. | Initial responses more positive. | |
| Landscape – All routes will have similar landscape character effects. | <p>More public rights of way (PROW) but less properties</p>  | Southern section of this route is preferable due to proximity to properties, and northern section of the Eastern Route - B. | Northern section of this route is preferable due to proximity to properties, and southern section of the Eastern Route - A. |
| Transport and access – eastern or 50/50 routes | Route difficult to access, new junction at A17 may be needed and drain / rail constraints with new bridges needed. Would need to access through villages such as Great Hale and therefore residential implications. Closure of public rights of way required. | More accessible due to road network and crossings at Swineshead. Constraints minimised with drains / bridges and therefore preferable. However, roads are narrow within Bicker. Utilising the Triton Knoll Access or the National Grid track west of Bicker would alleviate some residential concerns in Bicker. | |

ANNEX 3 - OCTOBER 2022 UPDATE

A3.1 A design workshop was completed with the authors of the technical chapters in September 2022. The feedback from each consultant on the preferred route was considered, resulting in a single swathe from the Energy Park to Bicker Fen Substation. Within the swathe a couple of options for the cable are considered, for example the optimum route through the Vicarage Drove Solar Farm, and BFWF. Coming out of the main Energy Park site two options are available, one is slightly shorter, but the other is straighter. No further decision is expected on this, with the whole area considered by technical authors in the Environmental Statement. A single swathe of 25m would be implemented, larger at areas where launch and receive pits for the HDD are required. The cable swathe is expected to be less than 0.6m wide. A wider area is included in the DCO Order Limits to allow for construction and some flexibility during detailed design.

A3.2 With a firm grid offer accepted and National Grid confirming the assigned generator bay in the South West corner of Bicker Fen, discussions with the Vicarage Drove developer accelerate with a view to finalise the route into the substation. Two routes are considered but the National Grid land route is in close proximity to transmission and distribution assets and presents significantly more engineering challenges in a confined area. A preferred route and associated parameters are presented to the Vicarage Drove developers, but their designs are not yet available for reviewing the impact although it is generally accepted that the proposed route through the solar farm is feasible.

| Considerations | Eastern Route A | Eastern Route B | Route Progress to |
|----------------------|--|---|--|
| Community | Preference as further from properties on Park Farm Lane. | Properties along Park Farm Lane concerned about access for construction vehicles to access the grid connection in this location. Crossing the A17 in close proximity to the farm shop would require crossing their overflow parking. | Preference as further from properties on Park Farm Lane. |
| Transport and access | Preference as further from properties on Park Farm Lane. | No existing field accesses so would need to create a new one on south side of A17 or access close to the farm shop or Park Farm Lane. | Preference as further from properties on Park Farm Lane. |

A3.3 No further comments suggested a preference for routes, topics related to the following technical chapters, other than those outlined in March 2022:

- Air quality
- Agricultural land classification
- Climate change
- Cumulative
- Ecology
- Flood risk
- Heritage
- Noise
- Landowners
- Landscape