The Planning Inspectorate
Yr Arolygiaeth Gynllunio

SCOPING OPINION:

Proposed Longfield Solar Farm

Case Reference: EN010118

Adopted by the Planning Inspectorate (on behalf of the Secretary of State) pursuant to Regulation 10 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

December 2020

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1. INTRODUCTION

1.1 Background

1.1.1 On 05 November 2020, the Planning Inspectorate (the Inspectorate) on behalf of the Secretary of State (SoS) received a scoping request from Longfield Solar Energy Farm Limited (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed Longfield Solar Farm (the Proposed Development).

1.1.2 In accordance with Regulation 10 of the EIA Regulations, an Applicant may ask the SoS to state in writing its opinion *'as to the scope, and level of detail, of the information to be provided in the environmental statement'.*

1.1.3 This document is the Scoping Opinion (the Opinion) provided by the Inspectorate on behalf of the SoS in respect of the Proposed Development. It is made on the basis of the information provided in the Applicant's report entitled *Environmental Impact Assessment Scoping Report: Longfield Solar Energy Farm Limited* (the Scoping Report). This Opinion can only reflect the proposals as currently described by the Applicant. The Opinion should be read in conjunction with the Applicant's Scoping Report.

1.1.4 The Applicant has notified the SoS under Regulation 8(1)(b) of the EIA Regulations that they propose to provide an Environmental Statement (ES) in respect of the Proposed Development. Therefore, in accordance with Regulation 6(2)(a) of the EIA Regulations, the Proposed Development is EIA development.

1.1.5 Regulation 10(9) of the EIA Regulations requires that before adopting a scoping opinion the Inspectorate must take into account:

(a) any information provided about the proposed development;

(b) the specific characteristics of the development;

(c) the likely significant effects of the development on the environment; and

(d) in the case of a subsequent application, the environmental statement submitted with the original application.

1.1.6 This Opinion has taken into account the requirements of the EIA Regulations as well as current best practice towards preparation of an ES.

1.1.7 The Inspectorate has consulted on the Applicant's Scoping Report and the responses received from the consultation bodies have been taken into account in adopting this Opinion (see Appendix 2). The Inspectorate notes that the Applicant carried out a non-statutory consultation exercise between 2 November and 14 December 2020. One consultation body appended the Applicant's non-statutory consultation document to their scoping consultation response and made comments regarding inconsistencies between that and the Scoping Report. For the avoidance of doubt, this Opinion is based on the content of the Applicant's Scoping Report.

1.1.8 The points addressed by the Applicant in the Scoping Report have been carefully considered and use has been made of professional judgement and experience in order to adopt this Opinion. It should be noted that when it comes to consider the ES, the Inspectorate will take account of relevant legislation and guidelines. The Inspectorate will not be precluded from requiring additional information if it is considered necessary in connection with the ES submitted with the application for a Development Consent Order (DCO).

1.1.9 This Opinion should not be construed as implying that the Inspectorate agrees with the information or comments provided by the Applicant in their request for an opinion from the Inspectorate. In particular, comments from the Inspectorate in this Opinion are without prejudice to any later decisions taken (eg on submission of the application) that any development identified by the Applicant is necessarily to be treated as part of a Nationally Significant Infrastructure Project (NSIP) or Associated Development or development that does not require development consent.

1.1.10 Regulation 10(3) of the EIA Regulations states that a request for a scoping opinion must include:

(a) a plan sufficient to identify the land;

(b) a description of the proposed development, including its location and technical capacity;

(c) an explanation of the likely significant effects of the development on the environment; and

(d) such other information or representations as the person making the request may wish to provide or make.

1.1.11 The Inspectorate considers that this has been provided in the Applicant's Scoping Report. The Inspectorate is satisfied that the Scoping Report encompasses the relevant aspects identified in the EIA Regulations.

1.1.12 In accordance with Regulation 14(3)(a), where a scoping opinion has been issued in accordance with Regulation 10 an ES accompanying an application for an order granting development consent should be based on *'the most recent scoping opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion)'*.

1.1.13 The Scoping Report identifies European sites within a 10km search area around the application site. The Inspectorate therefore notes the potential need to carry out an assessment under The Conservation of Habitats and Species Regulations 2017. This assessment must be co-ordinated with the EIA in accordance with Regulation 26 of the EIA Regulations. The Applicant's ES should therefore be co-ordinated with any assessment made under the Habitats Regulations.

1.2 The Planning Inspectorate's Consultation

1.2.1 In accordance with Regulation 10(6) of the EIA Regulations the Inspectorate has consulted the consultation bodies before adopting a scoping opinion. A list

of the consultation bodies formally consulted by the Inspectorate is provided at Appendix 1. The consultation bodies have been notified under Regulation 11(1)(a) of the duty imposed on them by Regulation 11(3) of the EIA Regulations to make information available to the Applicant relevant to the preparation of the ES. The Applicant should note that whilst the list can inform their consultation, it should not be relied upon for that purpose.

1.2.2 The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided, along with copies of their comments, at Appendix 2, to which the Applicant should refer in preparing their ES.

1.2.3 The ES submitted by the Applicant should demonstrate consideration of the points raised by the consultation bodies. It is recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.

1.2.4 Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account within this Opinion. Late responses will be forwarded to the Applicant and will be made available on the Inspectorate's website. The Applicant should also give due consideration to those comments in preparing their ES.

1.3 The European Union (Withdrawal Agreement) Act 2020

1.3.1 The UK left the European Union as a member state on 31 January 2020. The European Union (Withdrawal Agreement) Act 2020 gives effect to transition arrangements that last until the 31 December 2020. This provides for EU law to be retained as UK law and also brings into effect obligations which may come in to force during the transition period.

1.3.2 This Opinion has been prepared on the basis of retained law and references within it to European terms have also been retained for consistency with other relevant documents including relevant legislation, guidance and advice notes.

2. THE PROPOSED DEVELOPMENT

2.1 Introduction

2.1.1 The following is a summary of the information on the Proposed Development and its site and surroundings prepared by the Applicant and included in their Scoping Report. The information has not been verified and it has been assumed that the information provided reflects the existing knowledge of the Proposed Development and the potential receptors/ resources.

2.2 Description of the Proposed Development

2.2.1 The Applicant's description of the Proposed Development, its location and technical capacity (where relevant) is provided in Chapter 2 of the Scoping Report.

2.2.2 The Proposed Development comprises the construction, operation and decommissioning of a solar photovoltaic (PV) electricity generating and storage facility with a capacity of up to 500 megawatts (MW), on land approximately 6km north-east of Chelmsford, Essex. The Proposed Development is likely to include the following infrastructure:

- solar PV modules and mounting structures;
- inverters and transformers;
- high voltage (HV) switchgear and control equipment (housed inside a building);
- onsite cabling;
- one or more 'Battery Energy Storage System' (expected to be formed of lithium ion batteries storing electrical energy);
- an electrical compound comprising a substation and control building;
- a spare parts storage building or enclosure;
- fencing and security measures;
- access tracks; and
- landscaping and biodiversity enhancement.

2.2.3 The application site is approximately 582 hectares in size and comprised of agricultural fields, which are mainly utilised for arable farming. Trees, hedgerows and farm access tracks intersect the fields and a number of Public Rights of Way (PRoW) cross the site. The River Ter flows through the northern part of the application site and the Boreham Tributary through the southern part. The site location is illustrated on Figures 1-1 and 1-2 of the Scoping Report.

2.2.4 Land use in the surrounding area is primarily agricultural, interspersed by blocks of woodland, a number of settlements (including Terling, Hatfield Peverel and Boreham) and listed buildings. The River Ter Site of Special Scientific Interest (SSSI) abuts the application site to the north-west. Terling Place Registered Park and Garden, which is bisected by the River Ter, is located approximately

130m to the east of the application site. To the south, the site is bound by the A12 carriageway and the railway connecting Chelmsford and Witham. To the west of the application site lies a sand and gravel quarry and several large waterbodies formed from the quarrying activity, with Boreham airfield (disused) beyond. Environmental constraints located within the application site and surrounding area are illustrated on Figure 2-1 of the Scoping Report.

2.2.5 The existing Bulls Lodge substation is located in the south-western part of the application site and the site is traversed by overhead pylons, as illustrated on Figure 2-1 of the Scoping Report.

2.2.6 The application site is located within the administrative boundaries of Braintree District Council, Chelmsford City Council and Essex County Council.

2.3 The Planning Inspectorate's Comments

Description of the Proposed Development

2.3.1 The description of the Proposed Development within the Scoping Report is relatively high level (at this stage) which does affect the level of detail possible in the Inspectorate's comments. In particular, the Inspectorate notes that the locations of the principle development components within the application site have not been confirmed in the Scoping Report and approximate dimensions of the energy storage facility, which is likely to be a prominent feature of the Proposed Development, have not been provided.

2.3.2 The Inspectorate understands that at this point in the evolution of the Proposed Development, a final description of the development is not yet confirmed and the red line boundary is likely to be refined. However, the Applicant should be aware that the description of the Proposed Development provided in the ES must be sufficiently certain to meet the requirements of the EIA Regulations. The ES must include a description of the Proposed Development and make reference to the design, size and locations of each element, including maximum heights, design parameters and limits of deviation. The description should be supported (as necessary) by figures, cross sections and drawings which should be clearly and appropriately referenced.

2.3.3 The Scoping Report identifies available options for the principal components of the Proposed Development. The options include those in relation to the cable route, location of the substation and orientation of the solar panels. There is also uncertainty around whether there would be *"one or more"* battery energy storage system, vehicular access routes to the site and whether additional overhead pylons would be required. The Inspectorate considers that early determination of options will support a more robust assessment of likely significant effects and provide certainty to those likely to be affected. The DCO application should seek to avoid presenting options, however in the event that options remain within the DCO application, the ES should identify and assess the worst case applicable to the design of the Proposed Development and its impacts.

2.3.4 The Inspectorate notes that The Infrastructure Planning (Electricity Storage Facilities) Order 2020, which came into force on 2 December 2020, removed electricity storage facilities from the NSIP regime, meaning that the proposed battery energy storage system (as currently proposed together with the solar array) would be considered as associated development. Notwithstanding this, the description of the Proposed Development in the ES and the assessment of significant effects should include all design characteristics and parameters applicable to the entire development. The ES should also explain the anticipated routes for consenting for any elements of the Proposed Development that do not form part of the DCO application.

2.3.5 Construction of the Proposed Development is anticipated to take an estimated 24-36 months, with a high-level overview of the construction programme and activities provided in Section 2.4 of the Scoping Report. This description should be developed in the ES to include details of how the construction would be phased, including the likely commencement date, duration and location of the required construction activities. The anticipated numbers of construction workers should also be stated.

2.3.6 The ES should provide details of the anticipated construction working hours (including any night-time working required) and activities on which the assessments of likely significant effect have been based. This should be consistent with the working hours specified in the draft DCO (dDCO).

2.3.7 The Scoping Report explains that one or more temporary construction compound/s will be required, the locations of which have yet to be determined. To ensure a robust assessment of likely significant effects, the Inspectorate advises that the location and size of the construction compound/s is confirmed in the ES.

2.3.8 The assessment in the ES should take into account the locations of existing infrastructure and identify any interactions between it and the Proposed Development. Any significant effects that are likely to occur should be assessed. In particular, the Applicant's attention is drawn to the scoping consultation responses from Cadent and National Grid (Appendix 2 of this Opinion), which highlight electricity transmission infrastructure and above ground electricity sites and installations that could be affected by the Proposed Development.

2.3.9 The ES should describe the location and methods applied for piling activities and explain how this would vary should options (such as orientation of the panels) be included in the DCO application. Any likely significant effects should be assessed and any proposed mitigation measures described.

2.3.10 The ES should describe the likely routing for the underground cabling, widths and depths of the cable trenches and the works required to facilitate this, including any dewatering of excavations.

2.3.11 Watercourses are proposed to be crossed during construction of the Proposed Development. The ES should identify which watercourses will be crossed and at what locations, with reference to an accompanying figure/s. The ES should describe the types of crossings that are required, their scale and dimensions and the nature of any associated construction works. Sufficient details should

be provided to inform a robust assessment of likely significant effects on relevant aspects/ matters including watercourse hydraulics and ecological receptors. Effort should be made to agree the approach to watercourse crossings with the relevant consultation bodies.

2.3.12 The application site as illustrated in the Scoping Report incorporates a number of public roads and it is unclear what (if any) works are proposed in these areas. The ES should describe and assess the potential impacts (both positive and negative) associated with any improvements/ changes to roads which are either required to facilitate construction of the Proposed Development or required for restoration purposes on completion of the works. The scope of the required works should be discussed and agreed with relevant consultation bodies, clearly described in the ES and it should be clear how this would be delivered and secured.

2.3.13 The ES should describe the lighting requirements for all elements and phases of the Proposed Development. It should be explained what measures are proposed to minimise light spill into the surrounding area.

2.3.14 The proposals for ongoing management and maintenance of the land around and under the solar PV modules should be confirmed in the ES, including any planting/ seeding or animal grazing, with reference to the proposed Framework Biodiversity and Landscape Management Plan. Proposals for maintaining vegetation around the PRoW within the application site should also be described.

2.3.15 Paragraph 2.6.1 of the Scoping Report explains that the operational life of the Proposed Development is expected to be 40 years, but *"…could be much longer than this"*. The ES should explain how the uncertainty around the design life of the Proposed Development has been accounted for in reaching the assessment conclusions. Any potential impacts arising from the Proposed Development should it operate beyond the 40-year timeframe should be assessed in the relevant ES aspect chapters.

2.3.16 The Inspectorate notes that decommissioning of the Proposed Development is expected to take between 12 and 24 months (paragraph 2.6.3 of the Scoping Report). The ES should provide a description of the activities and works which are likely to be required during decommissioning of the Proposed Development, including the anticipated duration. Where significant effects are likely to occur as a result of decommissioning the Proposed Development, these should be described and assessed in the ES. Any proposals for restoration of the site to agricultural use should also be described.

Alternatives

2.3.17 The EIA Regulations require that the Applicant provide 'A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects'.

2.3.18 The Inspectorate acknowledges the Applicant's intention to consider alternatives within the ES. The Inspectorate would expect to see a discrete section in the ES that provides details of the reasonable alternatives studied and the reasoning for the selection of the chosen option(s), including a comparison of the environmental effects. This should include options considered for development components such as the cable route, location of the substation and orientation of the solar panels.

Flexibility

2.3.19 The Inspectorate notes the Applicant's desire to incorporate flexibility into their draft DCO (dDCO) and its intention to apply a Rochdale Envelope approach for this purpose. Where uncertainty exists and flexibility is sought, the ES should clearly set out the design characteristics and parameters that would apply and how these inform the assessment in the ES. Where the details of the Proposed Development cannot be defined precisely, the Applicant will apply a worst-case scenario. The Inspectorate welcomes the reference to Planning Inspectorate Advice Note Nine 'Using the 'Rochdale Envelope'[1] in this regard.

2.3.20 The Applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the Proposed Development have yet to be finalised and provide the reasons. At the time of application, any Proposed Development parameters should not be so wide-ranging as to represent effectively different developments. The development parameters should be clearly and consistently defined across both the dDCO and the accompanying ES. It is a matter for the Applicant, in preparing an ES, to consider whether it is possible to robustly assess a range of impacts resulting from a large number of undecided parameters. The description of the Proposed Development in the ES must not be so wide that it is insufficiently certain to comply with the requirements of Regulation 14 of the EIA Regulations.

2.3.21 It should be noted that if the Proposed Development materially changes prior to submission of the DCO application, the Applicant may wish to consider requesting a new scoping opinion.

[1] Advice Note Nine: Using the Rochdale Envelope. Available at: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/

3. ES APPROACH

3.1 Introduction

3.1.1 This section contains the Inspectorate's specific comments on the scope and level of detail of information to be provided in the Applicant's ES. General advice on the presentation of an ES is provided in the Inspectorate's Advice Note Seven 'Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements'[2] and associated appendices.

3.1.2 Aspects/ matters (as defined in Advice Note Seven) are not scoped out unless specifically addressed and justified by the Applicant and confirmed as being scoped out by the Inspectorate. The ES should be based on the Scoping Opinion in so far as the Proposed Development remains materially the same as the Proposed Development described in the Applicant's Scoping Report.

3.1.3 The Inspectorate has set out in this Opinion where it has/ has not agreed to scope out certain aspects/ matters on the basis of the information available at this time. The Inspectorate is content that the receipt of a Scoping Opinion should not prevent the Applicant from subsequently agreeing with the relevant consultation bodies to scope such aspects / matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects/ matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.

3.1.4 The Inspectorate has made effort to ensure that this Scoping Opinion is informed through effective consultation with the relevant consultation bodies. At this time there may be delays in the Inspectorate receiving hard copy consultation responses and this may affect a consultation body's ability to engage with the scoping process. The Inspectorate also appreciates that strict compliance with COVID-19 advice may affect a consultation body's ability to provide their consultation response. The Inspectorate considers that Applicants should make effort to ensure that they engage effectively with consultation bodies and where necessary further develop the scope of the ES to address their concerns and advice. The ES should include information to demonstrate how such further engagement has been undertaken and how it has influenced the scope of the assessments reported in the ES.

3.1.5 Where relevant, the ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured through dDCO requirements (or other suitably robust methods) and whether relevant consultation bodies agree on the adequacy of the measures proposed.

[2] Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements and annex. Available from: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/

3.2 Relevant National Policy Statements (NPSs)

3.2.1 Sector-specific NPSs are produced by the relevant Government Departments and set out national policy for NSIPs. They provide the framework within which the Examining Authority (ExA) will make their recommendation to the SoS and include the Government's objectives for the development of NSIPs. The NPSs may include environmental requirements for NSIPs, which Applicants should address within their ES.

3.2.2 The Applicant's Scoping Report acknowledges that there is no specific NPS for solar PV electricity generating and storage facilities, but that the designated NPSs that appear relevant to the Proposed Development are:

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

3.2.3 The Inspectorate notes that NPS for Renewable Energy Infrastructure (NPS EN-3) may also be of relevance to the Proposed Development.

3.3 Scope of Assessment

General

3.3.1 The Inspectorate recommends that in order to assist the decision-making process, the Applicant uses tables:

- to demonstrate how the assessment has taken account of this Opinion;
- to identify and collate the residual effects after mitigation for each of the aspect chapters, including the relevant interrelationships and cumulative effects;
- to set out the proposed mitigation and/ or monitoring measures including cross-reference to the means of securing such measures (e.g. a dDCO requirement);
- to describe any remedial measures that are identified as being necessary following monitoring; and
- to identify where details are contained in the Habitats Regulations Assessment (HRA report) (where relevant), such as descriptions of European sites and their locations, together with any mitigation or compensation measures, are to be found in the ES.

3.3.2 The Inspectorate recommends that the physical scope of the study areas should be identified under all the environmental aspects of the ES and should be sufficiently robust in order to undertake the assessment. The ES should justify the extent of the study areas on the basis of recognised professional guidance (whenever such guidance is available) and the extent of the likely impacts, with reference to relevant models or approaches such as traffic modelling or Zones of Theoretical Visibility (ZTV). The study areas should also be agreed with the relevant consultation bodies and where this is not possible, this should be stated clearly in the ES and reasoned justification given. The scope should also cover

the breadth of the topic area and the temporal scope, and these aspects should be described and justified.

3.3.3 The Applicant should review the accuracy of the distances between the Proposed Development and sensitive receptors as quoted in the Scoping Report, as these do not always appear to accurately reflect the application site boundary as presented in the Scoping Report (for example, in the Cultural Heritage chapter). The Applicant should ensure the correct distances are presented in the ES.

3.3.4 The overarching methodology for the assessment of cumulative and combined effects (using the approach outlined in the Inspectorate's Advice Note Seventeen) is described in Section 5.6 of the Scoping Report. It appears that cumulative effects would be considered within the aspect chapters of the ES, rather than as a standalone chapter, although this is not apparent from all chapters of the Scoping Report. The Inspectorate is content that a standalone chapter is not required but considers that along with a description of the overarching methodology, each of the ES aspect chapters should explain how cumulative effects have been assessed in relation to that aspect. Any impacts which are likely to result in significant cumulative or combined effects should be assessed.

3.3.5 The Scoping Report proposes a 10km search area to identify other developments[3] for inclusion in the cumulative effects assessment, which have not been identified at this stage. The Inspectorate recommends that the Applicant identifies other developments through determining the Zone of Influence for each environmental aspect and presents this in a table format as recommended in Advice Note Seventeen. Effort should be made to agree the approach to cumulative effects assessment and the list of other developments with relevant consultation bodies. In particular, the ES should fully assess the cumulative impacts from the Proposed Development together with relevant projects, such as the proposed A12 Chelmsford to A120 Widening Scheme and Chelmsford Garden Community.

Baseline Scenario

3.3.6 The ES should include a description of the baseline scenario with and without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

3.3.7 In light of the number of ongoing developments within the vicinity of the Proposed Development application site, the Applicant should clearly state which developments will be assumed to be under construction or operational as part of the future baseline.

3.3.8 The Inspectorate notes the potential for impacts to ancient woodland, although it is unclear from the Scoping Report whether any ancient woodland is located within the application site itself. The stand-off distance between the Proposed Development and ancient woodland is also unclear. These matters should be

[3] As defined in the Inspectorate's Advice Note Seventeen – Cumulative Effects Assessment. Available from: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/

clarified in the ES. Any loss of ancient woodland (or plantations on ancient woodland sites) or impacts on this feature resulting from the Proposed Development which are likely to result in significant effects, should be assessed in the relevant ES aspect chapter/s.

Forecasting Methods or Evidence

3.3.9 The ES should contain the timescales upon which the surveys which underpin the technical assessments have been based. For clarity, this information should be provided either in the introductory chapters of the ES (with confirmation that these timescales apply to all chapters), or in each aspect chapter.

3.3.10 The Inspectorate expects the ES to include a chapter setting out the overarching methodology for the assessment, which clearly distinguishes effects that are 'significant' from 'non-significant' effects. Any departure from that methodology should be described in individual aspect assessment chapters.

3.3.11 The ES should include details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.

Residues and Emissions

3.3.12 The EIA Regulations require an estimate, by type and quantity, of expected residues and emissions. Specific reference should be made to water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases, where relevant. This information should be provided in a clear and consistent fashion and may be integrated into the relevant aspect assessments.

Mitigation and Monitoring

3.3.13 Any mitigation relied upon for the purposes of the assessment should be explained in detail within the ES. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The ES should also address how any mitigation proposed is secured, with reference to specific dDCO requirements or other legally binding agreements.

3.3.14 The Inspectorate notes that various management plans/ strategies are to be produced, including a Construction Environmental Management Plan (CEMP). The Applicant should append a draft/ outline copy of these documents to the ES and/ or demonstrate how they will be secured. Where the ES relies upon mitigation measures which would be secured through a management plan/ strategy, it should be demonstrated (with clear cross-referencing) where each measure is set out in the draft/ outline document.

3.3.15 The ES should identify and describe any proposed monitoring of significant adverse effects and how the results of such monitoring would be utilised to inform any necessary remedial actions.

Risks of Major Accidents and/or Disasters

3.3.16 The ES should include a description and assessment (where relevant) of the likely significant effects resulting from accidents and disasters applicable to the Proposed Development. The Applicant should make use of appropriate guidance (e.g. that referenced in the Health and Safety Executives (HSE) Annex to Advice Note 11) to better understand the likelihood of an occurrence and the Proposed Development's susceptibility to potential major accidents and hazards. The description and assessment should consider the vulnerability of the Proposed Development to a potential accident or disaster and also the Proposed Development's potential to cause an accident or disaster. The assessment should specifically assess significant effects resulting from the risks to human health, cultural heritage or the environment. Any measures that will be employed to prevent and control significant effects should be presented in the ES.

3.3.17 Relevant information available and obtained through risk assessments pursuant to European Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.

3.3.18 The Inspectorate has provided comments regarding the proposed approach to assessing major accidents or disasters in Table 4.14 of this Opinion.

Climate and Climate Change

3.3.19 The ES should include a description and assessment (where relevant) of the likely significant effects the Proposed Development has on climate (for example having regard to the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change. Where relevant, the ES should describe and assess the adaptive capacity that has been incorporated into the design of the Proposed Development. This may include, for example, alternative measures such as changes in the use of materials or construction and design techniques that will be more resilient to risks from climate change.

3.3.20 The Inspectorate has provided comments regarding the proposed approach to assessing climate and climate change in Table 4.1 of this Opinion.

Transboundary Effects

3.3.21 Schedule 4 Part 5 of the EIA Regulations requires a description of the likely significant transboundary effects to be provided in an ES.

3.3.22 The Scoping Report concludes in Appendix A (Table A1) that the Proposed Development is not likely to have significant effects on the environment in another European Economic Area (EEA) State.

3.3.23 Having considered the nature and location of the Proposed Development, the Inspectorate is not aware that there are potential pathways of effect to other EEA states but recommends that, for the avoidance of doubt, the ES details any such consideration and assessment.

A Reference List

3.3.24 A reference list detailing the sources used for the descriptions and assessments must be included in the ES.

3.4 Coronavirus (COVID-19) Environmental Information and Data Collection

3.4.1 The Inspectorate understands government enforced measures in response to COVID-19 may have consequences for an Applicant's ability to obtain relevant environmental information for the purposes of their ES. The Inspectorate understands that conducting specific surveys and obtaining representative data may be difficult in the current circumstance.

3.4.2 The Inspectorate has a duty to ensure that the environmental assessments necessary to inform a robust DCO application are supported by relevant and up to date information. Working closely with consultation bodies, the Inspectorate will seek to adopt a flexible approach, balancing the requirement for suitable rigour and scientific certainty in assessments with pragmatism in order to support the preparation and determination of applications in a timely fashion.

3.4.3 Applicants should make effort to agree their approach to the collection and presentation of information with relevant consultation bodies. In turn the Inspectorate expects that consultation bodies will work with Applicants to find suitable approaches and points of reference to allow preparation of applications at this time. The Inspectorate is required to take into account the advice it receives from the consultation bodies and will continue to do so in this regard.

3.5 Confidential and Sensitive Information

3.5.1 In some circumstances it will be appropriate for information to be kept confidential. In particular, this may relate to personal information specifying the names and qualifications of those undertaking the assessments and/or the presence and locations of rare or sensitive species such as badgers, rare birds and plants where disturbance, damage, persecution or commercial exploitation may result from publication of the information.

3.5.2 Where documents are intended to remain confidential the Applicant should provide these as separate documents with their confidential nature clearly indicated in the title and watermarked as such on each page. The information should not be incorporated within other documents that are intended for publication or which the Inspectorate would be required to disclose under the Environmental Information Regulations 2004.

3.5.3 The Inspectorate adheres to the data protection protocols set down by the Information Commissioners Office[4]. Please refer to the Inspectorate's National Infrastructure privacy notice[5] for further information on how personal data is managed during the Planning Act 2008 process.

[4] https://ico.org.uk

[5] https://infrastructure.planninginspectorate.gov.uk/help/privacy-notice/

4. ASPECT BASED SCOPING TABLES

4.1 Climate Change

(Scoping Report Section 6)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.1.1	Table 6-2	In-combination climate change impact assessment encompassing: • temperature change; • sea level rise; • precipitation change; and • wind.	The Applicant proposes that an assessment of the combined impact of the Proposed Development and future climate change on the receiving environment is scoped out of the ES. The Inspectorate agrees that the Proposed Development is not likely result in impacts relating to temperature change, sea level rise, precipitation change and wind. This matter can be scoped out of the ES.
4.1.2	Table 6-3	Sea level rise from climate change resilience review	The Applicant explains that the Proposed Development is not located in an area that is susceptible to sea level rise. The Inspectorate agrees that significant effects are not likely to occur and an assessment of sea level rise in the climate change resilience review can be scoped out of the ES.
4.1.3	6.6.6	Emission sources that are <1% of a given emissions inventory	The Inspectorate agrees that emissions sources of <1% of a given emissions inventory can be scoped out of the greenhouse gas impact assessment, based on the 1% threshold as stated in publicly available specification (PAS) 2050:2011[6] at point 3.31.

[6] Publicly available specification (PAS) 2050:2011 - *Specification for the assessment of the life cycle greenhouse gas emissions of goods and services*

ID	Ref	Other points	Inspectorate's comments
4.1.4	Table 6-3; 6.6.8 and 6.6.9	Resilience and vulnerability of the Proposed Development to climate change	The Scoping Report states that the Proposed Development will be "*designed to be as resilient as reasonably practicable to future climate change*", although further details are not provided at this stage. The ES should include a description and assessment of any likely significant effects resulting from the vulnerability of the Proposed Development to climate change. Where relevant, the ES should describe and assess the adaptive capacity that has been incorporated into the design of the Proposed Development. This may include, for example, alternative measures such as changes in the use of materials or construction and design techniques that will be more resilient to risks from flooding.
4.1.5	6.6.7	Carbon budgets	The Scoping Report states that *"Where carbon budgets are not available for certain assessment periods, a qualitative approach will be taken".* Any assumptions made around future carbon budgets should be clearly set out and justified in the ES.

4.2 Cultural Heritage

(Scoping Report Section 7)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.2.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.2.2	Sections 7.2, 7.4 and 7.5	Study areas and sensitive receptors	The ES should contain a robust justification to support the study areas and sensitive receptors selected for the purposes of the ES assessment, on the basis of recognised professional guidance and the extent of the likely impacts, with reference to relevant approaches such as the ZTV developed for the Landscape and Visual Impact Assessment (LVIA). It should be clear how the approach taken ensures that any heritage assets or conservation areas with long views towards or out from the application site have been identified and considered. Effort should be made to agree the approach and sensitive receptors with relevant consultation bodies. The study areas and locations of the heritage assets should be depicted on supporting plan/s.
4.2.3	Section 7.4 and 7.5.1	Sensitive receptors	As noted in Section 3 above, the Applicant should review the accuracy of the distances between the Proposed Development and sensitive receptors as quoted in the Cultural Heritage chapter of the Scoping Report (as these do not always appear to accurately reflect the application site boundary as presented in the Scoping Report) and ensure the correct distances are presented in the ES.
4.2.4	Section 7.4 and 7.5.1	Impacts to Protected Lanes and byways	Any impacts to Protected Lanes and byways that are of historic and landscape value (including impacts to their setting) which are likely to result in significant effects should be assessed, in accordance with

ID	Ref	Other points	Inspectorate's comments
			relevant guidance. Clear cross-referencing and explanation should be provided between the Cultural Heritage, LVIA and Transport and Access ES chapters in this respect.
4.2.5	7.4.8 – 7.4.10	Impacts to non-designated heritage and archaeological assets	The Scoping Report identifies four non-designated archaeological assets together with their Historic Environment Record numbers, but unlike the numbered designated heritage assets shown on Figure 7.1 these are not numbered when depicted on Figure 7.2. The equivalent ES figure should include this referencing to aid interpretation and cross-referencing. The ES should identify and assess potential impacts on non-designated heritage and archaeological assets and their setting, including any archaeological features revealed during site investigations, where significant effects are likely.
4.2.6	7.5.1 and 7.5.2	Impacts to setting of heritage assets	Section 11 of the Scoping Report (Noise and Vibration) states that impacts from noise and vibration to heritage receptors will be considered in the Cultural Heritage ES aspect chapter. However, there is no reference to consideration of impacts from noise and vibration in the Cultural Heritage section of the Scoping Report. For the avoidance of doubt, the Cultural Heritage ES aspect chapter should assess any impacts from noise and vibration during construction and decommissioning of the Proposed Development which are likely to result in significant effects on heritage assets and their setting. The ES assessment of impacts to setting should consider other relevant factors such as dust, traffic, lighting, glint and glare and changes to land use, cross-referencing to other aspect chapters as appropriate. Impacts during construction, operation and decommissioning of the Proposed Development which are likely to result in significant effects on the setting of heritage assets should be assessed in the ES.

ID	Ref	Other points	Inspectorate's comments
4.2.7	7.5.3	Impacts to archaeological resource	The Inspectorate notes the potential for impacts to buried archaeology. The assessment of impacts to buried archaeology in the ES should include (but not be limited to) those from the installation and removal of piling, cable trenching, any tracking platforms and any deep ploughing, along with any alterations to drainage patterns or dewatering. The assessment should include impacts from both construction and decommissioning. Where uncertainty exists and flexibility is required, the assessment should be based on a worst-case scenario. The assessment should take into account the guidance contained in Historic England's guidance document '*Preserving Archaeological Remains*'[7].
4.2.8	7.6.8 - 7.6.10; 7.7.1	Archaeological surveys	The Applicant should ensure that the information used to inform the assessment is robust and allows for suitable identification of assets likely to be impacted by the Proposed Development. The Applicant should make effort to agree the need for intrusive investigations (paragraph 7.7.1 of the Scoping Report indicates that intrusive investigations may be carried out) with relevant consultation bodies. Where necessary intrusive investigations should be completed prior to submission of the DCO application.
4.2.9	N/A	Mitigation	The ES should describe any proposed mitigation measures and how these would be secured through the DCO, including proposals for the recording of any archaeology which would be permanently lost as a result of the Proposed Development. Effort should be made to agree the necessary measures with relevant consultation bodies.

[7] Historic England (2016) - *Preserving Archaeological Remains: Decision-taking for Sites Under Development*

4.3 Ecology

(Scoping Report Section 8)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.3.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment

ID	Ref	Other points	Inspectorate's comments
4.3.2	Section 8.4 and 8.1.3	Desk study	Whilst the MAGIC[8] website is referenced, no other sources used in the desk study are referenced in the Scoping Report. The ES should list all sources used to inform the assessment of significant effects.
4.3.3	2.2.38 and 8.6.8-9	Impacts	The Inspectorate notes the potential for bird disturbance/ mortality from construction and operation of new overhead lines (should this option be pursued). If significant effects on bird species as a result of new overhead lines are likely, these should be assessed in the ES. The Applicant's attention is drawn to the requirements of NPS EN-5 (section 2.7) in this regard. Effort should be made to agree the need for a bird collision risk assessment with relevant consultation bodies.
4.3.4	2.4.3	Construction activities – watercourse crossings	As highlighted in Section 2 above, the ES should describe where watercourse crossings are proposed and demonstrate that there is sufficient detail regarding the design as to inform a robust assessment of effects on watercourse hydraulics and ecology.
4.3.5	2.2.44 and 8.4.3	Impacts	Security fencing is proposed around the operational areas of the site. This has potential to fragment the landscape and impact on ecological receptors. The ES should assess any impacts associated with the security fencing on ecological receptors where significant effects are

[8] Defra (2020) Multi-Agency Geographic Information for the Countryside (MAGIC) map. Available at: https://magic.defra.gov.uk/MagicMap.aspx

ID	Ref	Other points	Inspectorate's comments
			likely to occur. Any necessary mitigation measures, such as mammal gates, should be described.
4.3.6	8.4.4 and 8.4.5	Veteran Trees	Receptors identified in the Scoping Report include ancient woodland, but it is not clear whether veteran trees are included under this term. In line with NPS EN-1, paragraph 5.3.14, veteran trees found outside of these ancient woodland habitats should be identified and assessed in the ES where significant effects are likely to occur. Any loss should be avoided or where this is unavoidable, this should be fully justified. Root protection zones of both ancient woodland and veteran trees should also be considered in the ES assessments of impacts to these habitats and appropriate buffer zones defined in line with Natural England and Forestry Commission's Standing Advice (see Appendix 2 of this Opinion).
4.3.7	8.4.7	Phase 1 Habitat Survey and further surveys	A Preliminary Ecological Assessment is referenced in the Scoping Report at paragraph 8.4.7. It included a Phase 1 Habitat Survey which, in combination with the desk study, has been used to identify further surveys necessary to inform the baseline in the ES. The results of both the desk study and Phase 1 Habitat Survey are not presented in the Scoping Report, meaning it is unclear how the need for further surveys has been identified. The ES should include any relevant data and/ or surveys that support the assessment of significant effects and explain how the results influenced the assessment. Effort should be made to agree the required surveys and their timings and locations with relevant consultation bodies.
4.3.8	8.6.8, 8.6.9 and 11.1.2	Impacts	Section 11 of the Scoping Report (Noise and Vibration) states that impacts from noise and vibration to ecological receptors will be considered in the Ecology ES aspect chapter. Whilst there is no explicit reference to consideration of impacts from noise and vibration in the Ecology section of the Scoping Report, the Inspectorate

ID	Ref	Other points	Inspectorate's comments
			assumes such impacts would be covered under 'disturbance' as referenced in paragraphs 8.6.8 and 8.6.9. For the avoidance of doubt, the Ecology ES aspect chapter should assess any impacts from noise and vibration arising from the Proposed Development which are likely to result in significant effects on ecological receptors.
4.3.9	8.6.8	Impacts	The Inspectorate notes the potential for impacts resulting from the spread of invasive species during construction and decommissioning of the Proposed Development. Any necessary eradication and/ or control measures should be detailed in the ES and any likely significant effects assessed.
4.3.10	8.6.8 and Figure 8-2	Impacts	The Inspectorate notes from Figure 8-2 of the Scoping Report that local wildlife sites (LWS), whilst outside of the application site boundary, will become effectively surrounded by the Proposed Development. Impacts to these LWSs including from fragmentation, severance and lighting should be carefully considered in the ES and any likely significant effects assessed. Effort should be made to agree appropriate mitigation measures with relevant consultation bodies.
4.3.11	8.6.9	Impacts	Impacts resulting from the presence of the solar PV panels (for example, reduced light) to plant and invertebrate species under the panels should be considered, particularly if the option for an east-west orientation of panels is pursued. Any likely significant effects should be assessed in the ES.
4.3.12	8.7.5	Mitigation	Effort should be made to agree any proposed mitigation measures with the relevant consultation bodies and it should be clear how these are secured through the DCO or other legal mechanism. Where any off-site mitigation is proposed, the additional area should be included

ID	Ref	Other points	Inspectorate's comments
			in the red line boundary and assessed in the ES where significant effects are likely to occur.
4.3.13	8.7.12 and Table 8.4	Defining significance	There is no definition of what effects are deemed significant in relation to Table 8.4. The ES should clearly define what effects are deemed significant and explain how those conclusions have been reached.
4.3.14	N/A	Interaction of impacts	The Ecology aspect chapter in the ES should include appropriate cross-referencing and explanation where other surveys, chapters and assessments are used to inform the assessment of significant effects on ecological receptors.

4.4 Flood Risk, Drainage and Surface Water

(Scoping Report Section 9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.4.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment

ID	Ref	Other points	Inspectorate's comments
4.4.2	9.5.4	Impacts	In relation to impacts from increased surface water run-off during operation, the Inspectorate considers that impacts on water quality as a result of soil erosion should be assessed in the ES where significant effects are likely. The Applicant should append a draft/ outline copy of the Surface Water Drainage Strategy to the ES and/ or demonstrate how its delivery will be secured through the DCO.
4.4.3	9.6.6, 9.6.10 and 9.6.11	Climate change projections	The Flood Risk, Drainage and Surface Water chapter of the Scoping Report mentions allowances for climate change but does not elaborate on how or which ones will be applied. In particular, the flood risk assessment (FRA) should include up to date climate change projections in line with NPS EN-1 (paragraph 5.7.1); this is not mentioned in paragraphs 9.6.10 – 9.6.11 where the Scoping Report discusses the production of a FRA to support the ES assessment of Flood Risk, Drainage and Surface Water. The ES and FRA should use the latest climate change projections in their assessments and explain how they have been applied. Effort should be made to agree the approach with the relevant consultation bodies.
4.4.4	9.6.5	Water Framework Directive Assessment (WFD)	A WFD assessment is proposed to be submitted as an appendix to the Preliminary Environmental Information report. For clarity, if the

ID	Ref	Other points	Inspectorate's comments
			Proposed Development has the potential to impact upon any WFD waterbodies then a WFD assessment should also be submitted as part of the DCO application as either an Appendix or a separate assessment report. This report should be used to inform the ES assessment.
4.4.5	9.7.1	Ecological and heritage receptors	The Inspectorate notes that the list of receptors sensitive to impacts from flood risk, drainage and surface water identified in paragraph 9.7.1 of the Scoping Report does not include ecological features or cultural heritage assets. However, a number of ecological and cultural heritage assets are present within/ around the Proposed Development site (e.g. ancient woodland). The ES should assess flood risk, drainage and surface water impacts to ecological and heritage receptors where significant effects are likely to occur. Where these assessments are presented in other aspect Chapters, the ES should include appropriate cross-reference and explanation.
4.4.6	Section 9.5	Mitigation	Section 9.5 of the Scoping Report is entitled 'Potential Effects and Mitigation' however, no mitigation measures are described in that section. Paragraph 9.6.8 suggests that Sustainable Drainage System (SuDS) will be used but no details regarding their design have been provided at this stage. The ES should include a full description and efficacy assessment of all proposed mitigation measures relevant to the Flood Risk, Drainage and Surface Water assessment and demonstrate how the delivery of such measures is secured through the DCO or other legal mechanism. Effort should be made to agree the necessary mitigation measures with relevant consultation bodies.
4.4.7	9.7.7	Mitigation	Appropriate buffer zone distances between the Proposed Development (excluding any crossings or similar infrastructure) and watercourses should be defined in the ES, with reference to how this

ID	Ref	Other points	Inspectorate's comments
			is secured through the DCO. The Applicant should make effort to agree these details with relevant consultation bodies.

4.5 Landscape and Visual Amenity

(Scoping Report Section 10)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.5.1	10.4.25	Assessment of impacts on Dedham Vale Area of Outstanding Natural Beauty (AONB)	The Scoping Report proposes that as the Dedham Vale AONB is located approximately 23km to the north-east of the Proposed Development, due to the distance and intervening features, an assessment of impacts on the AONB is scoped out of the LVIA. Considering the nature and characteristics of the Proposed Development and the distances involved, the Inspectorate agrees that an assessment of impacts on the Dedham Vale AONB can be scoped out of the ES.
4.5.2	10.7.9	Assessment of impacts from lighting	The Scoping Report proposes that an assessment of impacts from lighting is scoped out of the ES, stating that any lighting during the construction phase would be temporary and any lighting during operation will be on temporarily. Noting the rural, largely unlit environment in which the Proposed Development is located and the likely change from the current baseline, the Inspectorate does not agree to scope this matter out of the assessment. Impacts to visual amenity resulting from the introduction of lighting during construction, operation and decommissioning which are likely to result in significant effects should be assessed in the ES. Any proposed mitigation measures should be described and secured through the DCO. The assessment should cross refer to other relevant aspect assessments and sensitive receptors (such as ecology and cultural heritage).

ID	Ref	Other points	Inspectorate's comments
4.5.3	Section 10.2	Study area	The preliminary LVIA study area extends up to 4km from the application site boundary. The ES should justify the extent of the study area/s with reference to recognised professional guidance and the extent of the likely impacts, informed by fieldwork and relevant models or approaches such as the ZTV. Effort should be made to agree the study areas with relevant consultation bodies.
4.5.4	10.4.35 - 10.4.46 and Table 10-1	Visual receptors and viewpoints	The ES should explain how the visual receptors and viewpoints have been selected, with reference to ZTV mapping and fieldwork, and illustrate these on suitable figures. The Applicant should ensure appropriate viewpoints have been selected to capture any long-distance views of the Proposed Development. The ZTV should take into account the setting of heritage receptors. Effort should be made to agree the visual receptors, viewpoints and viewpoint heights with relevant consultation bodies.
4.5.5	10.4.7, 10.4.14, 10.4.19, 10.4.20	Impacts	Many of the field boundaries within the study area are formed by mature hedgerows, which are an important feature of the existing character of the landscape. Existing vegetation should be mapped and any loss of or impacts to hedgerows, trees or woodland which are likely to result in significant effects on landscape and visual amenity should be assessed in the ES.
4.5.6	10.4.43 and 10.7.3	Visual representations	The assessment should be supported by appropriate visual representations including annotated photographs, photomontages and wirelines. Effort should be made to agree the viewpoints for visual representations, the assessment years and the detailed methodology for their production with relevant consultation bodies. Both winter and summer views should be included. The ES should clearly present any assumptions made with regards to the height that any mitigation planting will have reached by the assessment years for purposes of generating photomontages.

ID	Ref	Other points	Inspectorate's comments
4.5.7	10.4.44	Methodology	The methodology for the assessment of impacts to Landscape Character Areas (LCA) should be based on relevant guidance, such as Natural England's '*An Approach to Landscape Character Assessment*'[9] and in respect to local LCAs, effort should be made to agree the specific approach with the relevant planning authorities.
4.5.8	Section 10.5	Impacts	The assessment of impacts to landscape and visual amenity (including the study areas, ZTV and photomontages) should be based on the relevant worst-case having regard to any parameters applicable to the Proposed Development, including panel orientation and all proposed structures such as the energy storage facility.
4.5.9	Section 10.5	Impacts	The Inspectorate notes that the Proposed Development may include new overhead lines. If this option is pursued, the ES should assess impacts from construction, operation and decommissioning of the proposed overhead lines on landscape and visual receptors.
4.5.10	10.6.1	Methodology	In addition to the '*Guidelines for Landscape and Visual Impact Assessment'* (3rd edition) and the Landscape Institute's *'Visual Representation of Development Proposals'*, the ES should, where relevant, make reference to other professional guidelines produced by the Landscape Institute such as '*Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs)'*[10]; in addition to the National Infrastructure Commission's '*Design Principles for National Infrastructure*'[11].
4.5.11	10.6.12 and Table 10.4	Landscape Value Criteria	The ES should provide examples for each category in Table 10.4 to aid understanding, as outlined for example in DMRB LA 107

[9] Natural England (2014) - *An Approach to Landscape Character Assessment*

[10] The Landscape Institute (2020) - *Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs): Technical Guidance Note 1/20*

[11] National Infrastructure Commission (2020) - *Design Principles for National Infrastructure*

ID	Ref	Other points	Inspectorate's comments
			Landscape and Visual Effects[12]. This should include examples from the study area.
4.5.12	N/A	Cumulative impacts	Cumulative landscape and visual impacts from the Proposed Development together with other developments including the A12 Chelmsford to A120 Widening Scheme and Chelmsford Garden Community should be fully assessed in the ES. In doing so the Applicant should consider use of relevant viewpoints selected for other developments.

[12] Design Manual for Roads and Bridges (DMRB) (2020) – *LA 107 Rev. 2 - Landscape and visual effects*

4.6 Noise and Vibration

(Scoping Report Section 11)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.6.1	11.1.2 and 11.2.3	Assessment of noise impacts on ecological and heritage receptors from Noise and Vibration ES aspect chapter	The Applicant proposes to scope out the assessment of noise and vibration impacts to ecological and heritage receptors from the Noise and Vibration ES aspect chapter. The assessments would instead be presented in the Ecology and Cultural Heritage ES aspect chapters. The Inspectorate is content with this approach but advises the Applicant to provide clear cross-referencing in the Noise and Vibration ES aspect chapter to where these assessments are located.
4.6.2	11.5.7	Assessment of operational vibration	The Scoping Report states that *"No major vibration sources are envisaged to be introduced as part of the Scheme and as such there will be no associated operational vibration effects"* and proposes to scope out an assessment of operational vibration from the ES. The Inspectorate has considered the nature and characteristics of the Proposed Development and locations of the potential sensitive receptors and is content with this approach.
4.6.3	Table 16-1	Assessment of ground-borne vibration arising from construction, operation and decommissioning of the Proposed Development	Table 16-1 of the Scoping Report proposes that an assessment of ground-borne vibration arising from construction, operation and decommissioning of the Proposed Development is scoped out of the ES, stating that no major vibration sources are envisaged to be introduced as part of the Proposed Development and as such, there will be no associated vibration effects. This is contradicted by paragraphs 11.5.1 and 11.6.10 of the Scoping Report which set out potential vibration effects during construction and decommissioning and state that this matter will be assessed. As such, the Applicant's proposed ES scope is unclear.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			As noted above, the Inspectorate is content that an assessment of operational vibration can be scoped out of the ES. However, at this stage, options and uncertainties remain regarding the principle development components and their locations, as well as the methods and locations for construction and decommissioning activities. Based on the information available at this time, the Inspectorate cannot agree to scope out an assessment of ground-borne vibration during construction and decommissioning. The ES should either include evidence to confirm that ground-borne vibration generated by plant/ activities on site and HGV movements (including along access routes) during construction and decommissioning would not result in significant effects on sensitive receptors, or provide an assessment of the likely significant effects.
4.6.4	Table 16-1	Assessment of operational noise effects associated with the grid connection	The Scoping Report explains that the cabling is not anticipated to produce any operational noise emissions and proposes to scope an assessment of this matter out of the ES. The Inspectorate agrees that if the connection consists of buried cable, this will emit little, if any, noise and the ground will act as attenuation. Significant effects are not anticipated to occur and this matter can be scoped out of the ES. However, there remains at this stage an option for a new substation to be constructed. If this option is pursued, the ES should assess any noise impacts resulting from the operational substation which are likely to result in significant effects on noise-sensitive receptors.

ID	Ref	Other points	Inspectorate's comments
4.6.5	11.2.1 and Table 11-1	Study area and sensitive receptors	A 500m study area is proposed for identifying receptors sensitive to noise and vibration changes, with a preliminary list of sensitive receptors (primarily residential properties) identified in Table 11-1.

ID	Ref	Other points	Inspectorate's comments
			The ES should explain how the study area and sensitive receptors have been selected with reference to the extent of the likely impacts. It should be clear how other relevant aspects (for example, construction traffic routes) relate to the choice of sensitive receptors.
4.6.6	11.6.2	Baseline	The ES should explain how the baseline noise monitoring locations were chosen with reference to relevant information including noise contour mapping.
4.6.7	Section 11.6	Methodology	The criteria for assessing the significance of noise and vibration effects should be clearly set out in the ES with reference to established guidance. Consistent with the Noise Policy Statement for England, Significant Observed Adverse Effect Level (SOAEL) and Lowest Observed Adverse Effect Level (LOAEL) should be defined for all of the construction, operational and decommissioning noise matters assessed.

4.7 Socio-Economics and Land Use

(Scoping Report Section 12)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.7.1	Table 16-1	Effects on Mineral Safeguarding Areas	The Scoping Report proposes to scope out an assessment of impacts on Mineral Safeguarding Areas, *"…as the only part of the Site within a Mineral Safeguarding Zone would be for potential cable route to the existing Bulls Lodge Substation".* The Planning Inspectorate notes the scoping consultation response from Essex County Council (Appendix 2 of this Opinion), which provides evidence to confirm that the vast majority of the application site is within a Mineral Safeguarding Area. As such, the Inspectorate does not agree that effects on Mineral Safeguarding Areas can be scoped out of assessment in the ES. The ES should identify potential impacts on mineral resources, including those resulting from sterilisation of the resource during the lifetime of the Proposed Development. Any likely significant effects should be assessed. Effort should be made to discuss and agree the approach with the County Council. The Applicant's attention is drawn to paragraph 5.10.9 of NPS EN-1 in this regard.
4.7.2	Table 16-1	Effects on Waste Consultation Areas and Transport Safeguarding Areas	The Scoping Report provides no supporting evidence or justification to allow the Inspectorate to conclude that no potential impact pathways exist between the Proposed Development and Waste Consultation Areas or Transport Safeguarding Areas. The Inspectorate therefore does not agree that effects on Waste Consultation Areas and Transport Safeguarding Areas can be scoped out of the assessment. The ES should provide an assessment of these matters where significant effects are likely to occur.

ID	Ref	Other points	Inspectorate's comments
4.7.3	12.5.1	Employment opportunities	The Scoping Report states temporary and permanent employment during construction, operation and decommissioning of the Proposed Development will be considered in the Socio-Economic and Land Use ES assessment. The Inspectorate advises that the number and types of jobs created should be estimated in the ES and considered in the context of the available workforce in the area during each phase of the Proposed Development.
4.7.4	12.5.1	Impacts to users of PRoW	Section 12 of the Scoping Report identifies potential impacts to users of PRoW. The Applicant is referred to the Inspectorate's comments in Table 4.8 (ID 4.8.6) of this Opinion (Transport and Access) regarding the assessment of impacts to users of PRoW.
4.7.5	12.5.1 and 14.3.2	Impacts from the displacement of agricultural land uses	Section 12 of the Scoping Report identifies the displacement of agricultural land uses for the duration of the Proposed Development as a potential socio-economic impact. The Applicant is referred to the Inspectorate's comments in Table 4.10 (ID 4.10.2) of this Opinion (Land Quality) regarding the assessment of impacts on agricultural land.
4.7.6	12.6.4-12.6.5	Methodology	The Scoping Report states the Socio-Economic and Land Use ES assessment will follow "*Standard EIA Guidance*". However, the Scoping Report does not set out the specific guidance material to be used to inform the assessment. The ES should clearly set out the guidance documents used to inform the Socio-Economic and Land Use assessment. Socio-economic impacts resulting from the Proposed Development should be quantified where possible. Where professional judgement has been applied this should be clearly stated and suitably justified in the ES with reference to supporting evidence.

4.8 Transport and Access

(Scoping Report Section 13)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.8.1	13.5.11	Detailed assessment of impacts during operation	Considering the nature of the Proposed Development, the Inspectorate is content that significant effects are unlikely to occur and that a detailed assessment of impacts from operational traffic movements can be scoped out of the ES. However, the ES should provide an estimate of the anticipated traffic movements for the operational phase.
4.8.2	Table 16-1 and 13.6.18	Hazardous loads	The Scoping Report states that there are no nearby road features (such as significant vertical drops) which suggest that the transfer of materials poses a risk beyond that which would be expected on the general highway network. The Inspectorate has considered the nature and characteristics of the Proposed Development and agrees that significant effects are not likely to occur. An assessment of impacts associated with the transport of hazardous loads can be scoped out of the ES. However, the ES should still outline the estimated number and composition of any hazardous loads.
4.8.3	Table 16-1 and 13.5.1	Assessment of impacts during decommissioning	Table 16-1 of the Scoping Report proposes that an assessment of impacts for the decommissioning phase is scoped out of the ES, due to uncertainties in relation to future traffic flows and transport infrastructure. This is however contradicted by paragraph 13.5.1, which states that *"…the greatest impact is likely to occur during the construction and decommissioning phases and this will be the focus of the assessment of transport effects presented in the ES".* In the absence of information to demonstrate that decommissioning of the Proposed Development would not lead to significant effects in

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			terms of Transport and Access, the Inspectorate considers that this matter should be assessed in the ES.

ID	Ref	Other points	Inspectorate's comments
4.8.4	2.2.7	Impacts	Paragraph 2.2.7 of the Scoping Report explains that an east-west panel orientation (if this option is pursued) would result in more HGV movements since more panels are required. The ES assessment of impacts to Transport and Access and the accompanying Transport Assessment (TA) should be based on the relevant worst-case having regard to any parameters applicable to the Proposed Development, including panel orientation.
4.8.5	Section 13.4	Baseline conditions	The description of baseline conditions in Section 13.4 of the Scoping Report makes no mention of the Great Eastern Main Line (GEML) railway, which is located immediately adjacent to the southern boundary of the application site. Impacts to rail travellers, including train drivers, such as those associated with visual amenity and glint and glare, should be assessed where significant effects are likely to occur. Appropriate cross-referencing and explanation between relevant ES aspect chapters should be provided.
4.8.6	13.4.5	Baseline conditions and impacts	Paragraph 13.4.5 of the Scoping Report explains that PRoW may need to be temporarily or permanently diverted/ closed as a result of the Proposed Development. The locations of any diversions or closures should be illustrated on suitable figures in the ES. The ES should assess impacts to users of PRoW where significant effects are likely. Where possible the assessment should be supported by pedestrian counts, with effort made to agree the locations for such counts with relevant consultation bodies. The assessment of impacts on users of PRoW should consider potential interactions with other

ID	Ref	Other points	Inspectorate's comments
			aspect assessments as relevant (for example noise and visual impacts and recreational value).
4.8.7	13.4.6	Baseline conditions	The Scoping Report states that "*There are no on or off-road cycling facilities within the immediate vicinity of the Site*". The Inspectorate notes that National Cycle Network Regional Route 50[13] passes through the application site boundary between Three Elms and Three Ashes Cottages and runs to the east of the application site boundary at the Waltham Road/ Terling Hall Road junction. The ES must assess any impacts on users of this cycle route which are likely to result in significant effects.
4.8.8	13.5.10	TA and cumulative effects assessment	The ES should clearly explain the relationship with the TA, how traffic movements have been predicted and what models and assumptions have been used to inform the assessment. Anticipated numbers of vehicle movements should be set out (including vehicle type, peak hour and daily movements). The Transport and Access aspect chapter and the cumulative assessment should clearly explain the approach adopted to estimate traffic growth as it appears in the TA. The explanation should include reference to appropriate software such as the Department for Transport's TEMPRO[14] software. This should be kept under review should any other developments come forward which may trigger the need to update the previous traffic modelling work. The Scoping Report states that the TA and Access Strategy will consider the impact of the proposed A12 Chelmsford to A120 Widening Scheme. The Applicant also should consider whether traffic associated with other developments including the proposed Bradwell B nuclear power station, Chelmsford Garden Community, Chelmsford NE Bypass, Radial Distributor Road 2 and planned works to the

[13] https://osmaps.ordnancesurvey.co.uk/route/3647712/Sustrans-Flitch-Way

[14] Trip End Model Presentation Program (TEMPRO)

ID	Ref	Other points	Inspectorate's comments
			Boreham Interchange could result in cumulative effects in terms of traffic and therefore need to be considered in the TA and cumulative assessment in the ES. The Applicant should make effort to agree the scope of the TA with relevant consultation bodies including the highways authority and Highways England.
4.8.9	13.6.2	Baseline	The Scoping Report states that traffic counts will be undertaken, *"…if considered necessary and subject to Covid-19 Pandemic restrictions…".* The ES should identify the locations where any traffic count surveys have been undertaken, explain how these locations were selected and confirm precise details of when the counts were undertaken. Effort should be made to agree these details with relevant consultation bodies. To provide assurance that the assessment of likely significant effects is supported by a robust dataset, the ES should include a justification to support the extent of the survey effort, including why the traffic data collected is considered to represent the typical (neutral) flow conditions on the network.
4.8.10	N/A	Impacts	The Transport and Access chapter does not confirm whether impacts resulting from the transport of waste will be assessed in the ES. The Applicant is referred to the Inspectorate's comments in Table 4.16 (ID 4.16.1) of this Opinion (Waste).

4.9 Air Quality

(Scoping Report Section 14.2)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.9.1	14.1.1, 14.2.8 and 14.2.12	Standalone Air Quality ES aspect chapter including modelling and quantitative detailed assessment	The Applicant proposes a qualitative assessment of dust emissions arising from activities during construction and decommissioning, using the Institute of Air Quality Management's guidance[15]. The Scoping Report states that incorporation of air quality mitigation measures into a Framework CEMP would negate the need for a specific air quality chapter in the ES. The air quality assessment would instead be presented as part of an 'Other Environmental Issues' chapter of the ES. The Inspectorate has considered the nature and characteristics of the Proposed Development and is content with this approach. The ES should describe the measures relied upon to manage dust and emissions during construction and decommissioning of the Proposed Development. It should be clear how all mitigation measures would be delivered and secured, through cross reference to the Framework CEMP and the DCO. The Inspectorate's agreement in this regard is on the basis that the predicted numbers of HGV movements (as stated in paragraph 2.4.6 of the Scoping Report) remain below the criterion for an air quality assessment as set out in EPUK guidance[16].

[15] Holman *et al* (2014) - *IAQM Guidance on the assessment of dust from demolition and construction,* Institute of Air Quality Management, London.

[16] EPUK (2010) - *Development Control: Planning for Air Quality*, available at: http://www.iaqm.co.uk/text/guidance/epuk/aq_guidance.pdf, which refers to large, long-term construction sites that would generate large HGV flows (>200 movements per day) over a period of a year or more.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.9.2	14.2.7	Impacts on air quality during operation of the Proposed Development	Having had regard to the nature and characteristics of the Proposed Development, the Inspectorate is content that operation of the proposed solar farm would not lead to significant effects in terms of air quality. This matter can be scoped out of the ES.

4.10 Land Quality

(Scoping Report Section 14.3)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.10.1	14.1.1	Standalone Land Quality ES aspect chapter	The Applicant proposes that an assessment of impacts relevant to Land Quality is presented as part of an 'Other Environmental Issues' chapter of the ES. The Inspectorate agrees with this approach and is content that any significant effects on land quality can be assessed within the 'Other Environmental Issues' chapter of the ES.

ID	Ref	Other points	Inspectorate's comments
4.10.2	14.3.2	Impacts on agricultural land and soil quality	The Scoping Report states that an Agricultural Land Classification (ALC) survey will be undertaken in accordance with the Ministry of Agriculture, Fisheries and Food Guidelines[17]. The Inspectorate advises the ES should also take into account Natural England's Technical Information Note (TIN)049[18] where relevant. The ES should quantify the amount of agricultural land that would be temporarily and permanently lost as a result of the Proposed Development (by Agricultural Land Classification (ALC) grade, with reference to an accompanying map/s depicting the grades) and assess any impacts, including to any Best and Most Versatile Land, that may result in likely significant effects. Any impacts likely to result in significant effects on soil quality should also be described and assessed. Any mitigation measures should be described with reference to relevant guidelines (such as the Defra

[17] Ministry of Agriculture, Fisheries and Food (1998) – *Agricultural Land Classification of England and Wales*

[18] Natural England Technical Information Note TIN049 (2012) - *Agricultural Land Classification: protecting the best and most versatile agricultural land*

ID	Ref	Other points	Inspectorate's comments
			Code of Practice for the sustainable use of soils on construction sites[19]) and secured through the DCO. The Inspectorate notes paragraph 5.10.8 of NPS EN-1 in this regard.

[19] Defra (2009) - *Code of practice for the sustainable use of soils on construction sites*

4.11 Glint and Glare

(Scoping Report Section 14.4)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.11.1	14.1.1, 14.4.3 and 14.4.12	Standalone Glint and Glare ES aspect chapter	The Applicant proposes to scope out a standalone ES aspect chapter for Glint and Glare, noting that impacts from glint and glare on landscape would be considered within the LVIA chapter of the ES. Section 14.7 of the Scoping Report (Major Accidents or Disasters) also refers to consideration of glint and glare. The results and recommendations of glint and glare calculations would be incorporated into the design of the Proposed Development and presented as a technical appendix to the ES. The Inspectorate is content that any significant effects that arise from glint and glare can be assessed within relevant aspect chapters of the ES and summarised within the 'Other Environmental Issues' chapter. A standalone chapter for Glint and Glare is not required. It should however be clear in the ES, with appropriate cross-referencing and explanation, how the findings presented in the glint and glare technical appendix have been integrated with relevant aspect assessments including LVIA, cultural heritage, transport and major accidents or disasters.
4.11.2	14.4.6	Assessment of impacts from glint and glare during construction and decommissioning	Based on the nature of the activities, the distances to receptors and the use of a CEMP, the Applicant proposes to scope an assessment of impacts from glint and glare during construction and decommissioning out of the ES. The Inspectorate has considered the nature and characteristics of the Proposed Development and is content with this approach. An assessment of impacts from glint and glare during construction and decommissioning can be scoped out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.11.3	14.4.2	Methodology	The technical appendix to the ES must clearly explain the assessment methodology (with reference to appropriate modelling and predictive techniques, charts/ diagrams and visual representations such as GIS-based viewshed analyses) to indicate the likely extent and distance of potential glint and glare. Where professional judgement has been applied, this should be identified.
4.11.4	14.4.1 – 14.4.5	Sensitive receptors	The Applicant is advised to use the ZTV developed for the LVIA to identify sensitive receptors with potential views of the site, which may therefore be affected by glint and glare. Effort should be made to agree the sensitive receptors with relevant consultation bodies. In addition to the receptors identified in Section 14.4 of the Scoping Report, the Applicant should also assess impacts to residential receptors, rail travellers on the GEML (including train drivers), aircraft (as indicated in Table 14-1 of the Scoping Report) and cultural heritage assets and their settings, where significant effects are likely. The locations of the sensitive receptors should be shown on an accompanying plan.
4.11.5	14.4.8	Impacts	Where flexibility remains regarding the location and orientation of the solar panels, the technical appendix to the ES should identify and assess the worst case applicable to the design of the Proposed Development and its impacts. The likely timing and duration of the impact should be noted. The assessment must cover the anticipated operational lifespan of the Proposed Development.

4.12 Ground Conditions

(Scoping Report Section 14.5)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.12.1	14.1.1 and 14.5.7	Standalone Ground Conditions ES aspect chapter including detailed assessment	Noting that a Phase 1 Preliminary Risk Assessment (PRA) *"is being prepared",* the Scoping Report states that incorporation of the results and recommendations of the PRA and the measures set out in Table 14-1 of the Scoping Report (pages 144 and 145) into a Framework CEMP would negate the need for a specific Ground Conditions chapter in the ES. As the results of the PRA are not yet available, there is insufficient information at this stage regarding the baseline and potential impacts to allow the Inspectorate to conclude that construction and decommissioning of the Proposed Development will not significantly affect ground conditions and that a detailed assessment is not required. Braintree District Council has also advised that there are records of contaminated land within the application site (see Appendix 2 of this Opinion). The ES should include an assessment of potential impacts on ground conditions during construction and decommissioning of the Proposed Development, where significant effects are likely. Potential operational impacts are discussed below. The ES should describe the measures relied upon to manage impacts on ground conditions during construction and decommissioning of the Proposed Development and explain how these would be delivered and secured, through cross-reference to the PRA, Framework CEMP and the dDCO.
4.12.2	14.5.6	Assessment of impacts from operational activities	The Scoping Report explains that an Operational Environmental Management Plan, to include a spillage Emergency Response Plan,

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			would address any risks arising from maintenance activities during operation of the Proposed Development. The Inspectorate has considered the nature and characteristics of the Proposed Development and agrees that significant effects are not likely to occur. An assessment of impacts from operational activities on ground conditions can be scoped out of the ES. However, the Applicant should append a draft/ outline copy of the Operational Environmental Management Plan, including the spillage Emergency Response Plan, to the ES and/ or demonstrate how this will be secured through the DCO or other legal mechanism.

4.13 Human Health

(Scoping Report Section 14.6)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.13.1	14.1.1, 14.6.1 and 14.6.7	Standalone Human Health ES aspect chapter	The Inspectorate is content that any significant effects on human health can be assessed within relevant aspect chapters of the ES and summarised within the 'Other Environmental Issues' chapter. With appropriate cross-referencing and explanation, a standalone chapter in the ES for Human Health is not required.
4.13.2	14.6.2–14.6.7	Assessment of impacts from electromagnetic fields (EMF)	The Scoping Report explains that *"132kV cables are likely to be required…"* as part of the Proposed Development. With reference to the DECC voluntary Code of Practice [20] and the ICNIRP exposure guidelines[21], the Applicant proposes that an assessment of impacts from EMF on human health is scoped out of the ES. The Inspectorate agrees that an assessment of impacts to human health receptors from EMF from cables up to and including 132kV can be scoped out of the ES. Notwithstanding this, the Applicant must provide sufficient evidence to demonstrate compliance with the ICNIRP restrictions, in accordance with the DECC voluntary Code of Practice. The Applicant's attention is drawn to Section 2.10 of NPS EN-5 in this regard. Should the description of the Proposed Development change and any cables exceeding 132kV be required, the likely significant effects on human health should be assessed in the ES. The Applicant should take into account any in-combination impacts from EMF associated

[20] Department of Energy and Climate Change (DECC) (2012) - *Power Lines: Demonstrating compliance with EMF public exposure guidelines: A voluntary Code of Practice*

[21] International Commission on Non-Ionizing Radiation Protection (ICNIRP) (1998) - *ICNIRP Guidelines: For limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300GHz),* Health Physics 74 (4): 494-522; 1998

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			with existing infrastructure (e.g. the 400kV overhead line crossing the application site).

ID	Ref	Other points	Inspectorate's comments
4.13.3	14.6.1	Impacts	Any impacts from ground conditions on the health of construction/ maintenance/ decommissioning workers should be assessed where significant effects are likely.
4.13.4	14.6.1	Impacts	Appropriate cross-referencing and explanation should also be made to the Flood Risk, Drainage and Surface Water ES aspect chapter in terms of potential impacts to drinking water supplies.

4.14 Major Accidents or Disasters

(Scoping Report Section 14.7)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.14.1	14.1.1 and 14.7.10	Standalone Major Accidents or Disasters ES aspect chapter	The Inspectorate is content that any significant effects resulting from major accidents or disasters can be assessed within relevant aspect chapters of the ES and summarised within the 'Other Environmental Issues' chapter. With appropriate cross-referencing and explanation, a standalone chapter in the ES for Major Accidents or Disasters is not required.
4.14.2	14.7.7	Risks to construction workers	The Applicant proposes that construction workers, as a receptor, can be excluded from the assessment, because existing legal protection is sufficient to minimise any risk from major accidents or disasters to a reasonable level. The Inspectorate has considered the nature and characteristics of the Proposed Development and is content that significant effects on construction workers as a result of major accidents or disasters are not likely. This matter can be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.14.3	14.7.3	Guidance	The Scoping Report refers to a lack of established guidance for this aspect topic. The assessment should refer to the new IEMA guidance document '*Major Accidents and Disasters in EIA*'[22], where relevant.
4.14.4	14.7.8	Shortlisted major accidents or disasters	Paragraph 14.7.8 of the Scoping Report states that the Applicant considers it *"highly likely"* that major accident or disaster types (as set out in Table 14-1, page 148) will be able to be removed from the

[22] Institute of Environmental Management (IEMA) (September 2020) - *Major Accidents and Disasters in EIA – A Primer*

ID	Ref	Other points	Inspectorate's comments
			scope of the assessment prior to publication of the ES as the design will ensure that, *"there is no real risk or serious possibility of the event interacting with the Scheme".* The Inspectorate does not consider there to be sufficient evidence available at this stage for the Applicant to omit any major accidents or disasters from the scope of assessment and expects all shortlisted accidents and disasters to be fully considered within the ES.
4.14.5	Table 14-1 (page 148)	Battery energy storage system	Table 14-1 of the Scoping Report (page 148) explains that there may be some potential for fire as a result of the battery energy storage system. Any mitigation measures relevant to safety risks associated with the battery storage system should be described in the ES and their delivery secured through the DCO (for example, the Applicant's attention is drawn to the extensive examination discussions relating to Cleve Hill Solar Park, which required the preparation of (and a DCO requirement in relation to) an Outline Battery Safety Management Plan). Effort should be made to agree any necessary measures with relevant consultation bodies.

4.15 Telecommunications, Television Reception and Utilities

(Scoping Report Section 14.8)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.15.1	14.8.2	Standalone Telecommunications, Television Reception and Utilities ES aspect chapter	The Applicant proposes that an assessment of impacts on Telecommunications, Television Reception and Utilities is presented as part of an 'Other Environmental Issues' chapter of the ES. The Inspectorate agrees with this approach and is content that any significant effects that arise from impacts on telecommunications, television reception and utilities can be assessed within the 'Other Environmental Issues' chapter of the ES.

ID	Ref	Other points	Inspectorate's comments
4.15.2	14.8.1	Impacts	It should be clear how the results of the desk study and consultation have informed the layout of the Proposed Development. Should any diversions of utility or telecommunications infrastructure be required, these should be described in the ES and any resultant likely significant effects should be assessed.

4.16 Waste

(Scoping Report Section 14.9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.16.1	14.9.4	Standalone Waste ES aspect chapter	The Inspectorate agrees that a standalone chapter on waste is not required in the ES and that the description of the potential streams of construction waste and estimated volumes can be included in the ES description of development chapter. A similar description and estimates should be provided in respect of decommissioning. The ES should assess any impacts resulting from the transport of waste generated during construction and decommissioning of the Proposed Development which are likely to result in significant effects. Any assumptions made (such as with regard to quantities of contaminated material) should be clearly set out and justified in the ES. In addition, the ES should describe any measures implemented to minimise waste and state whether the waste hierarchy will be utilised. The Framework CEMP should include as much detail as possible on on-site waste management, recycling opportunities and off-site disposal.

5. INFORMATION SOURCES

5.0.1 The Inspectorate's National Infrastructure Planning website includes links to a range of advice regarding the making of applications and environmental procedures, these include:

- Pre-application prospectus[23]
- Planning Inspectorate advice notes[24]:
  - Advice Note Three: EIA Notification and Consultation;
  - Advice Note Four: Section 52: Obtaining information about interests in land (Planning Act 2008);
  - Advice Note Five: Section 53: Rights of Entry (Planning Act 2008);
  - Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements;
  - Advice Note Nine: Using the 'Rochdale Envelope';
  - Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects (includes discussion of Evidence Plan process);
  - Advice Note Twelve: Transboundary Impacts;
  - Advice Note Seventeen: Cumulative Effects Assessment; and
  - Advice Note Eighteen: The Water Framework Directive.

5.0.2 Applicants are also advised to review the list of information required to be submitted within an application for Development as set out in The Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009.

[23] The Planning Inspectorate's pre-application services for applicants. Available from: https://infrastructure.planninginspectorate.gov.uk/application-process/pre-application-service-for-applicants/

[24] The Planning Inspectorate's series of advice notes in relation to the Planning Act 2008 process. Available from: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/

APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

TABLE A1: PRESCRIBED CONSULTATION BODIES[25]

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Health and Safety Executive	Health and Safety Executive
The National Health Service Commissioning Board	NHS England
The relevant Clinical Commissioning Group	NHS Mid-Essex Clinical Commissioning Group
Natural England	Natural England
The Historic Buildings and Monuments Commission for England	Historic England
The relevant fire and rescue authority	Essex County Fire and Rescue Service
The relevant police and crime commissioner	Police, Fire and Crime Commissioner for Essex
The relevant parish council(s) or, where the application relates to land [in] Wales or Scotland, the relevant community council	Hatfield Peverel Parish Council
	Terling and Fairstead Parish Council
	Boreham Parish Council
	Great and Little Leighs Parish Council
The Environment Agency	The Environment Agency
The Relevant Highways Authority	Essex County Council Highways Authority
The relevant strategic highways company	Highways England
Public Health England, an executive agency of the Department of Health	Public Health England
Relevant statutory undertakers	See Table 2 below

[25] Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the 'APFP Regulations')

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Crown Estate Commissioners	The Crown Estate
The Forestry Commission	The Forestry Commission
The Secretary of State for Defence	Ministry of Defence
The Office for Nuclear Regulation	The Office for Nuclear Regulation

TABLE A2: RELEVANT STATUTORY UNDERTAKERS[26]

STATUTORY UNDERTAKER	ORGANISATION
The relevant Clinical Commissioning Group	NHS Mid-Essex Clinical Commissioning Group
The National Health Service Commissioning Board	NHS England
The relevant National Health Service Trust	East of England Ambulance Service National Health Service Trust
Railways	Network Rail Infrastructure Limited
Universal Service Provider	Royal Mail Group
Homes and Communities Agency	Homes England
The relevant Environment Agency	The Environment Agency
The relevant water and sewage undertaker	Anglian Water
	Essex and Suffolk Water, part of Northumbrian Water
The relevant public gas transporter	Cadent Gas Limited
	Energetics Gas Limited
	Energy Assets Pipelines Limited
	ES Pipelines Limited
	ESP Networks Limited
	ESP Pipelines Ltd
	ESP Connections Limited
	Fulcrum Pipelines Limited
	Harlaxton Gas Networks Limited
	GTC Pipelines Limited
	Independent Pipelines Limited

[26] 'Statutory Undertaker' is defined in the APFP Regulations as having the same meaning as in Section 127 of the Planning Act 2008 (PA2008)

STATUTORY UNDERTAKER	ORGANISATION
	Indigo Pipelines Limited
	Murphy Gas Networks Limited
	Quadrant Pipelines Limited
	National Grid Gas Plc
	Scotland Gas Networks Plc
	Southern Gas Networks Plc
The relevant electricity distributor with CPO Powers	Eclipse Power Network Limited
	Energetics Electricity Limited
	Energy Assets Networks Limited
	ESP Electricity Limited
	Fulcrum Electricity Assets Limited
	Harlaxton Energy Networks Limited
	Independent Power Networks Limited
	Leep Electricity Networks Limited
	Murphy Power Distribution Limited
	The Electricity Network Company Limited
	UK Power Distribution Limited
	Utility Assets Limited
	Vattenfall Networks Limited
	UK Power Networks Limited
The relevant electricity transmitter with CPO Powers	National Grid Electricity Transmission Plc

TABLE A3: SECTION 43 LOCAL AUTHORITIES (FOR THE PURPOSES OF SECTION 42(1)(B))[27]

LOCAL AUTHORITY[28]
South Cambridgeshire District Council
Brentwood Borough Council
Epping Forest District Council
Uttlesford District Council
Chelmsford City Council
Braintree District Council
Rochford District Council
Colchester Borough Council
Maldon District Council
Basildon Borough Council
Babergh District Council
West Suffolk District Council
Medway Council
Southend-on-Sea Borough Council
Thurrock Council
London Borough of Havering
London Borough of Enfield
Waltham Forest Council
London Borough of Redbridge
Hertfordshire County Council
Suffolk County Council
Essex County Council

[27] Sections 43 and 42(B) of the PA2008

[28] As defined in Section 43(3) of the PA2008

LOCAL AUTHORITY[28]
Cambridgeshire County Council

APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

CONSULTATION BODIES WHO REPLIED BY THE STATUTORY DEADLINE:
Anglian Water
Babergh District Council
Braintree District Council
Cadent and National Grid
Cambridgeshire County Council
Chelmsford City Council
Energetics Gas Limited
Environment Agency
Essex County Council
Forestry Commission
Great and Little Leighs Parish Council
GTC Pipelines Limited
Health and Safety Executive
Highways England
Maldon District Council
Medway Council
National Grid Electricity Transmission Plc and National Grid Gas Plc
Office for Nuclear Regulation
Public Health England
Southern Gas Networks Plc
Southend-on-Sea Borough Council
Suffolk County Council

Terling and Fairstead Parish Council
Thurrock Council

Anglian Water Services Ltd
Lancaster House
Lancaster Way
Ermine Business Park
Huntingdon
PE29 6XU

Tel 01480 323000
www.anglianwater.co.uk

Ms Katherine King
Senior EIA Advisor
Major Casework Directorate
The Planning Inspectorate,
Temple Quay House,
2 Temple Quay,
Bristol,
BS1 6PN

Your ref EN010118-LSF

2 December 2020

Dear Ms King,

Longfield Solar Farm: EIA Scoping Report

Thank you for the opportunity to comment on the scoping report for the above project. Anglian Water is the water and/or sewerage undertaker for the above site. The following response is submitted on behalf of Anglian Water.

General comments

Anglian Water would welcome further discussions with Longfield Solar Energy Ltd prior to the submission of the Draft DCO for examination. In particular it would be helpful to discuss the following issues:

- Wording of the Draft DCO including protective provisions specifically for the benefit of Anglian Water.
- Requirement for water and/or wastewater services.
- Impact of development on Anglian Water's existing assets and the need for mitigation if required.
- Pre-construction surveys.

9. Flood Risk, Drainage and Surface Water Management

Reference is made to a flood risk assessment being prepared for the above development. The Scoping Report identifies the principal risk of flooding from the above project being surface water flooding, At this stage it is unclear whether there is a requirement for a connection(s) to the public sewerage network for the above site or as part of the construction phase.

Anglian Water is responsible for managing the risks of flooding from surface water, foul water or combined water sewer systems. Consideration should be given to all potential sources of flooding including sewer flooding as part of the Environmental Statement and related flood risk assessment.

On the 1st April 2020, new sewerage adoption arrangements came into effect through the publication of a suite of documents known as Sewerage Section Guidance produced UK Water on behalf of the water industry for the approval of Ofwat.

Reference is made to Sewers for Adoption (Version 7). Sewers for adoption is no longer current and has been updated and replaced by the Design and Construction Guidance (DCG) which is available to view at the following address:

https://www.water.org.uk/sewerage-sector-guidance-approved-documents/

14. Other Environment Topics

Reference is made to undertaking a desktop study and consultation with utility providers which is welcomed.

The location of our existing infrastructure and assets (including both underground infrastructure and aboveground assets such as pumping stations) are available to view at the following address:

http://www.digdat.co.uk/digdatUtilities

Yours sincerely

[redacted]

Stewart Patience
Spatial Planning Manager, MRTPI

From:	Bron Curtis
To:	Longfield Solar Farm
Subject:	Your ref EN010118-LSF our ref DC/20/05010
Date:	09 November 2020 16:23:09
Attachments:	image001.png

Good afternoon,

Thank you for consulting Babergh and Mid Suffolk District Councils on the EIA Scoping for the above proposed development.

I can confirm that the councils have no comment to make in respect of the content of the ES.

Kind regards,
Bron

Bron Curtis BA(Hons), MA, MRTPI
Principal Planning Officer, Strategic Projects and Delivery - Development Management **** Wednesdays and Thursdays only ****
Sustainable Communities
Mid Suffolk and Babergh District Councils - Working Together

Telephone: [redacted]
For general enquiries email: **planningadmin@midsuffolk.gov.uk**
Websites: **www.babergh.gov.uk** or **www.midsuffolk.gov.uk**
Click Here for the latest planning news and changes to the service coming up this year.

For our latest Coronavirus response please visit click the following link-
https://www.midsuffolk.gov.uk/features/our-covid-19-response/

Controllers of the information you are providing. As required by the Data Protection Act 2018 the information will be kept safe, secure, processed and only shared for those purposes or where it is allowed by law. In some circumstances however we may need to disclose your personal details to a third party so that they can provide a service you have requested, or fulfil a request for information. Any information about you that we pass to a third party will be held securely by that party, in accordance with the Data Protection Act 2018 and used only to provide the services or information you have requested.
For more information on how we do this and your rights in regards to your personal information and how to access it, visit our website.

Braintree District Council

Our ref: 20/00006/ODC
Your ref: EN010118-LSF
Ask for: Mr Tim Havers
Dial: 01376 552526
Ext: 2526
Date: 3rd December 2020

Sustainable Development
Causeway House Braintree
Essex CM7 9HB
Tel: 01376 552525
planning@braintree.gov.uk
www.braintree.gov.uk

Ms Katherine King
Senior EIA Advisor
Major Casework Directorate
Temple Key House
2 The Square
Bristol
BS1 6PN

Dear Ms King,

PINS REF NO: EN010118-LSF (Longfield Solar Farm)

DESCRIPTION: Planning Act 2008 (as amended) and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 - Scoping Opinion Consultation

PROPOSAL: Application by Longfield Solar Energy Farm Ltd for an Order granting Development Consent for the Longfield Solar Farm

I write in response to the statutory consultation received by Braintree District Council on 6th November 2020 in relation to the Environmental Impact Assessment Scoping Report (SR) concerning the above development proposal.

Although a significant part of this proposal would be located within Braintree District, it would be classed as a Nationally Significant Infrastructure Project and would therefore require a Development Consent Order to be determined by the Planning Inspectorate on behalf of the Secretary of State.

This letter therefore constitutes Braintree District Council's response to the Environmental Impact Assessment Scoping Report consultation issued by the Planning Inspectorate.

Scoping Report

Regulatory Requirements and Assessment Methodologies

Braintree District Council consider that the SR has met the regulatory requirements set out in Part 4, Section 15(2) of the EIA Regulations which state that a scoping request must include *"a plan sufficient to identify the land; a brief description of the nature and purpose of the development and of its possible effects on the environment; and such other information or representations as the person making the request may wish to provide or make"*. The SR provides proportionate detail on the methodologies to be employed for each topic.

One of the benefits of scoping is the opportunity it presents to agree the detailed assessment methods prior to submission of the application. The more information provided, the more useful the response will be.

The Applicant should ensure the details of the proposed methods underpinning each EIA topic are agreed prior to submission of the ES with the relevant consultees, which would include for example, agreeing baseline survey locations and study areas, agreeing viewpoint locations etc. This should form part of the on-going consultation into the EIA.

Scoping – Environmental Topics Scoped into the EIA

The SR sets out the following topics as being scoped into the EIA:

- Climate Change
- Cultural Heritage
- Ecology
- Flood Risk, Drainage and Surface Water
- Landscape and Visual Amenity
- Nosie and Vibration
- Socio-Economics and Land Use
- Transport and Access

In addition, the following topics are also included but are not considered to require stand alone chapters with a single chapter proposed to cover all of them and technical appendices relating to each to be submitted:

- Air Quality
- Land Quality
- Glint and Glare
- Ground Conditions
- Human Health
- Major Accidents or Disasters
- Telecommunications
- Television Reception and Utilities
- Waste

Braintree District Council considers that the topics identified for inclusion within the EIA are appropriate. The following general comments are however made.

<u>Cultural Heritage</u>

There are a high number of Designated Heritage Assets, both Listed Buildings and a Registered Park/Garden (Terling Place) located in the immediate vicinity of the site. Some of these would be surrounded or almost surrounded by the proposed developable area whilst other would be in very close proximity to it. At this stage it is unclear how severe the proposal's impact would be upon these Designated Heritage Assets, although it seems likely at face value that the impact upon their setting would, at least in some cases be significantly affected.

Of particular concern is the proposal's impact upon the Grade 1 listed Ringers Farm. Very careful consideration should be given to minimising the proposals impact upon the above listed buildings and in particular upon Ringers Farm.

There is also a Protected Lane ((Noakes Lane) designated as such under the Council's Adopted Local Plan) which crosses the site to the north-west of Ringers Wood. The impact of the proposal upon the setting of this Protected Lane is also of concern.

The site contains a relatively high number of public rights of way. At this stage it is unclear how these would be affected during both the construction and operational phase of the

proposal and more information is required in this regard. It is anticipated that the Parish Council will be likely to be particularly interested in this matter as will the Ramblers Association.

Ecology

The general site area encompasses a cluster of Local Wildlife sites (which are also Ancient Woodlands as discussed further below). The developable area is shown to surround two of these Wildlife Sites completely and to run in close proximity to the remainder. The issue of lighting is raised in more detail below. The Council is also concerned with regard to the size of proposed stand-off areas and buffer zones to these Wildlife Sites and how functional these zones would be.

The River Ter (SSSI) is also adjacent to the site. This flows to the Essex Coast, acting as a Vector by which impacts upon the protected Natura 2000 Essex coastal sites may be impacted. The Council's Adopted Essex Coast Recreational Disturbance Avoidance and Mitigation Strategy (RAMS) SPD is relevant insofar as it identifies the importance of ensuring sufficient recreational space (including footpaths and other public rights of way) remain available in the southern part of the District, to help alleviate recreational pressure on protected coastal sites.

Landscape and Visual Amenity

There are a number of ancient woodlands located within the site boundary which the applicant has identified and is aware of. The proposal is at an early stage and there is not yet sufficient detail to identify what the detailed relationship between the proposal and these woodlands would be. However, it is noted that the developable area is shown to be in close proximity to these woodlands, and in fact surrounds two of them on all sides. The safeguarding of these woodlands is critical, both in terms of the operational phase of the proposed development and also in terms of the construction phase. At present it is unclear whether there would be sufficient stand-off from these woodlands in order for this safeguarding to be properly achieved.

The SR states that either underground cables or overhead lines would be used to connect to the existing grid. These two options are quite different in terms of their visual impact and their physical impact upon the land. At present there is little information provided on these options with the SR stating that overhead lines may constitute an NSIP. Further detailed information is required in relation to the consideration of these options.

The SR also identifies a number of baseline documents upon which the LVIA would be based. This list should also include the Braintree District Settlement Fringes Landscape Character Assessment 2015 which sits alongside but is more finely grained than the 2006 study.

Land Use

The site is very large and the majority of the land upon which the site is located is best and most versatile agricultural land. The proposal has the advantage of being temporary (albeit over an estimated period of 40 years). The EIA should provide detail on how the land and soil quality would be protected during the construction and operational phases and restored to its formal agricultural use at the end of the schemes operational life, to ensure that such land was not permanently lost.

There are also several areas of contaminated land within the site which are identified on the Council's records. Due consideration will need to be given to how development on or adjacent to such land would be managed.

Scoping – Environmental Topics Scoped out of the EIA

The SR sets out the following elements of identified technical topics as being scoped out of the EIA:

- **Climate Change** – In-combination impacts of temperature, sea level rise, precipitation change and changes in wind patterns are proposed to be scoped out of the in-combination climate impact assessment. Sea level rise is proposed to be scoped out of the climate change resilience review.
- **Landscape and Visual Amenity** – Lighting assessment and impact upon Deadham Vale AONB.
- **Noise and Vibration** – Ground-borne vibration from the construction, operation and decommissioning of the Scheme and operational noise effects associated with the Grid Connection.
- **Socio-Economics and Land Use** - Effects on Mineral Safeguarding Areas, Waste Consultation Areas and Transport Safeguarding Areas.
- **Transport and Access** - Operational vehicle movements due to low numbers of vehicles, hazardous loads and assessments for the decommissioning phase due to uncertainties in relation to future traffic flows and transport infrastructure.

The SR also identifies the following elements of other environmental topics as being scoped out of the EIA:

- **Air Quality** - Effect of scheme operation and operational traffic on air quality is proposed to be scoped out.
- **Ground Conditions** - Maintenance activities during the operational phase will be managed through an Operational Environmental Management Plan and are proposed to be scoped out of the assessment.
- **Human Health** - EMFs are proposed to be scoped out.
- **Major Accidents and Disasters** – It is proposed to scope out from the ES the assessment of major accidents or disasters which are not already being considered where it becomes clear that there is no real risk or serious possibility of such events interacting with the scheme.

In general terms Braintree District Council considers that the elements of technical and other environmental topics identified as being scoped out are appropriate although the following points of concern are raised.

Lighting

A Lighting Assessment is identified as being scoped out because 'any lighting during the construction phase would be temporary and any lighting during operation will be on temporarily'. It is not clear at this stage exactly what lighting would be require during the operational phase, nor how long it would need to remain on for. In addition, the Construction Phase is estimated at 24 to 36 months which is not insignificant.

The site is in a very rural location and contains a number of wooded areas, trees and established hedgelines. The Council are concerned firstly that the visual impact of lighting in such a rural area during the operational phase (even if only on temporarily) needs to be fully assessed. Secondly, the Ecological impact, partiality in relation to bat roosting and commuting corridors also needs to be fully assessed and temporary construction lighting and/or lighting required during the operational phase has the clear potential to have a detrimental impact in this regard if not assessed fully and managed correctly.

Conclusion

Braintree District Council consider that in general terms the SR meets the statutory requirements for scoping set out in Section 15 (2) of the EIA Regulations. The scope of the EIA is also considered to be adequate with the exception of the specific concerns raised above in relation to lighting. A number of other matters (such as specific heritage and ecology impact concerns) have also been raised above as areas where particularly detailed consideration is required due to the site's specific sensitivities.

This consultation response is made with regard to the SR in the context provided by the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended) and does not prejudice the Braintree District Council's consideration of the other planning matters relating to the development of this site.

Yours sincerely,

Mr Tim Havers MRTPI
Principal Planner

For

Mr Christopher Paggi
Planning Development Manager

Plant Protection
Cadent
Block 1; Floor 1
Brick Kiln Street
Hinckley
LE10 0NA
E-mail: plantprotection@cadentgas.com
Telephone: [redacted]

Katherine King
The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

National Gas Emergency Number:
0800 111 999*

National Grid Electricity Emergency Number:
0800 40 40 90*
* Available 24 hours, 7 days/week.
Calls may be recorded and monitored.

www.cadentgas.com

Date: 10/11/2020
Our Ref: EA_GE4A_3NWP_026496
Your Ref: EN010118 (JP)
RE: Formal Planning Application, CM3 3AU Longfield Solar Energy Farm Limited, Essex

Thank you for your enquiry which was received on 06/11/2020.
Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to Cadent Gas Limited, National Grid Electricity Transmission plc's and National Grid Gas Transmission plc's apparatus. Please note it does not cover the items listed in the section "Your Responsibilities and Obligations", including gas service pipes and related apparatus.
For details of Network areas please see the Cadent website (http://cadentgas.com/Digging-safely/Dial-before-you-dig) or the enclosed documentation.

Are My Works Affected?

Searches based on your enquiry have identified that there is apparatus in the vicinity of your enquiry which may be affected by the activities specified.
Can you please inform Plant Protection, as soon as possible, the decision your authority is likely to make regarding this application.
If the application is refused for any other reason than the presence of apparatus, we will not take any further action.
Please let us know whether Plant Protection can provide you with technical or other information that may be of assistance to you in the determination of the application.

As your proposed activity is in close proximity to National Grid's Transmission assets we have referred your enquiry/consultation to our Asset Protection team for further detailed assessment. We request that you do not commence work or take further action with regards to your proposal until you hear from us. We will endeavour to contact you within 21 days from the date of this response. Please contact us at assetprotection@nationalgrid.com if you have not had a response within this time frame.

Due to the presence of Cadent and/or National Grid apparatus in proximity to the specified area, the contractor should contact Plant Protection before any works are carried out to ensure the apparatus is not affected by any of the proposed works.

Your Responsibilities and Obligations

The "Assessment" Section below outlines the detailed requirements that must be followed when planning or undertaking your scheduled activities at this location.

It is your responsibility to ensure that the information you have submitted is accurate and that all relevant documents including links are provided to all persons (either direct labour or contractors) working for you near Cadent and/or National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

This assessment solely relates to Cadent Gas Limited, National Grid Electricity Transmission plc (NGET) and National Grid Gas Transmission plc (NGGT) and apparatus. This assessment does **NOT** include:

- Cadent and/or National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to Cadent and/or National Grid's assets in private land. You must obtain details of any such restrictions from the landowner in the first instance and if in doubt contact Plant Protection.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations, e.g. other gas distribution operators, local electricity companies, other utilities, etc.

It is **YOUR** responsibility to take into account whether the items listed above may be present and if they could be affected by your proposed activities. Further "Essential Guidance" in respect of these items can be found on either the National Grid or Cadent website.

This communication does not constitute any formal agreement or consent for any proposed development work; either generally or with regard to Cadent and/or National Grid's easements or wayleaves nor any planning or building regulations applications.

Cadent Gas Limited, NGGT and NGET or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

If you require further assistance please contact the Plant Protection team via e-mail (click here) or via the contact details at the top of this response.

Yours faithfully

Plant Protection Team

ASSESSMENT

Affected Apparatus
The apparatus that has been identified as being in the vicinity of your proposed works is:

- Electricity Transmission underground cables and associated equipment
- Electricity Transmission overhead lines
- Above ground electricity sites and installations

As your proposal is in proximity to apparatus, we have referred your enquiry / consultation to the following department(s) for further assessment:

- Land and Development Asset Protection Team (High Pressure Gas Transmission and Electricity Transmission Apparatus)

We request that you take no further action with regards to your proposal until you hear from the above. We will contact you within 28 working days from the date of this response. Please contact us if you have not had a response within this timeframe.

Requirements

BEFORE carrying out any work you must:

- **Refer to the attached cable profile drawings (if any) which provide details about the location of National Grid's high voltage underground cables.**
- Carefully read these requirements including the attached guidance documents and maps showing the location of apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe Cadent and/or National Grid's legal rights (i.e. easements or wayleaves). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near Cadent and/or National Grid's apparatus follow the requirements of the HSE Guidance Notes HSG47 - 'Avoiding Danger from Underground Services' and GS6 – 'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at http://www.hse.gov.uk
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken.

GUIDANCE

Working Near National Grid Electricity Transmission equipment:
If you are carrying out any work in proximity to an overhead line or any excavation that may be near an underground cable then please consult National Grid Technical Guidance Note 287 that can be found at https://www.nationalgrid.com/sites/default/files/documents/8589935533-TGN%20287_Third%20party%20guidance%20for%20working%20near%20NGET%20equipment.pdf Further guidance related to underground cables can also be found at https://www.nationalgrid.com/sites/default/files/documents/8589936512-Excavating%20Safety%20Leaflet%20Electricity.pdf

Standard Guidance

Essential Guidance document:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=8589934982

General Guidance document:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=35103

Excavating Safely in the vicinity of gas pipes guidance (Credit card):
http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf

Excavating Safely in the vicinity of electricity cables guidance (Credit card):
http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf

Copies of all the Guidance Documents can also be downloaded from the National Grid and Cadent websites.

TL7312SW
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7312SE
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7412SW
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7412SE
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7512SW
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7512SE
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7612SW
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TL7612SE
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7311NW
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TL7311NE
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7411NW
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TL7411NE
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7511NW
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7511NE
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7611NW
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7411SW
Tile not found in current owner index. Other owners' assets may be present in this area.

TL7411SE
Tile not found in current owner index. Other owners' assets may be present in this area.

ID: EA_GE4A_3NWP_026496	View extent: 4120m, 2440m	Do not proceed without further consultation
USER: James.Parker	LP MAINS MP MAINS IP MAINS LHP MAINS NHP MAINS	This plan shows those pipes owned by Cadent Gas Limited in its role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc., are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.
DATE: 10/11/2020		
DATA DATE: 09/11/2020		
REF: EN010118 (JP)		
MAP REF: TL7511 CENTRE: 575460, 211011	0m 200m Approximate scale 1:10000 on A3 Colour Landscape	

Some examples of Plant Items:
Valve | Depth of Cover | Syphon | Diameter Change | Material Change | Out of Standard Service

Map 2 of 2 (GAS)

MAPS Plot Server Version 1.11.0

Cadent
Your Gas Network

Requested by: The Planning Inspectorate

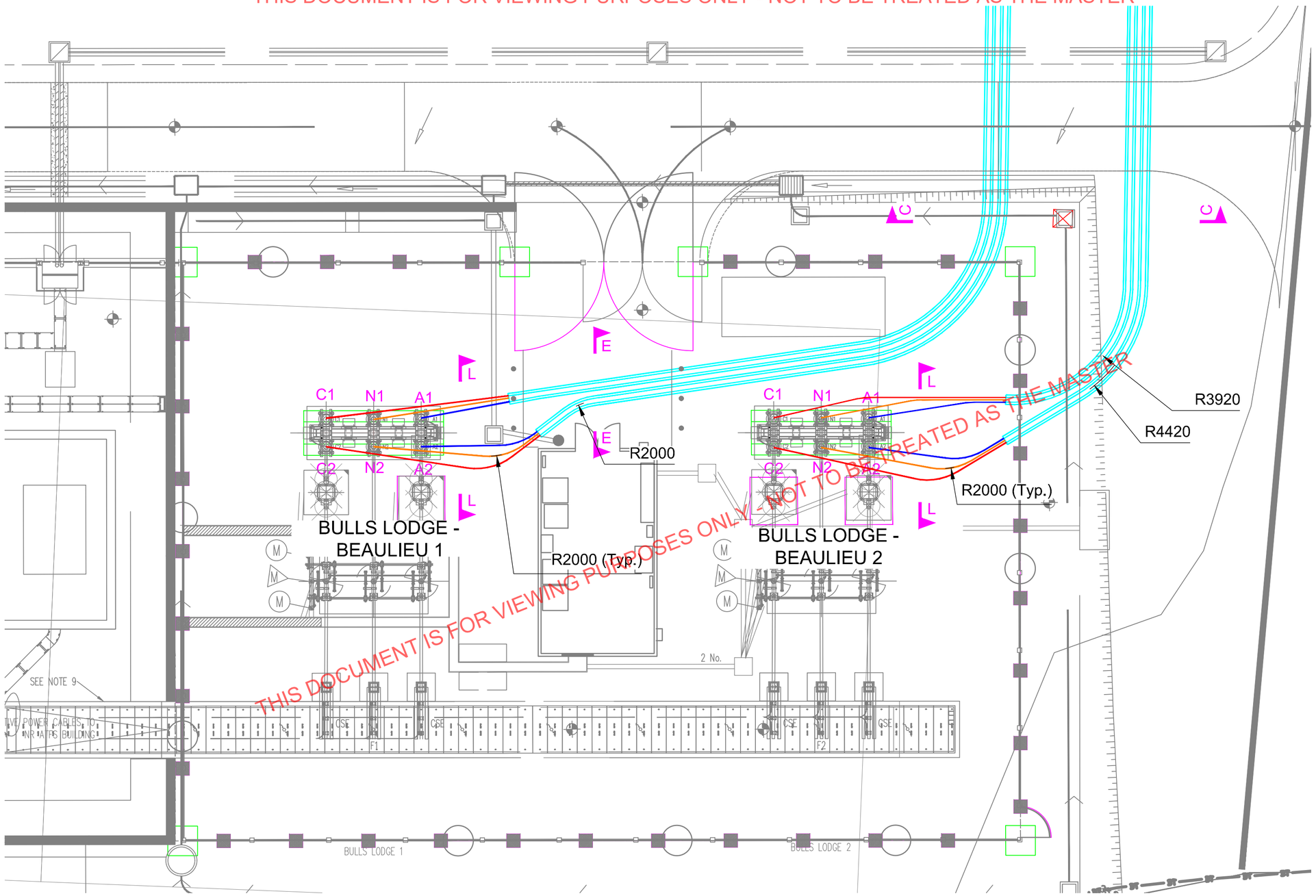
ID: EA_GE4A_3NWP_026496	View extent: 4120m, 2440m	Do not proceed without further consultation
USER: James.Parker	Underground cables Overhead lines	This plan shows those cables owned by National Grid Electricity Transmission plc in its role as a Licensed Electricity Transporter (ET). Electricity cables owned by other ETs, or otherwise privately owned, may be present in this area. Information with regard to such cables should be obtained from the relevant owners The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Ancillary equipment such as cooling systems and communication cables are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by National Grid Electricity Transmission plc or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of cables and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near electricity apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.
DATE: 10/11/2020		
DATA DATE: 14/08/2020		
REF: EN010118 (JP)		
MAP REF: TL7511 CENTRE: 575460, 211011	0m 200m Approximate scale 1:10000 on A3 Colour Landscape	

Map 1 of 2 (ELECTRIC)

MAPS Plot Server Version 1.11.0

nationalgrid

Requested by: The Planning Inspectorate



Balfour Beatty
Utility Solutions
Power Transmission & Distribution

PROJECT:
Bulls Lodge Substation to Beaulieu Substation Connection

Drawing Title:
BEAULIEU SUBSTATION PLAN

Drawing Number:
ULQH4953 - 7

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Approved	
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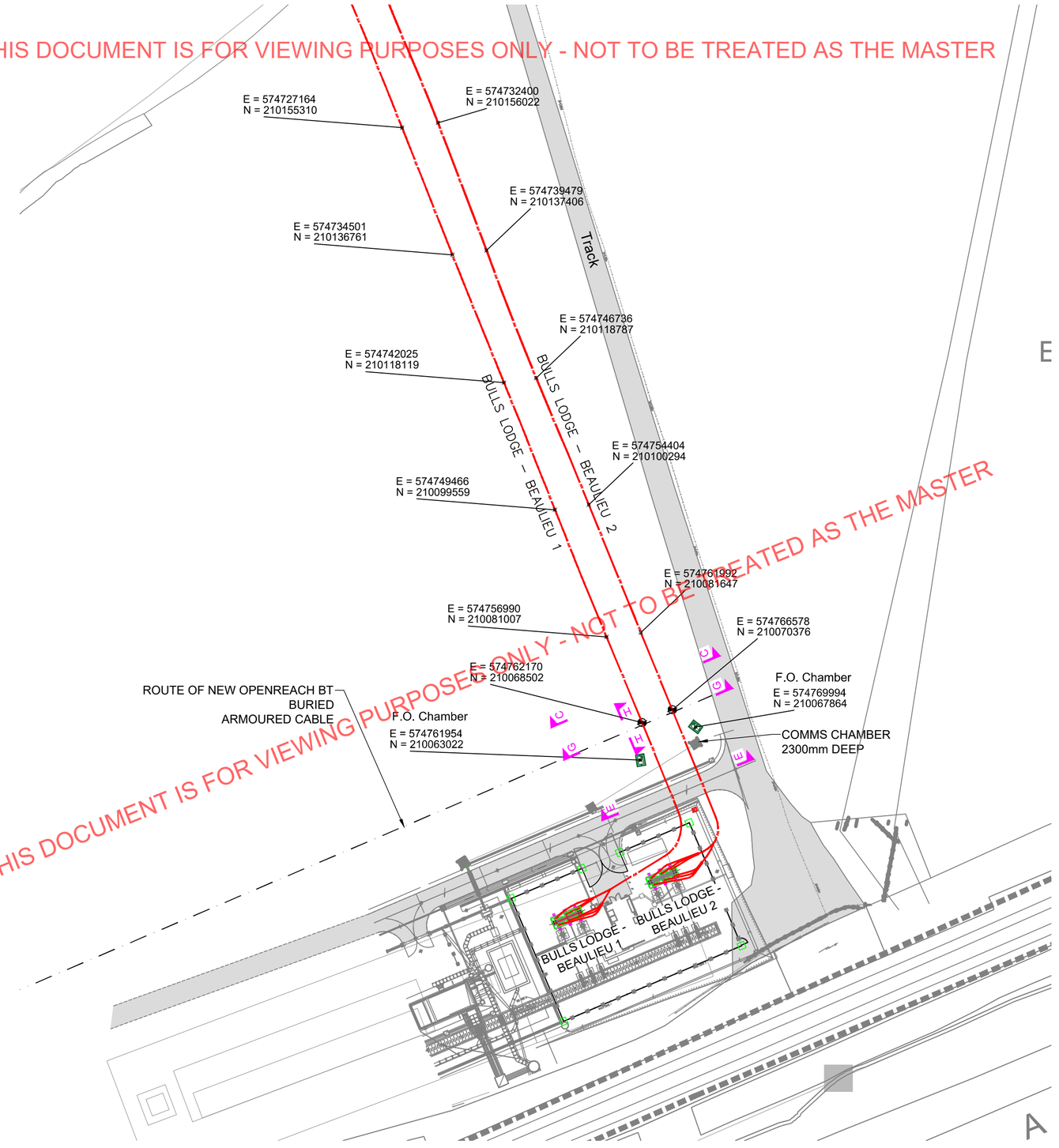

Balfour Beatty
Utility Solutions
Power Transmission & Distribution

PROJECT:
Bulls Lodge Substation to Beaulieu Substation Connection

Drawing Title:
ROUTE PLAN
SHEET 1

Drawing Number:
ULQH4953 - 8

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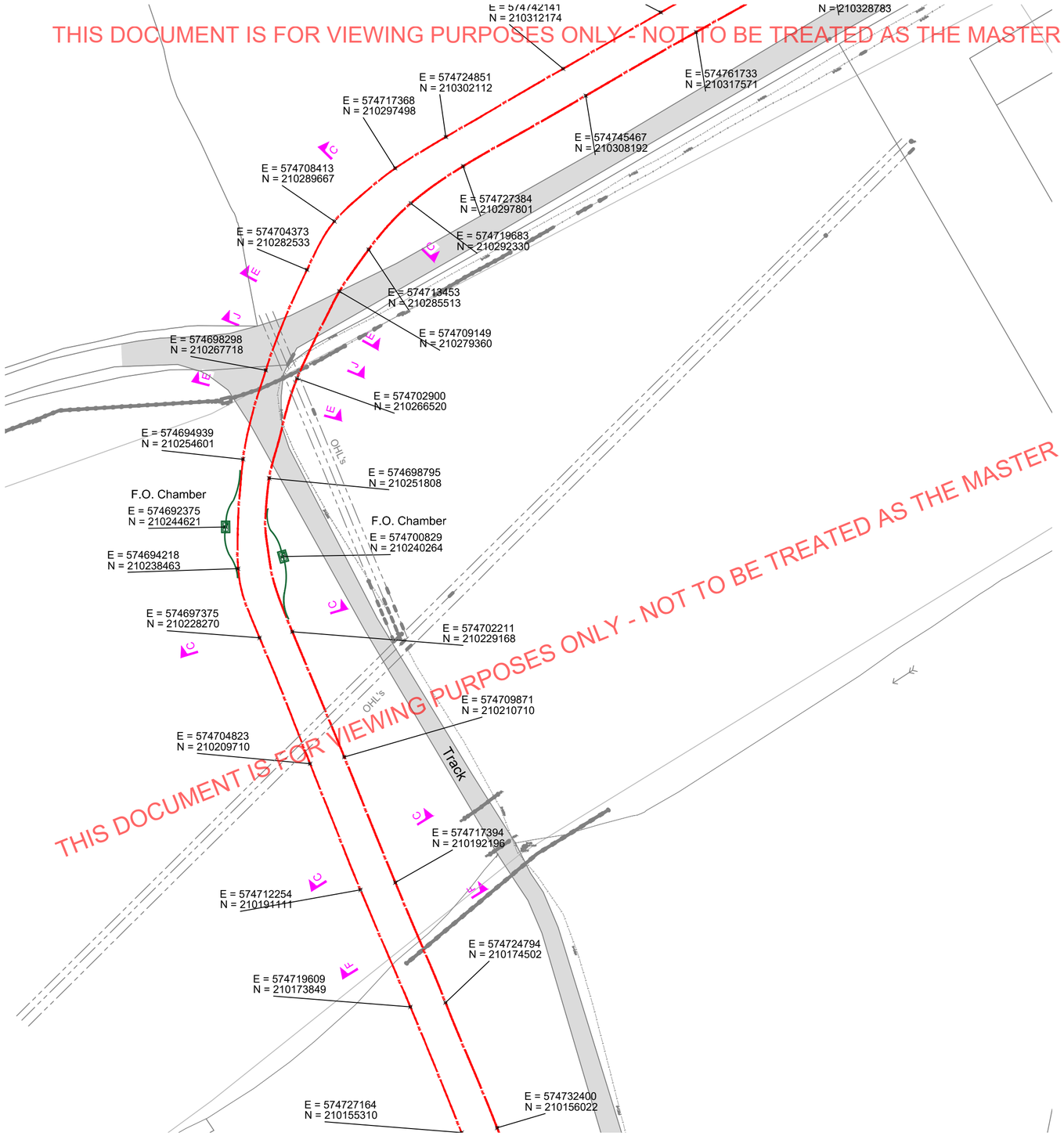

Balfour Beatty
Utility Solutions
Power Transmission & Distribution

PROJECT:
Bulls Lodge Substation to Beaulieu Substation Connection

Drawing Title:
ROUTE PLAN
SHEET 2

Drawing Number:
ULQH4953 - 9

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Approved	
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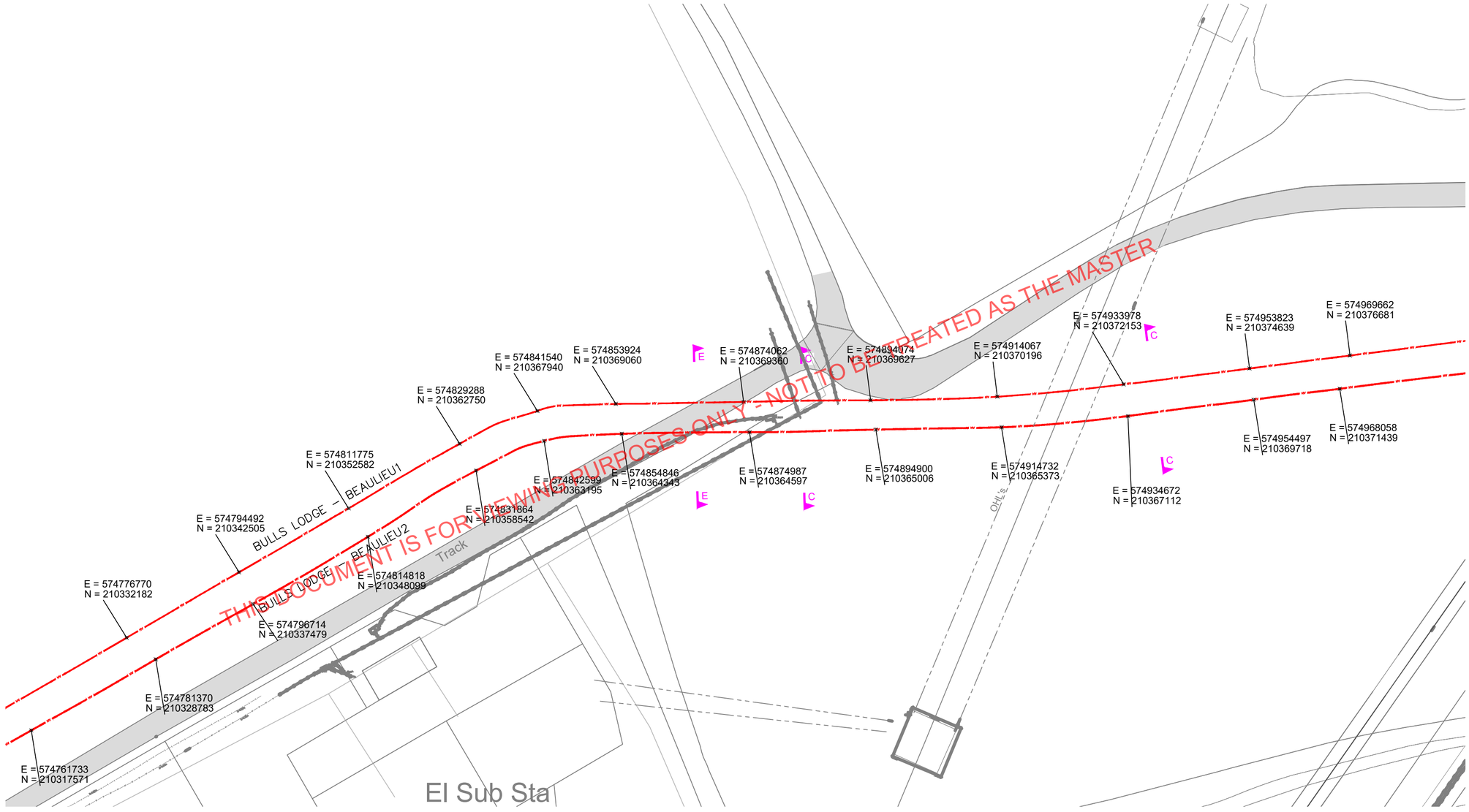
INDICATIVE



Balfour Beatty Utility Solutions Power Transmission & Distribution						PROJECT: Bulls Lodge Substation to Beaulieu Substation Connection	Drawing Title: ROUTE PLAN SHEET 3 Drawing Number: ULQH4953 - 10	Drawn: SJF Checked: GL Approved:	Scale: 1:1000 Page: 10 Size: A2

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INDICATIVE

4VB061A
L12 DT(MK3) M3

SGT2

SGT1

BULLS LODGE - BEAULIEU 2

BULLS LODGE - BEAULIEU 1

Track

F.O. Chamber
E = 575149855
N = 210401628

F.O. Chamber
E = 575155997
N = 210393205

BULLS LODGE – BEAULIEU 1

BULLS LODGE – BEAULIEU 2

E = 575166613
N = 210408863

E = 575172963
N = 210417956

E = 575185925
N = 210421053

E = 575178371
N = 210410456

E = 575167099
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E = 575112379
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Balfour Beatty
Utility Solutions
Power Transmission & Distribution

PROJECT:
Bulls Lodge Substation to Beaulieu Substation Connection

Drawing Title:
ROUTE PLAN
SHEET 4

Drawing Number:
ULQH4953 - 11

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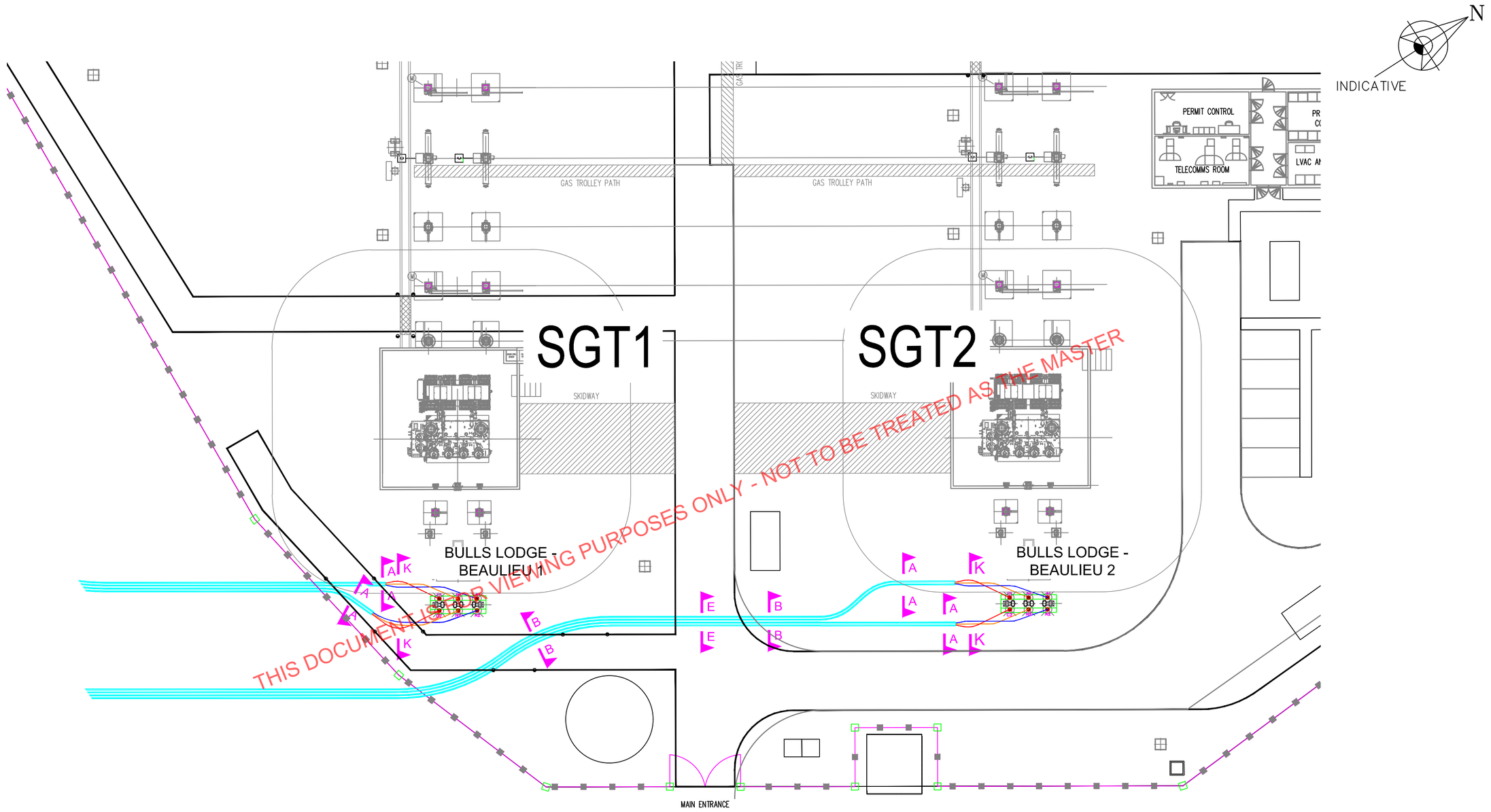
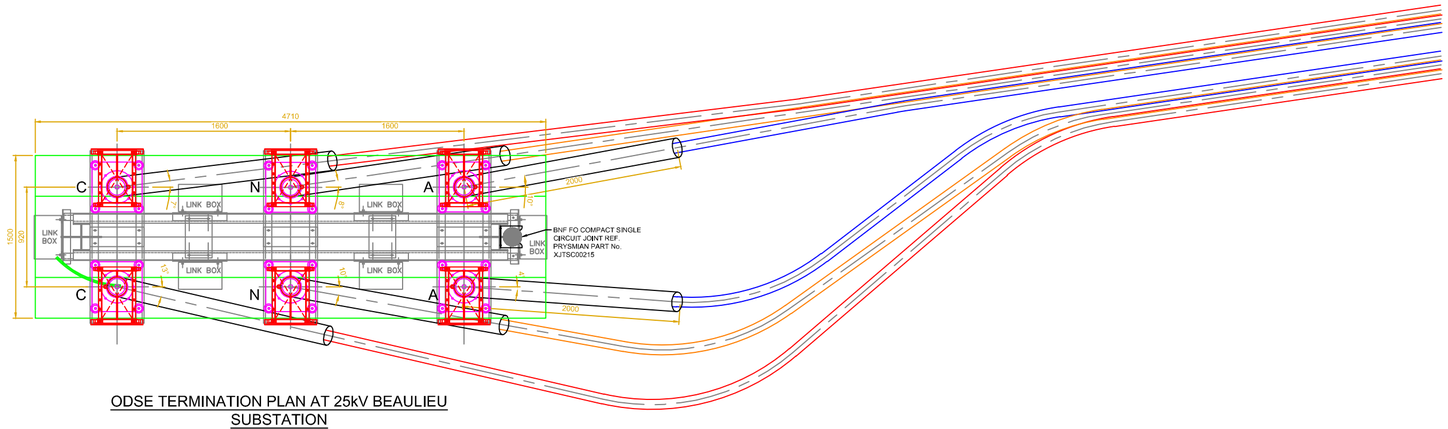
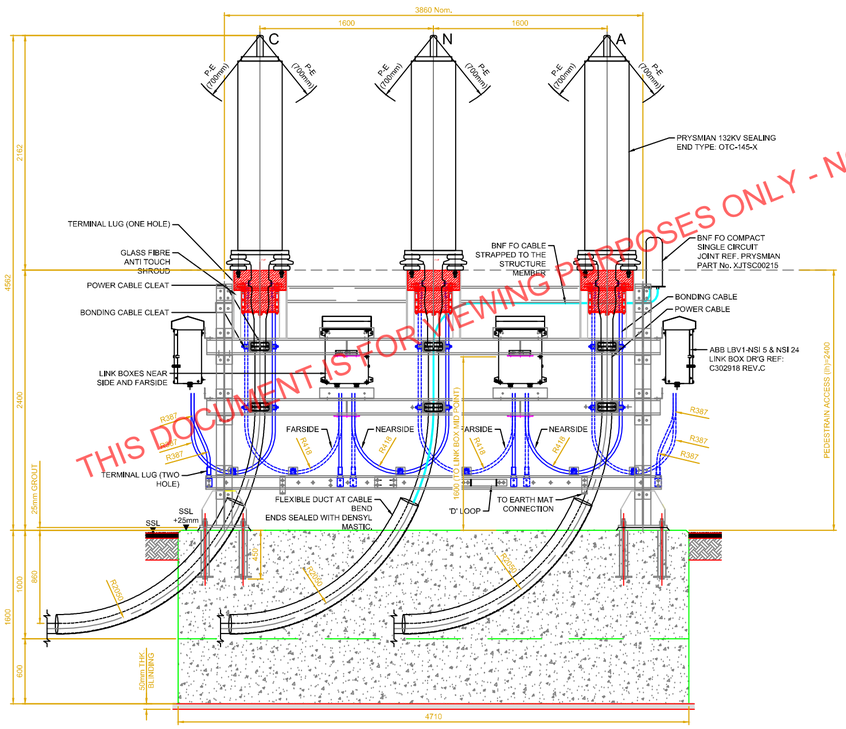


Balfour Beatty Utility Solutions Power Transmission & Distribution							PROJECT: Bulls Lodge Substation to Beaulieu Substation Connection	Drawing Title: BULLS LODGE SUBSTATION PLAN Drawing Number: ULQH4953 - 12	Drawn: SJF Checked: GL Approved:	Scale: 1:250 Page: 12 Size: A2



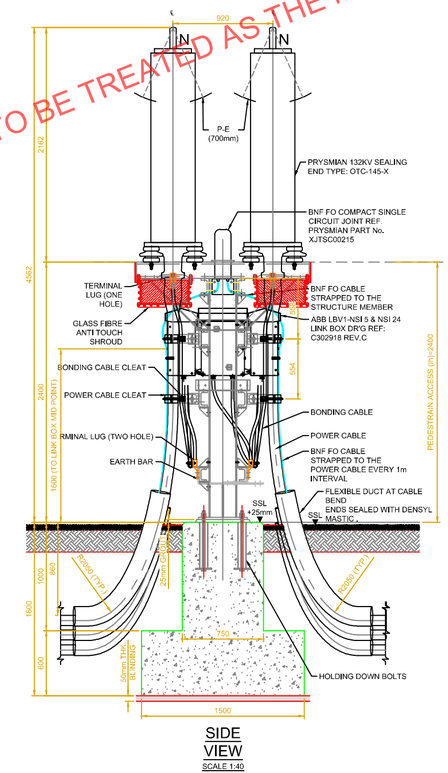
ODSE TERMINATION PLAN AT 25kV BEAULIEU SUBSTATION

SCALE 1:40



ELEVATION

SCALE 1:40



SIDE VIEW

SCALE 1:40

Balfour Beatty
Utility Solutions
Power Transmission & Distribution

PROJECT:

Bulls Lodge Substation to Beaulieu Substation Connection

Drawing Title:

BEAULIEU SUBSTATION TERMINATION STRUCTURE

Drawing Number: ULQH4953 - 13

Drawn	Scale:
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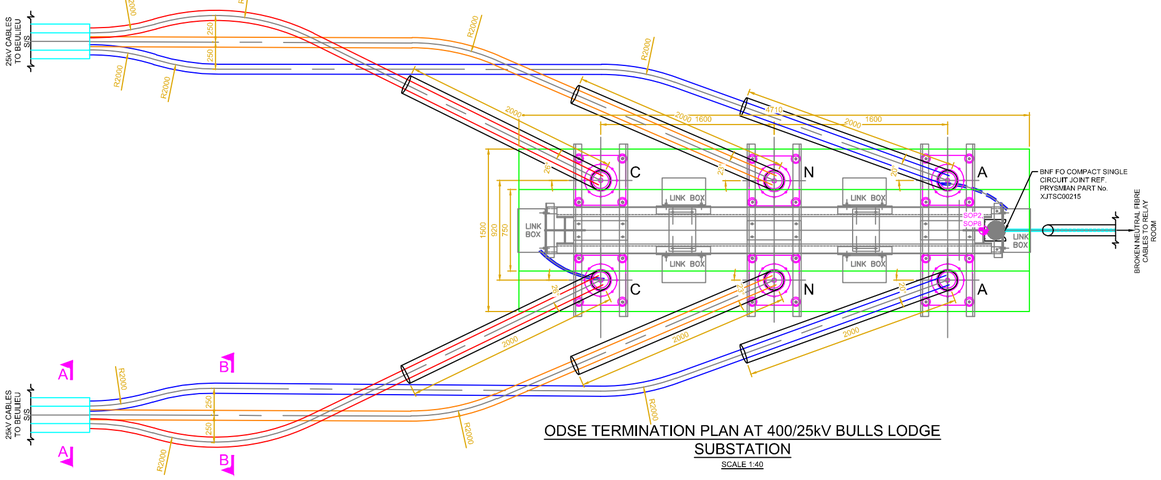
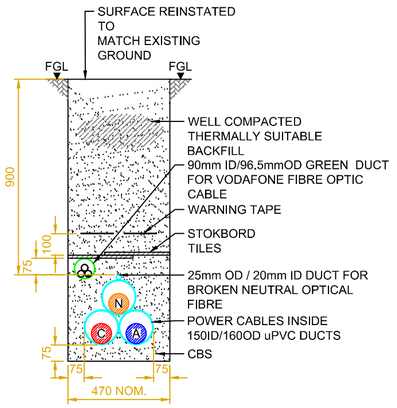
GL	Page: 13
Approved	
	Size: A2



ODSE TERMINATION PLAN AT 400/25kV BULLS LODGE SUBSTATION
SCALE 1:40



SECTION
A-A
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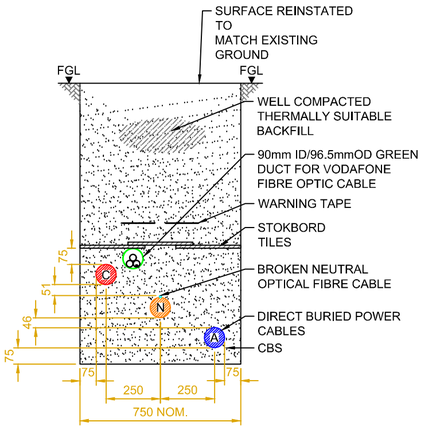

SECTION
B-B
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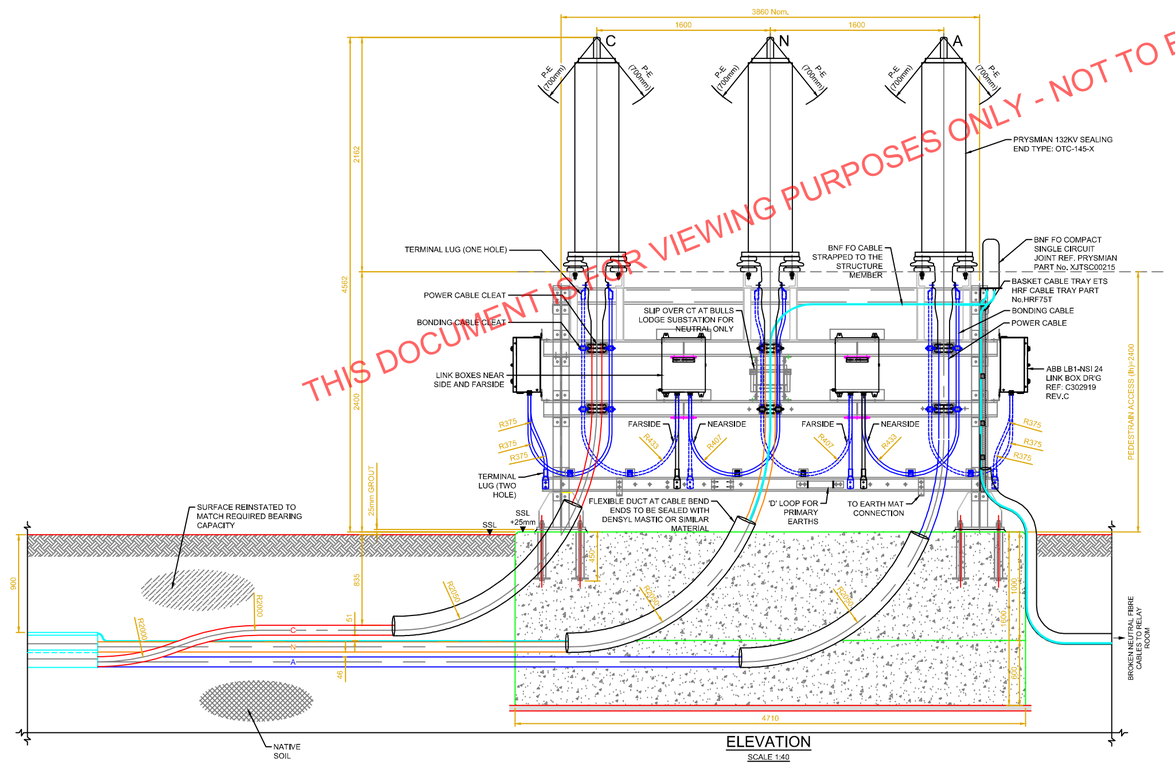
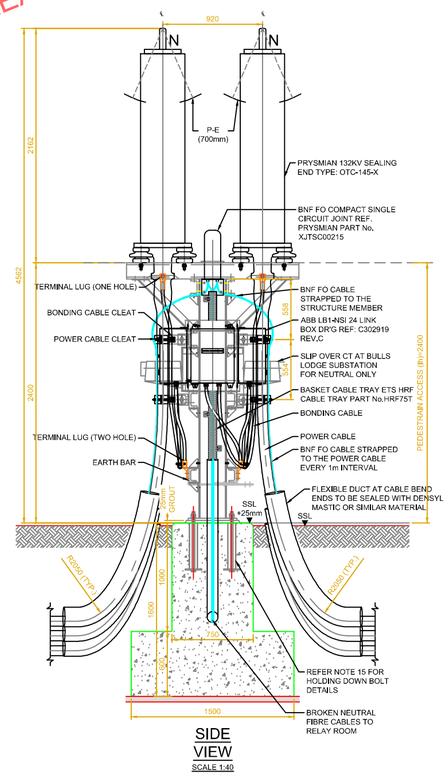


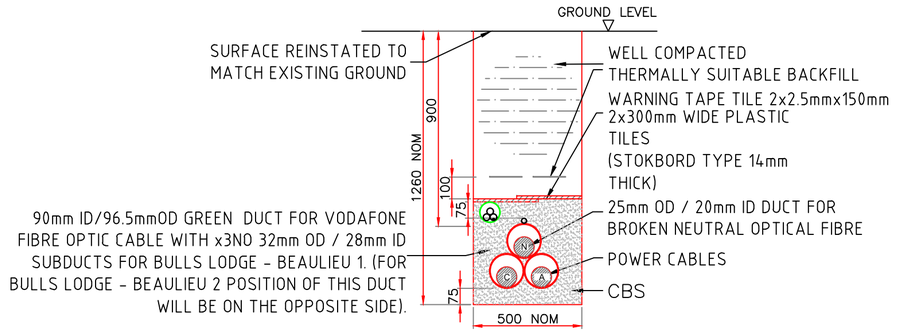
ELEVATION
SCALE 1:40



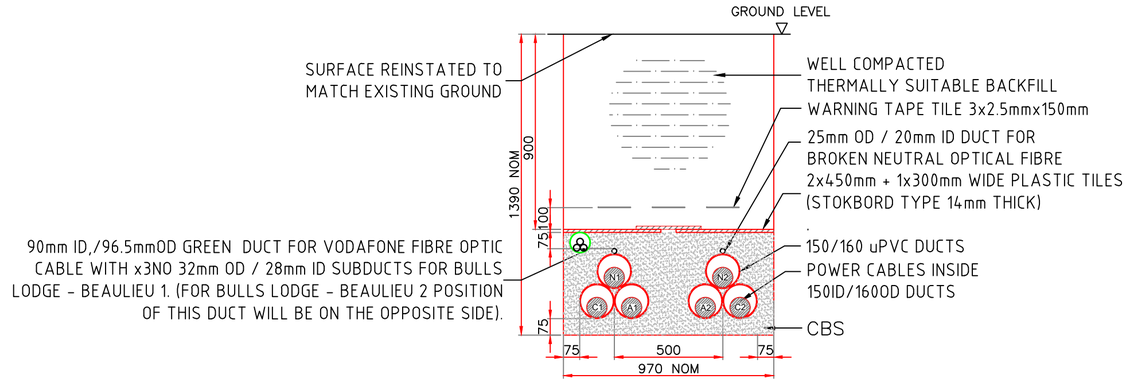
SIDE
VIEW
SCALE 1:40

Balfour Beatty Utility Solutions Power Transmission & Distribution					PROJECT: Bulls Lodge Substation to Beaulieu Substation Connection	Drawing Title: BULLS LODGE SUBSTATION TERMINATION STRUCTURE Drawing Number: ULQH4953 - 14

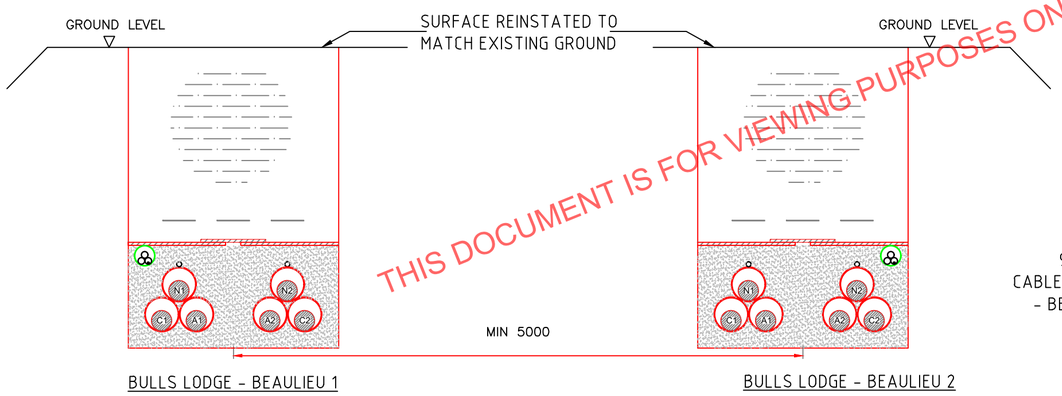
Drawn	Scale:
SJF	1:40
Checked	
GL	Page:
Approved	14
	Size: A2



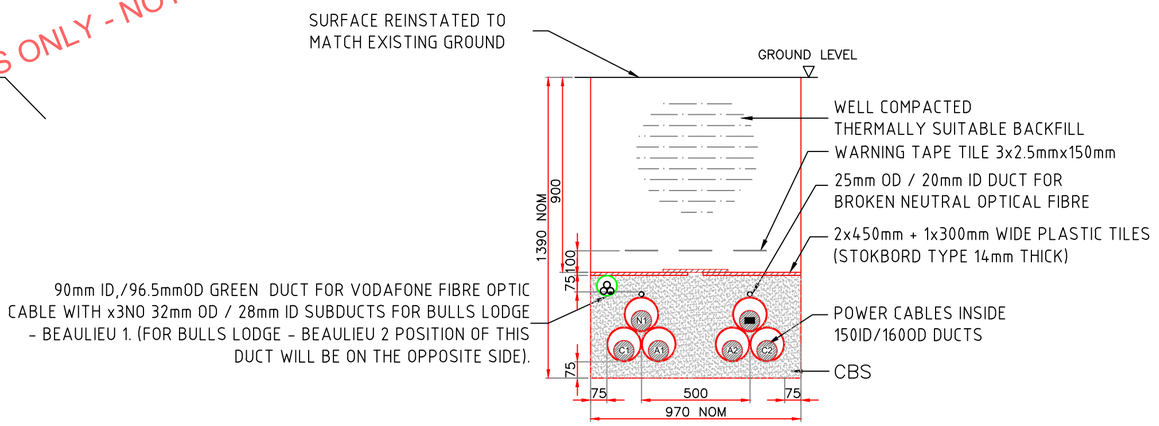
SECTION A-A
TYPICAL SECTIONAL DETAILS FOR CABLES IN SINGLE TREFOIL DUCTED GROUP INSIDE SUBSTATION
(SHOWN TYPICALLY FOR BULLS LODGE - BEAULIEU 1 LEFT CIRCUIT ONLY)



SECTION B-B
TYPICAL SECTION DETAILS FOR 2 X TREFOIL DUCTS INSIDE SUBSTATION

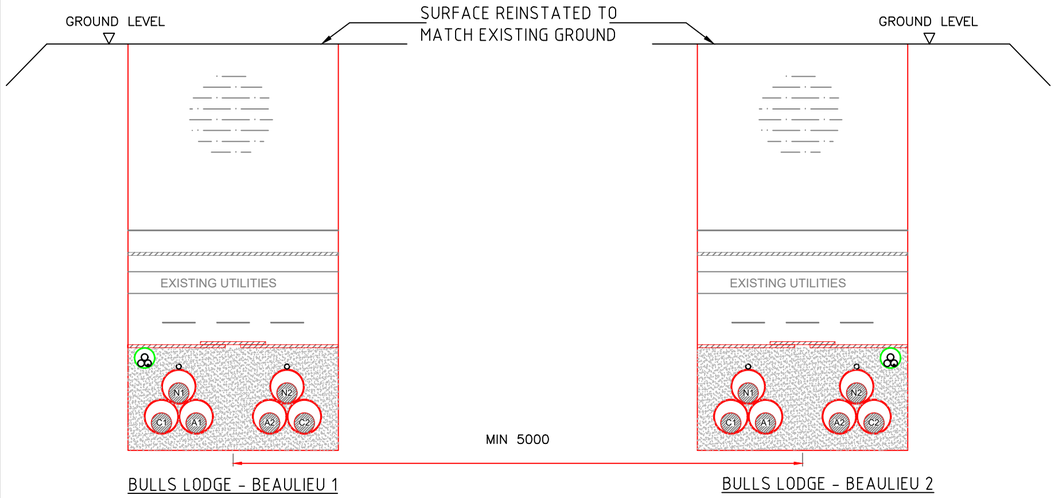


SECTION C-C
TYPICAL SECTION DETAILS FOR CABLES INSTALLED IN DUCTS

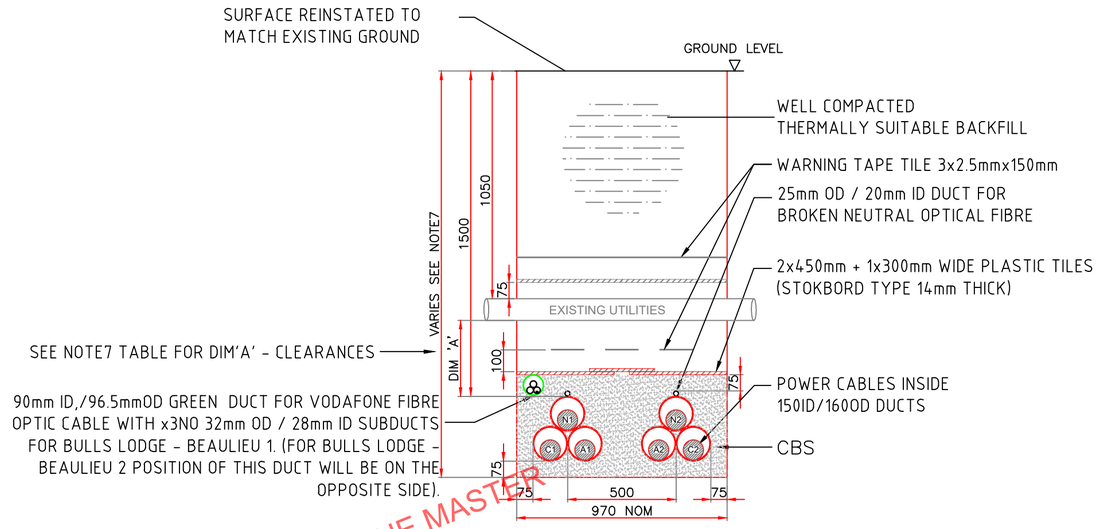


SECTION C-C
TYPICAL SECTION DETAILS FOR CABLES INSTALLED IN DUCTS FOR BULLS LODGE - BEAULIEU 1 CIRCUIT

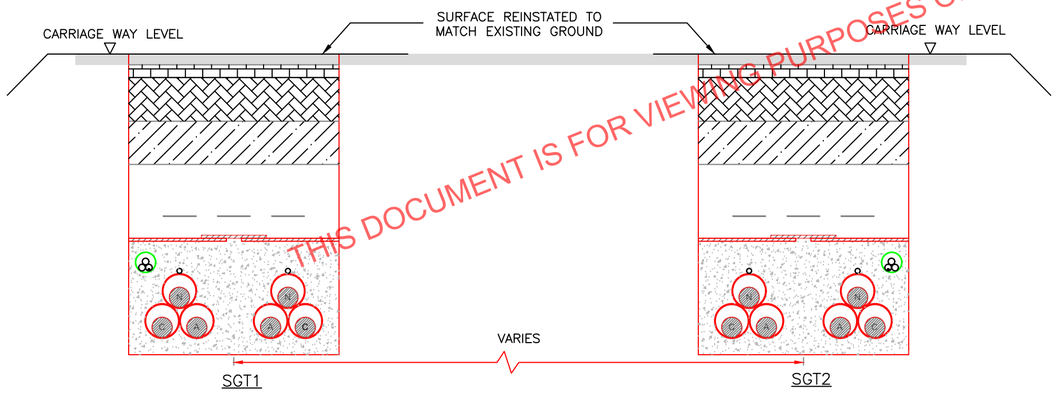
Balfour Beatty Utility Solutions Power Transmission & Distribution							PROJECT: Bulls Lodge Substation to Beaulieu Substation Connection	Drawing Title: TRENCH CROSS SECTIONS SHEET 1	Drawn: SJF Checked: GL Approved:
								Drawing Number: ULQH4953 - 15	Scale: 1:20 Page: 15 Size: A2



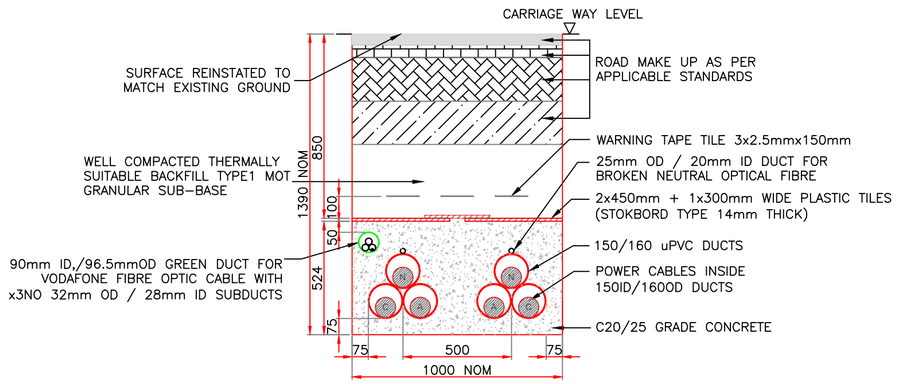
SECTION D-D
TYPICAL SECTION DETAILS FOR CABLES AT EXISTING UTILITY CROSSING



SECTION D-D
TYPICAL SECTION DETAILS FOR CABLES AT EXISTING UTILITY CROSSING FOR BULLS LODGE - BEAULIEU 1 CIRCUIT

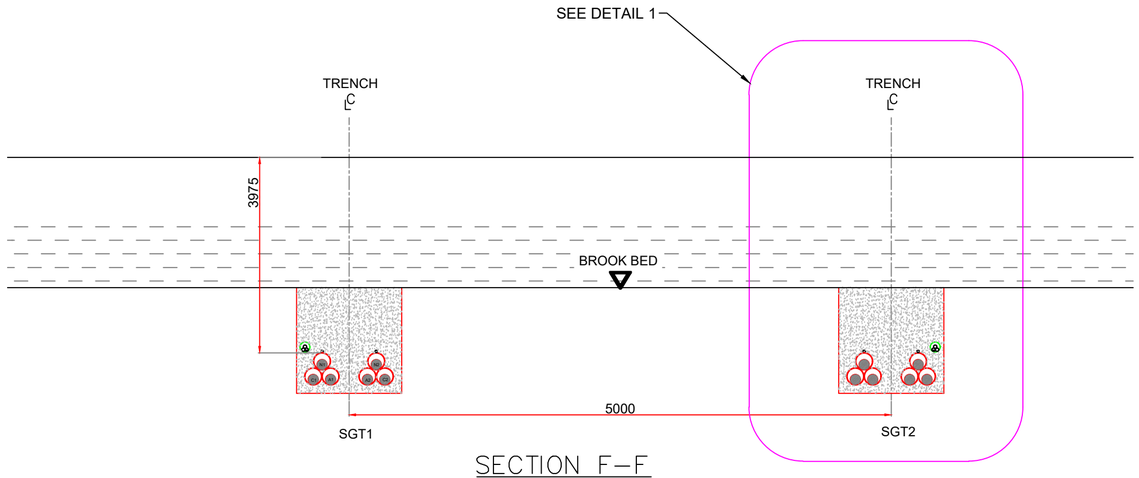


SECTION E-E
TRENCH SECTION AT ROAD CROSSING
SCALE 1:20



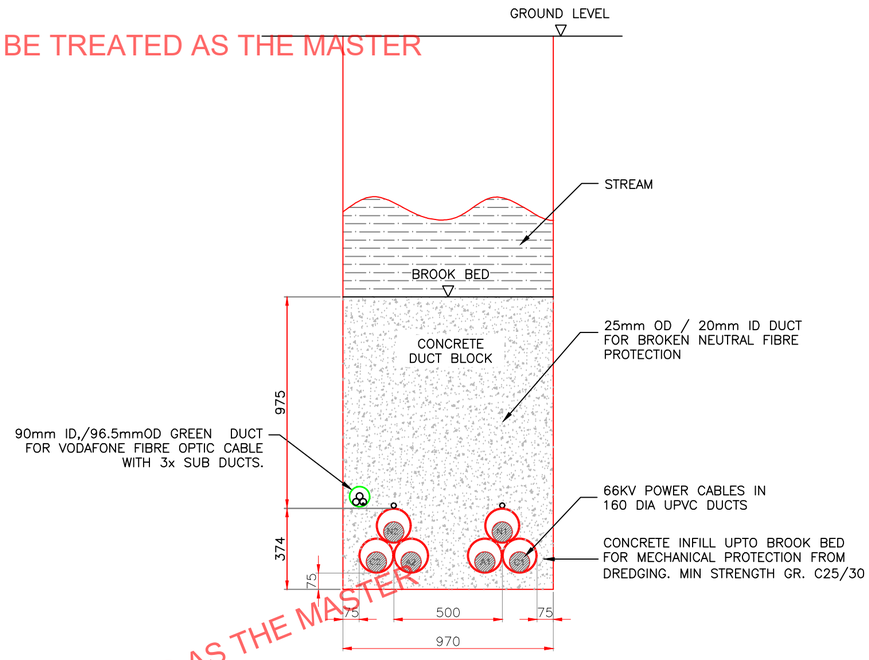
SECTION E-E
ROAD CROSSING TRENCH DETAILS
TYPICALLY SHOWN FOR SGT1 CIRCUIT
SCALE 1:20

Balfour Beatty Utility Solutions Power Transmission & Distribution						PROJECT: Bulls Lodge Substation to Beaulieu Substation Connection	Drawing Title: TRENCH CROSS SECTIONS SHEET 2 Drawing Number: ULQH4953 - 16	Drawn: SJF Checked: GL Approved: Scale: 1:20 Page: 16 Size: A2



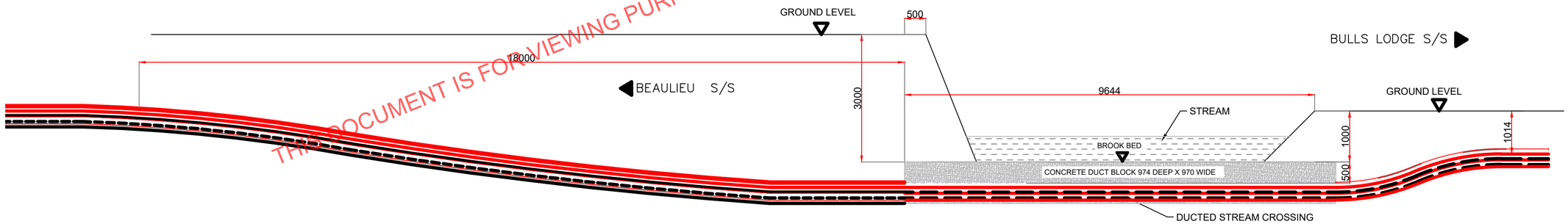
SECTION F–F
STREAM CROSSING

SCALE 1:40



DETAIL 1

SCALE 1:20



LONGITUDINAL
SECTION
STREAM CROSSING

SCALE 1:75

Balfour Beatty
Utility Solutions
Power Transmission & Distribution

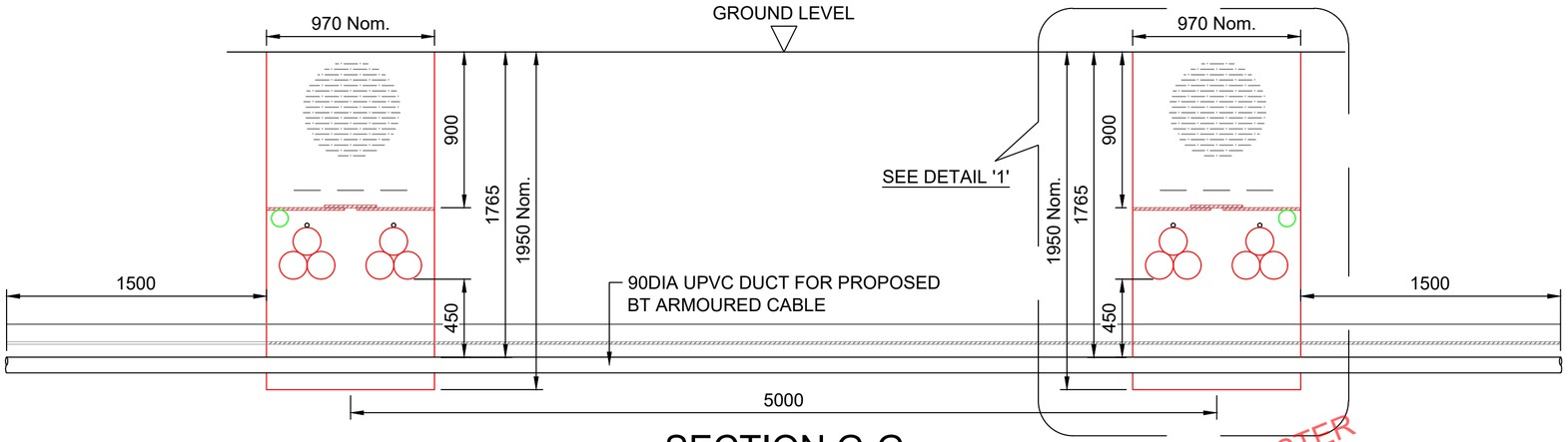
PROJECT:
Bulls Lodge Substation to Beaulieu Substation Connection

Drawing Title:
TRENCH CROSS SECTIONS
SHEET 3

Drawn: SJF
Checked: GL
Approved:

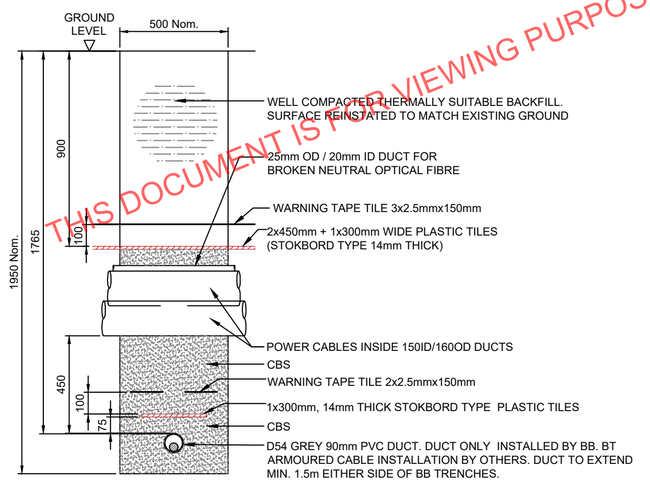
Scale: As Noted
Page: 17
Size: A2

Drawing Number:
ULQH4953 - 17



SECTION G-G

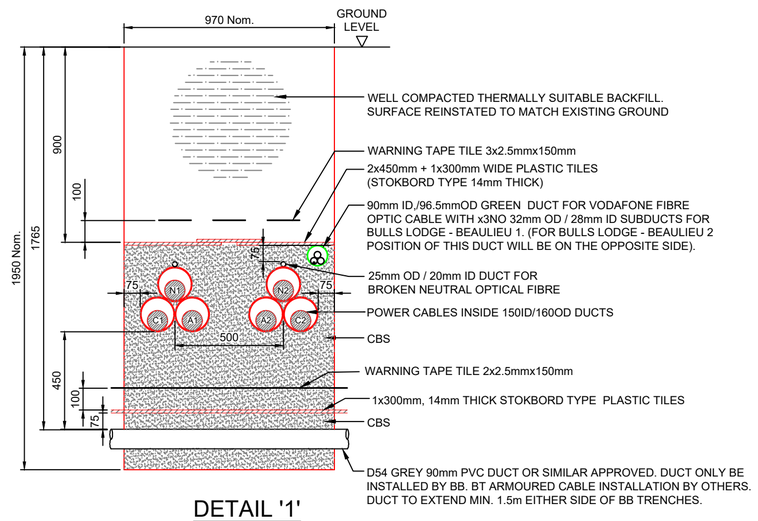
SCALE 1:25



SECTION H-H

(VODAFONE GREEN DUCT NOT SHOWN FOR CLARITY)

SCALE 1:20

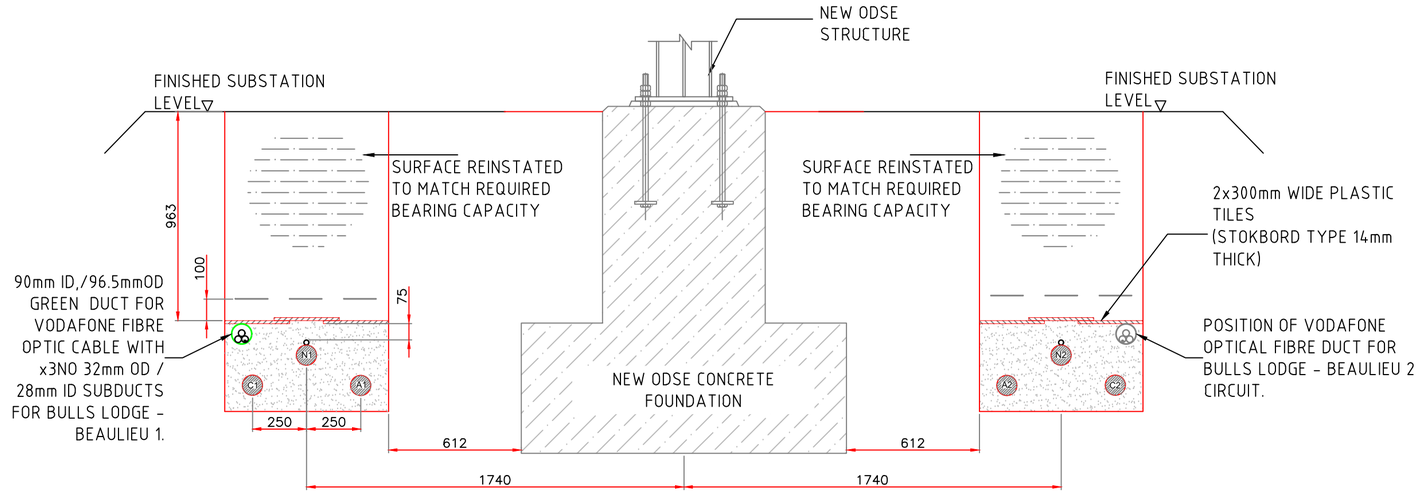


DETAIL '1'

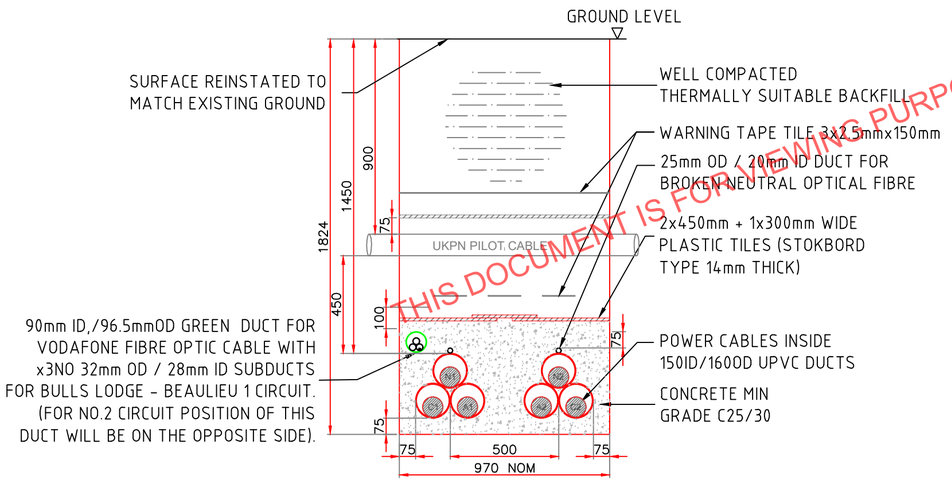
(TYPICALLY SHOWN FOR BULLS LODGE - BEAULIEU 2 CIRCUIT)

SCALE 1:20

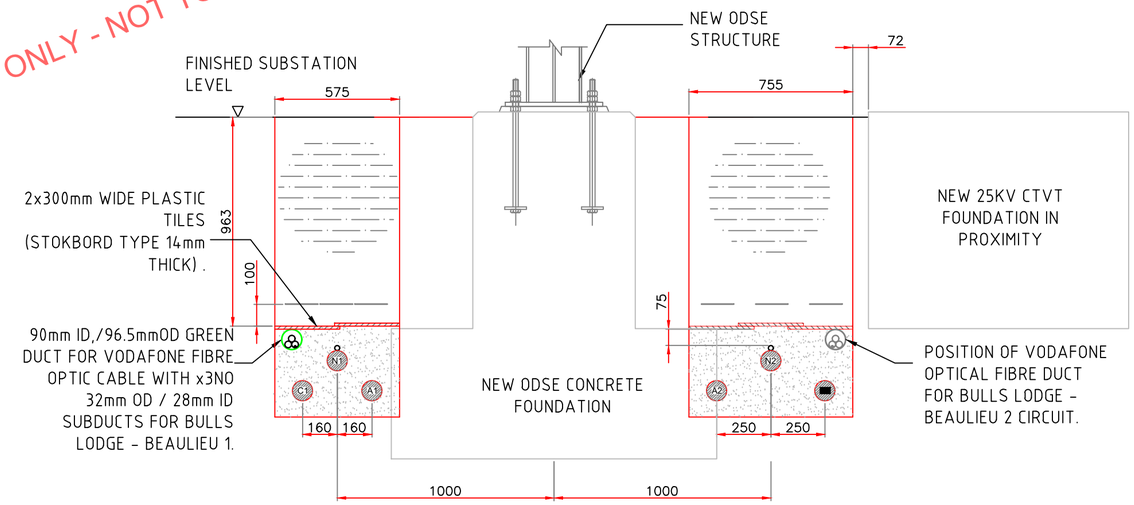
Balfour Beatty Utility Solutions Power Transmission & Distribution							PROJECT: Bulls Lodge Substation to Beaulieu Substation Connection	Drawing Title: TRENCH CROSS SECTIONS SHEET 4 Drawing Number: ULQH4953 - 18	Drawn SJF Checked GL Approved	Scale: As Noted Page: 18 Size: A2



SECTION K-K
TRENCH SECTION FOR DIRECT BURIED CABLES ON THE APPROACH TO ODSE STRUCTURES BEFORE PHASE TRANSPOSITION AT BULLS LODGE SUBSTATION



SECTION J-J
SECTION DETAILS FOR CABLES AT UKPN PILOT CABLE CROSSING



SECTION L-L
TRENCH SECTION FOR DIRECT BURIED CABLES ON THE APPROACH TO ODSE STRUCTURES AT BEAULIEU SUBSTATION

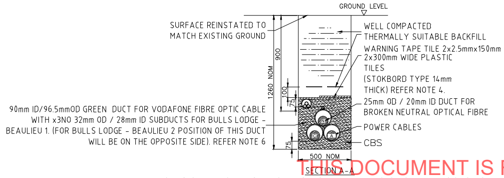
Balfour Beatty
Utility Solutions
Power Transmission & Distribution

PROJECT:
Bulls Lodge Substation to Beaulieu Substation Connection

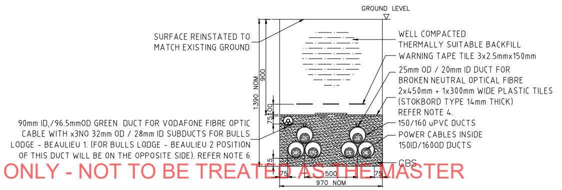
Drawing Title:
TRENCH CROSS SECTIONS SHEET 5

Drawing Number:
ULQH4953 - 19

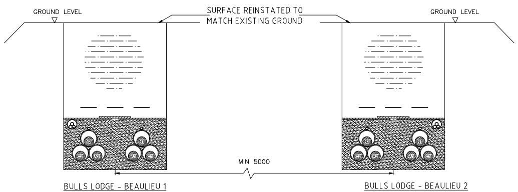
Drawn	Scale:
SJF	1:20
Checked	
GL	Page: 19
Approved	
	Size: A2



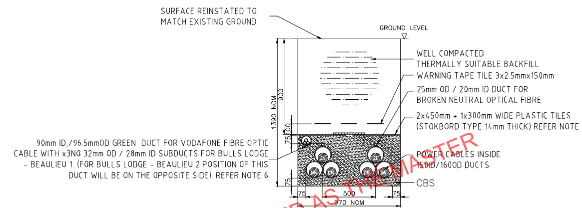
SECTION A-A
TYPICAL SECTIONAL DETAILS FOR CABLES IN SINGLE TREFOIL DUCTED GROUP INSIDE SUBSTATION
(SHOWN TYPICALLY FOR BULLS LODGE - BEAULIEU 1 LEFT CIRCUIT ONLY)



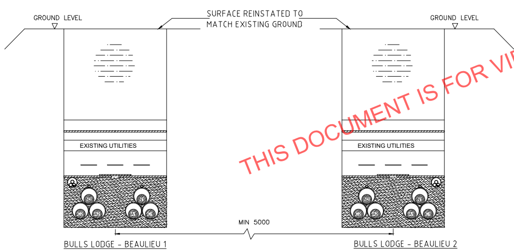
SECTION B-B
TYPICAL SECTION DETAILS FOR 2 X TREFOIL DUCTS INSIDE SUBSTATION



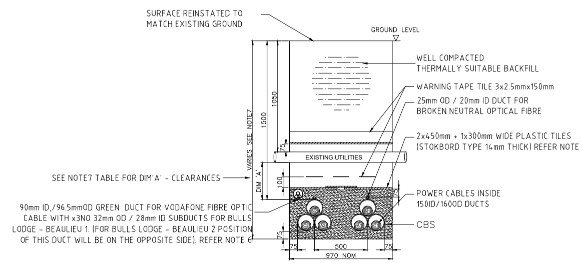
SECTION C-C
TYPICAL SECTION DETAILS FOR CABLES INSTALLED IN DUCTS



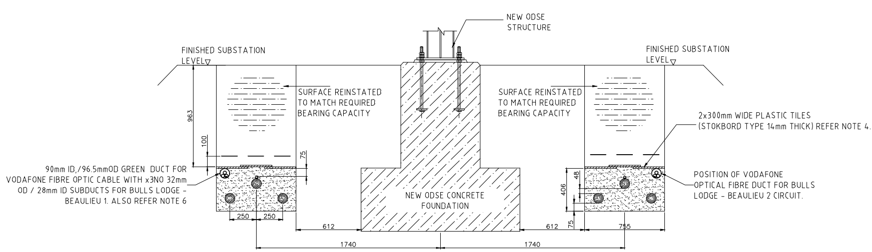
SECTION C-C
TYPICAL SECTION DETAILS FOR CABLES INSTALLED IN DUCTS FOR BULLS LODGE - BEAULIEU 1 CIRCUIT



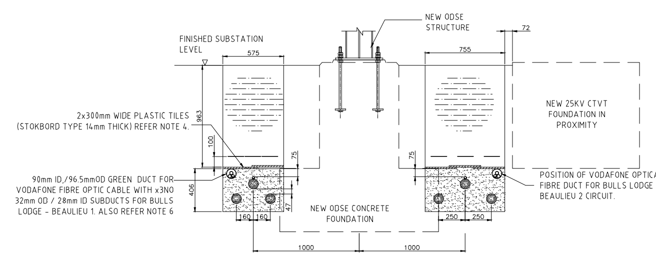
SECTION D-D
TYPICAL SECTION DETAILS FOR CABLES AT EXISTING UTILITY CROSSING



SECTION D-D
TYPICAL SECTION DETAILS FOR CABLES AT EXISTING UTILITY CROSSING FOR BULLS LODGE - BEAULIEU 1 CIRCUIT



SECTION K-K
TRENCH SECTION FOR DIRECT BURIED CABLES ON THE APPROACH TO ODSE STRUCTURES BEFORE PHASE TRANSPOSITION AT BULLS LODGE SUBSTATION



SECTION L-L
TRENCH SECTION FOR DIRECT BURIED CABLES ON THE APPROACH TO ODSE STRUCTURES AT BEAULIEU SUBSTATION

NOTES:

1. ALL DIMENSIONS ARE IN mm U.N.O.
2. CABLE INSTALLATION CARRIED OUT IN ACCORDANCE WITH NGTS 3.5.7
3. STABILISED BACKFILL IS COMPLY WITH REQUIREMENTS OF NGTS 3.5.7 AND EA TS 97.1
4. PLASTIC TILES PLACED ACROSS COMPLETE WIDTH OF THE TRENCH.
   VODAFONE DUCTS ARE IN ACCORDANCE WITH OpTelMFA SPECIFICATION 5.0_OPT_BOM3_22E
5. ALL POWER CABLE DUCTS ARE MARKED IN ACCORDANCE WITH NG TS 3.5.7
6. MEWP AND OTHER PLANT / EQUIPMENT MUST NOT BE PARKED DIRECTLY ABOVE THE CABLE ROUTE FOR ANY LENGTH OF TIME DUE TO RISK OF DAMAGE TO CABLES DUE TO STATIC LOADS AND ALSO RISK OF IMPRESSED VOLTAGES FROM THE CABLES.
7. MINIMUM CLEARANCES FOR ELECTRICITY SUPPLIES SHALL BE MAINTAINED AS PER NATIONAL GRID TS 3.8.22. PLEASE REFER TO DIMENSION 'A' IN TABLE BELOW:

DIMENSION 'A'	TYPE OF SERVICE
150mm	LAMP STANDARDS, LIGHT RAIL, TROLLEY WIRE, TRAFFIC SIGNAL POST OR SIMILAR PLANT
450mm	HV SINGLE CORE CABLE, ELECTRIC RAIL OR TRAMWAY SYSTEM EXCEEDING 1000V
300mm	HV MULTICORE CABLE EXCEEDING 1000V
50mm	LV CABLES NOT EXCEEDING 1000V

WHERE IT IS NOT POSSIBLE TO ACHIEVE ABOVE CLEARANCES, PLEASE CONTACT DESIGN AND ENGINEERING DEPARTMENT FOR REMEDIAL DESIGN.

REFERENCE DRAWINGS:

PN/CSED/12545 – CABLE ROUTE LAYOUT FOR BULLS LODGE–BEAULIEU 1&2 CIRCUITS
PN/CSED/12543 – TYPICAL DETAILS FOR CABLES AT OHL CROSSING
PN/CSED/12544 – TYPICAL DETAILS FOR CABLES AT STREAM CROSSING
PN/CSED/12627 – TRENCH CROSS SECTIONS AT ROAD CROSSING
PN/CSED/12546 – GA OF ODSE STRUCTURE AT BULLS LODGE SUBSTATION
PN/CSED/12680 – GA OF ODSE STRUCTURE AT BEAULIEU SUBSTATION

ISSUE	DRAWN	CHKD	APPD	REMARKS	DATE
F	BR	AH	DC	VERIFIED AS-BUILT AS PER NG SCHEME No.31253 EPC	22/11/2018
E	NK	AH	DC	CLIENT COMMENTS UPDATED & ISSUED FOR CONSTRUCTION	27/06/2017
D	NK	AH	DC	SECTIONS K-K & L-L ADDED. SECTIONS A-A & B-B AMENDED. NOTE 7 ADDED. MINOR UPDATE TO TRENCH DIMS. TRANSFERED TO A0 PAPER. RE-ISSUED FOR APPROVAL.	19/06/2017
C	NK	AH	DC	NOTE 6 ADDED. REFERENCE DRAWINGS UPDATED. RE-ISSUED FOR APPROVAL.	31/05/2017
B	NK	AH	DC	A THIRD SUBDUCT ADDED TO REAS PER VODAFONE REQUIREMENT.	25/04/2017
A	SVB	AH	DC	FOR APPROVAL	27/03/2017

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National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

JOB No: SC16/404

NG SCHEME No - 31253 EPC

DRAWING TITLE:
TRENCH CROSS SECTIONS

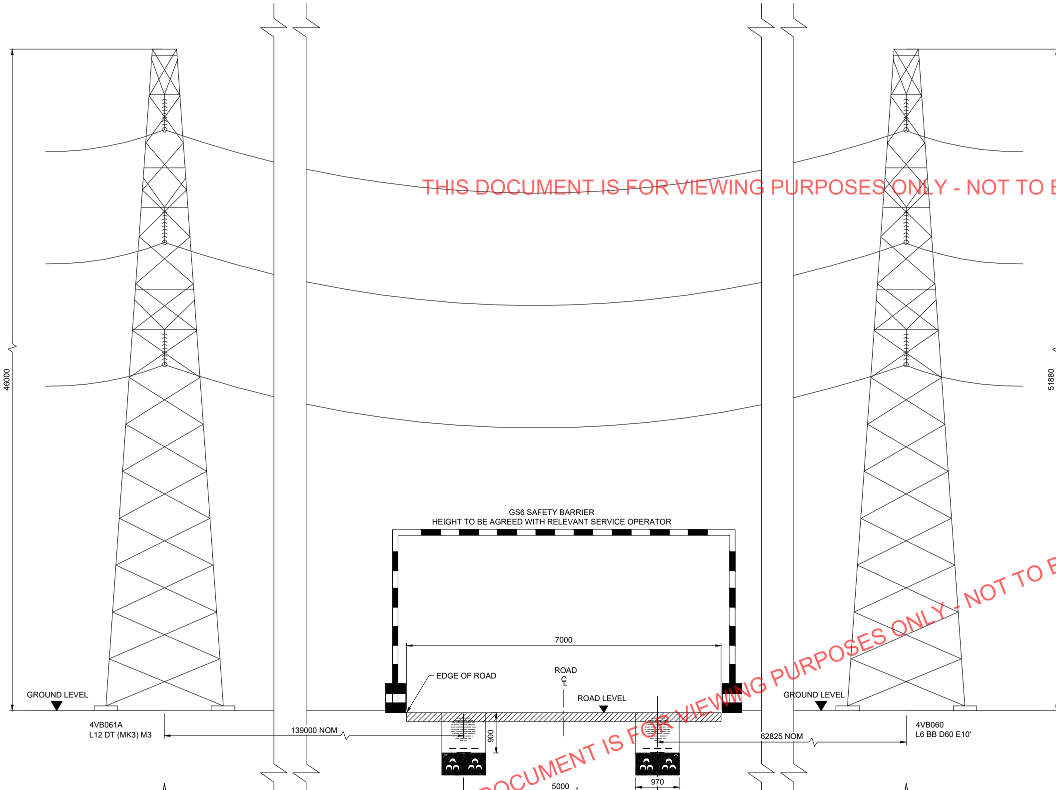
SITE: NETWORK RAIL CONNECTION AT BULLS LODGE — A0

DRAWING No: PN/CSED/12542 — CAD

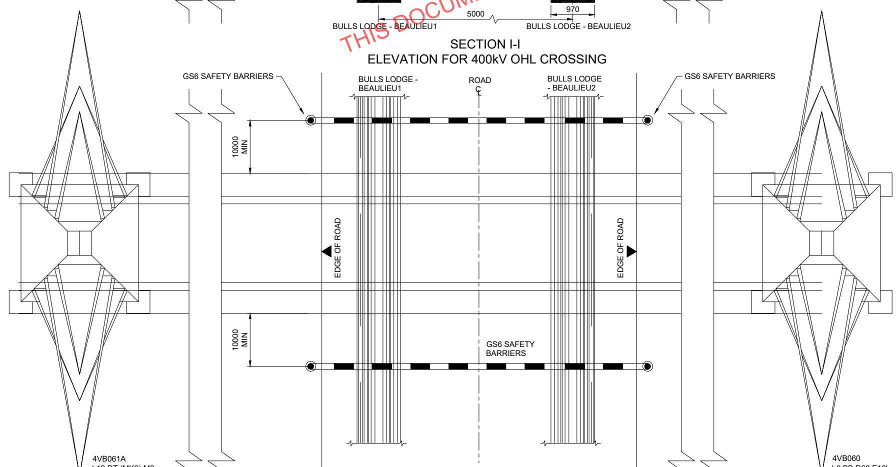
NG DRAWING No: 70/BA/0125 — Sheet No: 1 — No of Sheets: 1 — Issue: F

SCALE: 1:20

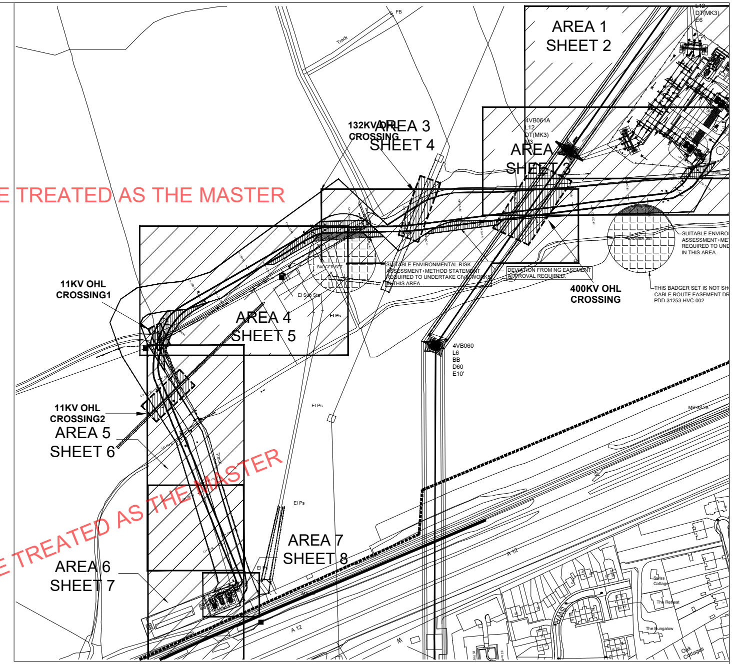
Balfour Beatty



SECTION I-I
ELEVATION FOR 400kV OHL CROSSING



PLAN FOR
400kV OHL CROSSING



KEY PLAN
SCALE 1:2000

NOTES:

1. ALL DIMENSIONS ARE IN mm U.N.O.
2. SAFETY BARRIER HEIGHT TO BE AGREED WITH RELEVANT SERVICE OPERATOR.
3. CABLE INSTALLATION CARRIED OUT IN ACCORDANCE WITH NGTS 3.5.7.
4. TRENCH DESIGN FOR SECTIONS J1-J1 AND J2-J2 ARE PRINCIPALLY THE SAME EXCEPT J1-J1 HAS AN UKPN PILOT CABLE CROSSING THE J2-J2 DOES NOT HAVE ANY CROSSINGS. THIS RESULTS IN J1-J1 BEING DEEPER THAN J2-J2.

REFERENCE DRAWINGS:

PN/CSED/12545 (70/BA/0128) ROUTE LAYOUT FOR BULLS LODGE BEAULIEU 1 & 2 CIRCUITS

PN/CSED/12542 (70/BA/0125) GENERAL TRENCH CROSS SECTION DRAWING

PN/CSED/12627 (70/BA/0129) TRENCH CROSS SECTION AT ROAD CROSSINGS.

ISSUE	E	REMARKS: VERIFIED AS-BUILT AS PER NG SCHEME No.31253 EPC	
DRAWN	BR		
CHKD	AH		
APPD	DC	DATE	22/11/2018
ISSUE	D	REMARKS: SECTIONS J1-J1 & J2-J2 ADDED. NOTED4 ADDED. CIRCUIT NOMENCLATURE UPDATED. RE-ISSUED FOR CONSTRUCTION	
DRAWN	NK		
CHKD	AH		
APPD	DC	DATE	21/06/2017
ISSUE	C	REMARKS: TRENCH SECTION UPDATED AT 11KV CROSSING, REFERENCE SECTION UPDATED, ISSUED FOR CONSTRUCTION	
DRAWN	NK		
CHKD	AH		
APPD	DC	DATE	13/06/2017
ISSUE	B	REMARKS: A THIRD SUB DUCT ADDED TO VODAFONE FO DUCT, RE-ISSUED FOR APPROVAL	
DRAWN	SVB		
CHKD	AH		
APPD	DC	DATE	03/05/2017
ISSUE	A	REMARKS: FOR APPROVAL	
DRAWN	SVB		
CHKD	AH		
APPD	DC	DATE	27/03/2017

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National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

JOB No: SC16/404

NG SCHEME No - 31253 EPC

DRAWING TITLE:

TRENCH CROSS SECTIONS AT OHL CROSSINGS

SITE: NETWORK RAIL CONNECTION AT BULLS LODGE — A1

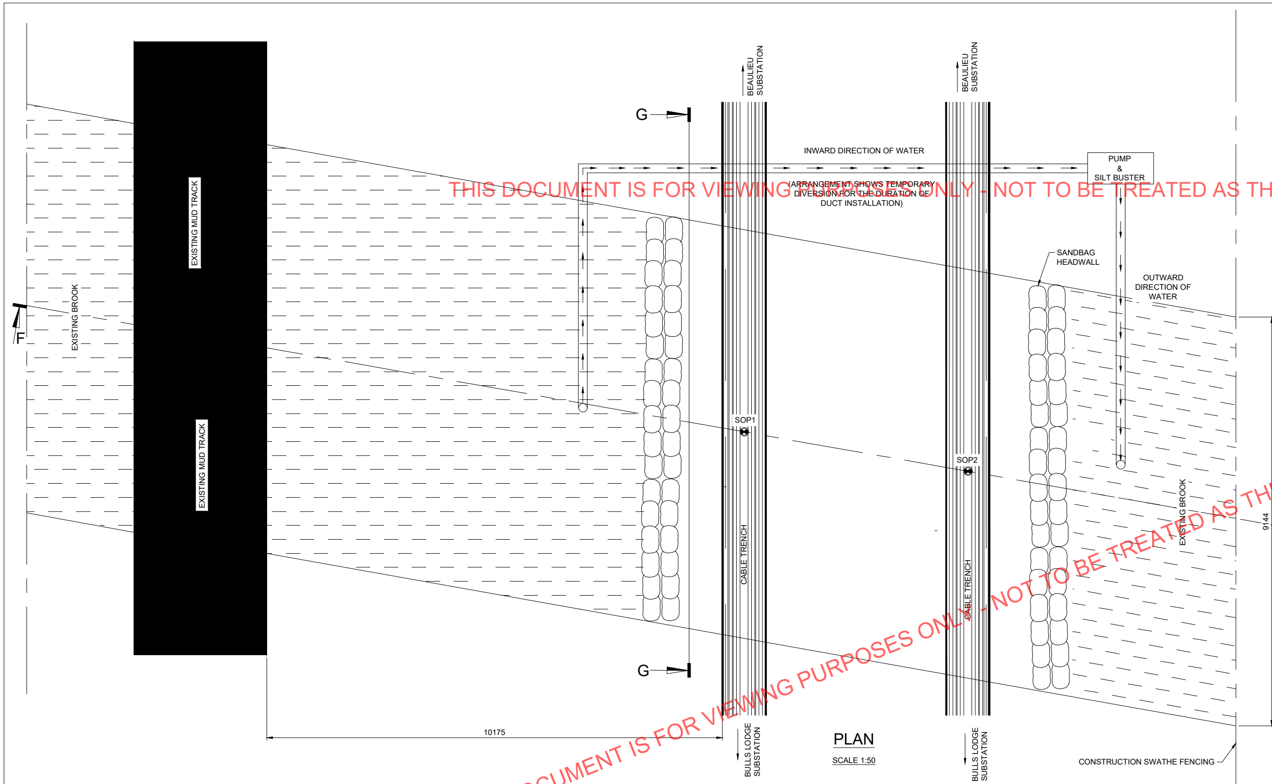
DRAWING No: PN/CSED/12543 — CAD

NG DRAWING No: 70/BA/0126

SCALE: N.T.S

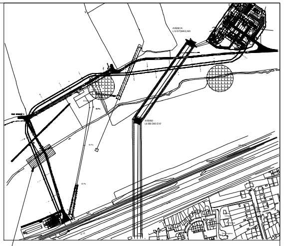
Sheet No: 1 — No of Sheets: 2 — Issue: E

Balfour Beatty



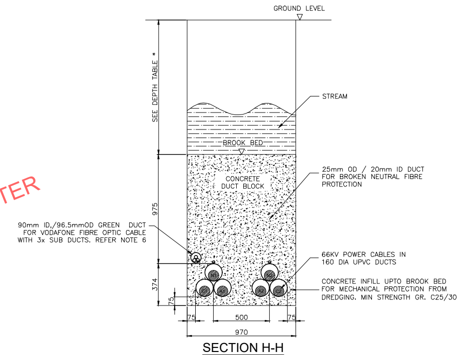
PLAN

SCALE 1:50



KEY PLAN

SCALE 1:5000



SECTION H-H

SCALE 1:20

DEPTH	
A	B
3000	1000

NOTES:

1. ALL DIMENSIONS ARE IN mm U.N.O.
2. WIDTH AND DEPTH OF STREAM ARE TAKEN FROM SITE SURVEY DETAILS PROVIDED BY 'DOUGLAS GRAY' VIA EMAIL DATED 17/01/2017.
3. CABLE INSTALLATION CARRIED OUT IN ACCORDANCE WITH TS 3.5.7
4. STABILISED BACKFILL IS COMPLY WITH REQUIREMENTS OF TS 3.5.7 AND EA TS 97/1.
5. GROUND PROFILE ON EITHER SIDES OF THE STREAM IS SHOWN INDICATIVELY. ACTUAL MAY VARY.
6. VODAFONE DUCTS IN ACCORDANCE WITH OpTelMFA SPECIFICATION 5.0_OPT_BOM3_22E

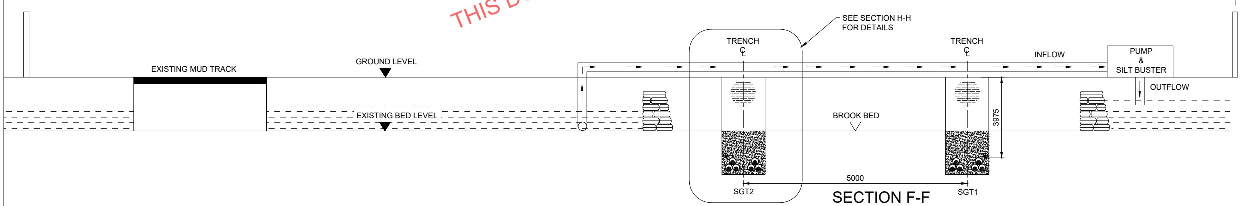
REFERENCE DRAWINGS:

PN/CSED/12545 (70/BA/0128) CABLE ROUTE LAYOUT FOR SGT1 & SGT2 CIRCUITS

PN/CSED/12542 (70/BA/0125) GENERAL TRENCH CROSS SECTIONS

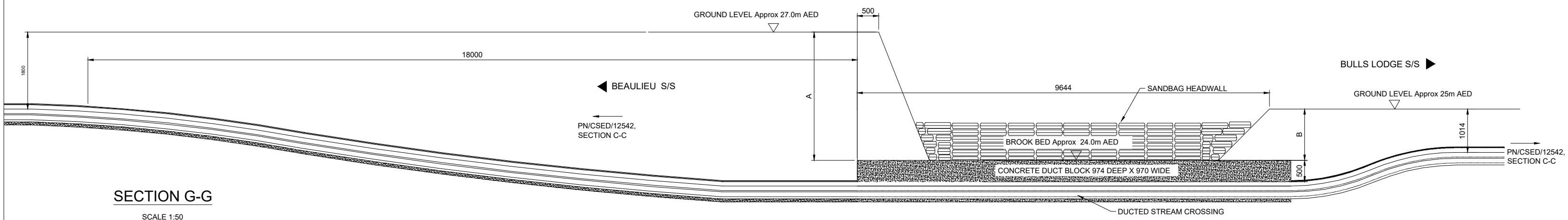
CO-ORDINATES:

SOP	EASTING (X)	NORTHING (Y)
SOP1	574716.077	210182.100
SOP2	574720.473	210184.830



SECTION F-F

SCALE 1:50



SECTION G-G

SCALE 1:50

ISSUE	DRAWN	CHKD	APPD	REMARKS	DATE
G	BR	AH	DC	VERIFIED AS-BUILT AS PER NG SCHEME No.31253 EPC	22/11/2018
F	NK	AH	DC	CABLE DEPTH SHOWN AT SECTION F-F SOP1 AND SOP2 ADDED & ISSUED FOR CONSTRUCTION	21/09/2017
E	AH	VC	DC	STREAM BANK HEIGHTS BASED ON SITE MEASURED VALUES	11/08/2017
D	NK	AH	DC	DA COMMENTS ADDRESSED, NOTES UPDATED, SECTIONS G-G & H-H AMENDED, PHASING UPDATED, ISSUED FOR CONSTRUCTION	13/06/2017
C	NK	AH	DC	CHANGED TO CONCRETE DUCT BLOCK FOR PROTECTION, RE-ISSUED FOR APPROVAL	25/05/2017
B	SVB	AH	DC	A THIRD SUBDUCT ADDED TO VODAFONE FO DUCT, RE-ISSUED FOR APPROVAL	26/04/2017
A	SVB	AH	DC	FOR APPROVAL	27/03/2017

nationalgrid

National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

JOB No: SC16/404

NG SCHEME No - 31253 EPC

DRAWING TITLE:

TYPICAL DETAILS FOR CABLES AT STREAM CROSSING

SITE: NETWORK RAIL CONNECTION AT BULLS LODGE

A1

DRAWING No: PN/CSED/12544

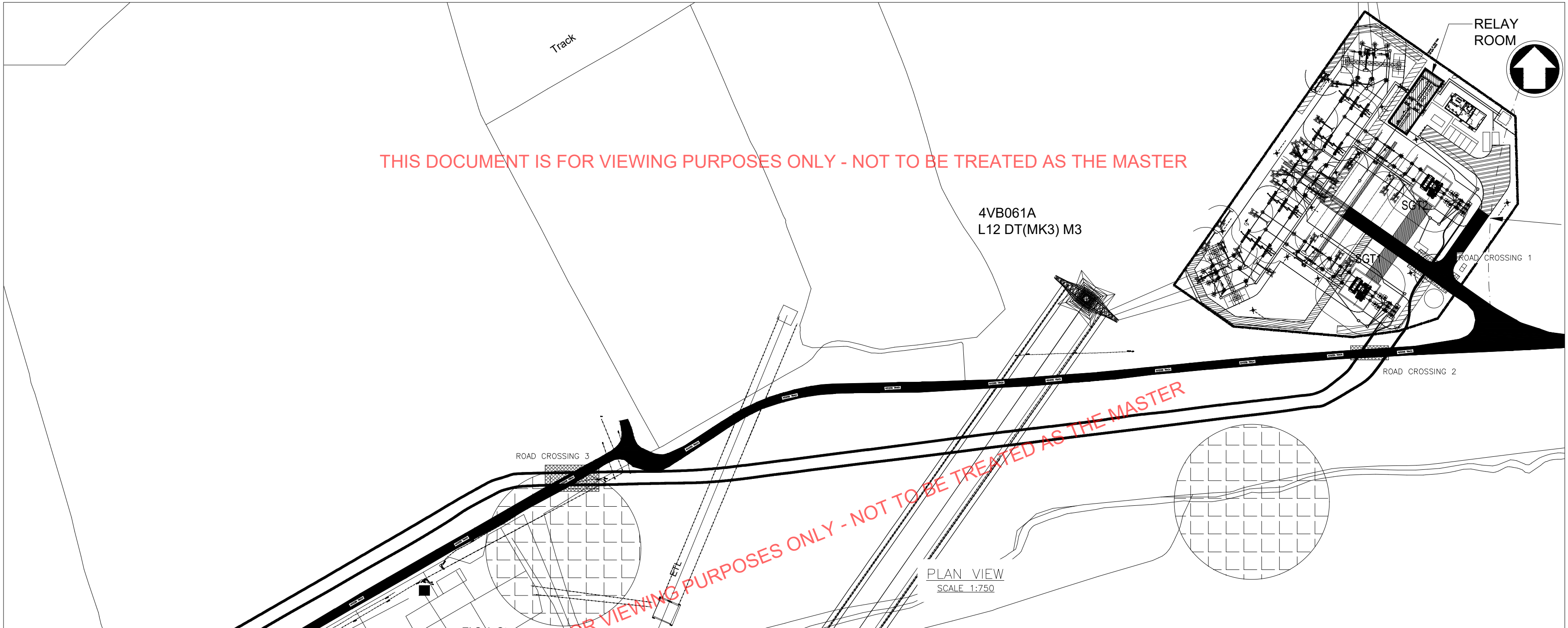
CAD

NG DRAWING No: 70/BA/0127

Sheet No: 1 | No of Sheets: 1 | Issue: G

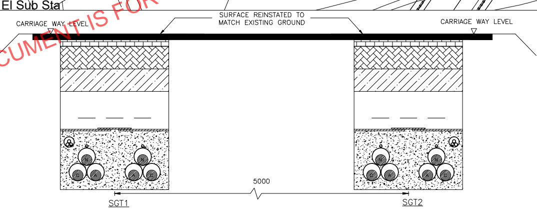
SCALE: AS SHOWN

Balfour Beatty

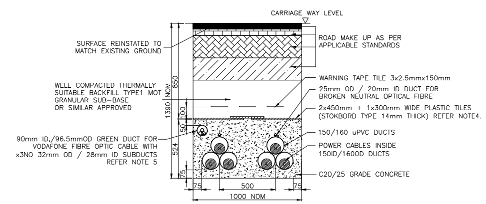


PLAN VIEW
SCALE 1:750

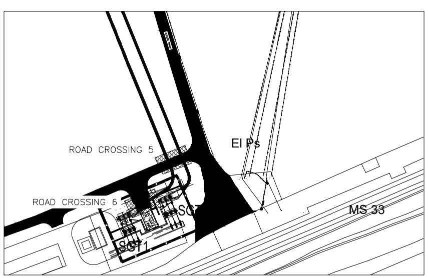
THIS DOCUMENT IS FOR VIEWING PURPOSES ONLY - NOT TO BE TREATED AS THE MASTER



TRENCH SECTION AT ROAD CROSSING
SCALE 1:20



ROAD CROSSING TRENCH DETAILS
TYPICALLY SHOWN FOR SGT1 CIRCUIT
SCALE 1:20



NOTES:

1. ALL DIMENSIONS ARE IN mm U.N.O.
2. CABLE INSTALLATION CARRIED OUT IN ACCORDANCE WITH NGTS 3.5.7
3. STABILISED BACKFILL ARE COMPLY WITH REQUIREMENTS OF NGTS 3.5.7 AND ENATS 97/1
4. PLASTIC TILES IS PLACED ACROSS COMPLETE WIDTH OF THE TRENCH.
5. VODAFONE DUCTS ARE IN ACCORDANCE WITH OpTelMFA SPECIFICATION 5.0_OPT_BOM3_22E
6. ALL POWER CABLE DUCTS IS MARKED IN ACCORDANCE WITH NG TS 3.5.7
7. MINIMUM COVER DEPTH (TO TOP OF TILES) IN ROADWAY / CARRIAGEWAY AS PER NGTS 3.5.7 IS 750mm. THE MAXIMUM PERMISSIBLE VARIATION IN ROAD LEVEL MUST NOT EXCEED 3.0m TO PREVENT THERMAL DE-RATING OF THE CIRCUIT.
8. MEWP AND OTHER PLANT / EQUIPMENT MUST NOT BE PARKED DIRECTLY ABOVE THE CABLE ROUTE FOR ANY LENGTH OF TIME DUE TO RISK OF DAMAGE TO CABLES DUE TO STATIC LOADS AND ALSO RISK OF IMPRESSED VOLTAGES FROM THE CABLES.

REFERENCE DRAWINGS:

PN/CSED/12545 (NG No.70/BA/0128) – ROUTE LAYOUT FOR BULLS LODGE – BEAULIEU 1 & 2 CIRCUITS
PN/CSED/12542 (NG No.70/BA/0125) – GENERAL TRENCH CROSS SECTION DRAWING.
PN/CSED/12543 (NG No.70/BA/0126) – TRENCH CROSS SECTIONS AT OHL CROSSINGS.
PN/CSED/12544 (NG No.70/BA/0127) – TRENCH CROSS SECTION AT STREAM CROSSING.

LEGEND

- ROAD CROSSING
- ROADWAY / CARRIAGEWAY
- CABLE ROUTE
- MEWP ACCESS ROUTE

ISSUE		REMARKS:	
ISSUE	D	REMARKS: VERIFIED AS-BUILT AS PER NG SCHEME No.31253 EPC	
DRAWN	BR		
CHKD	AH		
APPD	DC	DATE	22/11/2018
ISSUE	C	REMARKS: MEWP ACCESS ROUTE ADDED. NOTE 8 ADDED. REFERENCE DRAWINGS UPDATED. ISSUED FOR CONSTRUCTION.	
DRAWN	SVB		
CHKD	AH		
APPD	DC	DATE	31/05/2017
ISSUE	B	REMARKS: EXTRA SUBDUCT ADDED TO VODAFONE FO DUCT, CONCRETE THICKNESS INCREASED BY 50mm TO PROVIDE ADEQUATE PROTECTION FOR FO DUCT.	
DRAWN	SVB		
CHKD	AH		
APPD	DC	DATE	26/04/2017
ISSUE	A	REMARKS: FOR APPROVAL	
DRAWN	SVB		
CHKD	AH		
APPD	DC	DATE	27/03/2017

nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

JOB No: SC16/404

NG SCHEME No - 31253 EPC

DRAWING TITLE:
TRENCH CROSS SECTIONS AT ROAD CROSSING

SITE:
NETWORK RAIL CONNECTION AT BULLS LODGE

A1

DRAWING No:
PN/CSED/12627

CAD

NG DRAWING No:	Sheet No:	No of Sheets:	Issue:
70/BA/0129	1	1	D

SCALE: AS SHOWN

Balfour Beatty

Plant Protection map

AGI site

Gas Pipe

Buried Cable

Cooling Station

OHL

Substation

Earthstar Geographics | OS, Esri, HERE, Garmin

ENQUIRY SUMMARY

Received Date
06/11/2020

Your Reference
EN010118 (JP)

Location
Centre Point: 575460, 211011
X Extent: 1325
Y Extent: 1325
Postcode: CM3 3AU
Location Description: CM3 3AU Longfield Solar Energy Farm Limited, Essex

Map Options
Paper Size: A3
Orientation: LANDSCAPE
Requested Scale: 10000
Actual Scale: 1:10000 (ELECTRIC), 1:10000 (GAS)
Real World Extents: 4120m x 2440m (ELECTRIC), 4120m x 2440m (GAS)

Recipients
pprsteam@cadentgas.com

Enquirer Details
Organisation Name: The Planning Inspectorate
Contact Name: Katherine King
Email Address: longfieldsolarfarm@planninginspectorate.gov.uk
Telephone: 0303 444 5000
Address: Temple Quay House, Temple Quay, Bristol, BS1 6PN

Description of Works
PA Environmental Impact Assessment (EIA) Scoping Report for the Longfield Solar Farm, comprises the installation of solar photovoltaic (PV) generating panels and on-site energy storage facilities across a proposed site in Essex together with grid connection infrastructure. The Scheme would allow for the generation, storage and export of up to 500 megawatts (MW) electrical generation capacity. SP

Enquiry Type
Formal Planning Application

Development Types
Development Type: Development for use by General Public

My ref: 2020\Essex, Longfield Solar Farm
Your ref: EN010118-LSF

Date: 23 November 2020

Contact: Emma Fitch
Telephone: 01223 715518
E Mail: PlanningDC@cambridgeshire.gov.uk

Cambridgeshire County Council

Place and Economy
Environment and Commercial

Box No SH1315
Shire Hall
Castle Hill
Cambridge
CB3 0AP

Major Casework Directorate
Temple Quay House
2 The Square, Bristol, BS1 6PN
LongfieldSolarFarm@planninginspectorate.gov.uk
BY EMAIL ONLY

Dear Ms King,

EN010118-LSF - APPLICATION BY LONGFIELD SOLAR ENERGY FARM LIMITED (THE APPLICANT) FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE LONGFIELD SOLAR FARM

Thank you for consulting Cambridgeshire County Council on the above proposal. We have no comments at this time.

Yours sincerely

[redacted]

Emma Fitch (Miss)
Joint Interim Assistant Director, Environment and Commercial

Planning and Development Management
P.O. Box 7544, Civic Centre,
Duke Street, Chelmsford,
Essex, CM1 1XP

The Planning Inspectorate
Temple Quay House
2 The Square
Bristol
BS1 6PN

Your ref:	EN010118-LSF
My ref:	20/01902/OBS4
Please ask for:	Ruth Mabbutt
Telephone:	01245 606441
Date:	3 December 2020

Dear Sir/Madam

TOWN AND COUNTRY PLANNING ACT 1990

PROPOSAL:	**Scoping consultation for application by Longfield Solar Energy Farm Limited (the Applicant) for an Order granting Development Consent for the Longfield Solar Farm (the Proposed Development)**
APPLICATION NO:	**20/01902/OBS4**
DATE RECEIVED:	**6th November 2020**

We refer to the above application, and are writing to advise you that Chelmsford City Council have the following comments on this proposal.

Chelmsford City Council has reviewed the scoping opinion and has the following **COMMENTS** to make.

Chelmsford City Council has reviewed the scoping opinion and is satisfied with its contents with the exception of the following:

Relevant Planning Policies

The Chelmsford Local Plan 2013-2036 was adopted in May 2020. The adopted Local Plan replaces all the policies and Proposals (Policies) Maps which formed part of the previous Local Development Framework from 2008. This includes

Chapter 11(Noise and vibration) of the Opinion makes reference to the Core Strategy Development Plan and Development Control Policies Development Plan Document (DPD), February 2008 and Core Strategy Development Plan and Development Control Policies Focused Review DPD, December 2013 which have been superceded. Reference should only be made to the adopted Local Plan policies. In addition, this chapter should reference Policy DM8 New buildings and structures in the rural area.

Reference should be made to the Draft Making Place Supplementary Planning Document (SPD) October 2020, particularly in Chapter 6 Climate Change.

Chapter 7 Cultural Heritage and Chapter 8 Ecology should reference Strategic Priority 7 Conserving and enhancing the natural and historic environment, and the Green Belt. Chapter 8 should also reference Strategic Policy S4 Conserving and enhancing the natural environment.

Chapter 12, the correct title for reference (Ref.166) is The Chelmsford Climate and Ecological Emergency Action Plan (2020). This chapter should also include reference to Strategic Policy S10 Securing infrastructure and impact mitigation.

Chapter 13 (Transport and Access), reference should be made to Strategic Policy S3 - Conserving and Enhancing the Historic Environment and Policy DM14 - Non-designated Heritage Assets of the adopted Local Plan. Section 13.3 should also reference Strategic Policy S1 Spatial Principles, Strategic Policy S9 Infrastructure Requirements and Strategic Policy S10 Securing infrastructure and impact mitigation in relation to transport impacts.

Cumulative Effects with Other Developments: Chelmsford Garden Community

The opinion does not refer to the Chelmsford Garden Community.

The scope for the scheme to directly provide neighbourhood scale power for the new garden community should be considered.

Paragraph 2.2.3.7 of the Scoping Report advises that 132kV cables are likely to be required to export the electricity produced by the Longfield Solar Farm to the National Grid sub-station. Overhead power lines which previously extended across the Beaulieu development and close to the Grade I listed New Hall were placed underground; these were a specific requirement of the approved Landscape Design and Management Plan (LDMP) which supported the then adopted North Chelmsford Area Action Plan and have dramatically improved and enhanced the landscape. The LDMP provides the detailed practical measures needed to secure the setting of the Grade I listed New Hall, its Registered Park and Garden and associated listed building groups.

The EIA should assess the visual and landscape impact of these power lines, if required to be above ground, and consider the amenity impacts to both the existing communities and the strategic proposals within the adopted Chelmsford Local Plan, which include the proposed Chelmsford NE Bypass and the new Garden Community (Strategic Growth Site 6), which make up some of the surrounding context.

The EIA will also need to assess and demonstrate the impact of the proposal on the local highway network having regard to planned development eg: the future Chelmsford NE Bypass, Radial Distributor Road 2, which will extend through the Chelmsford Garden Community, planned works to the Boreham Interchange and a future scheme to widen the A12.

Cultural Heritage

The proposed scheme will have a considerable impact on the historic environment.

The methodology set out is on the whole adequate to assess the historic environment, but requires some amendment as set out below:

- It should include identification of protected lanes.
- There should be further assessment of other buildings, structures and features within the study area to include all non-designated heritage assets.
- There should be a clearly defined strategy to avoid and minimise of mitigate the impact on the historic environment *
- The list of heritage assets affected is premature given the baseline study has not been completed.
- The criteria for assessing heritage value (table 7.1) should include grade II listed buildings within the 'high' section as their structures are designated for their national importance.

*Note this may include specifying areas for no development, the location of equipment, screening, landscaping and planting.

Ecology

The proposed scheme will have a significant impact on the natural environment.

The methodology set out is on the whole adequate to assess the ecological environment, but requires some amendment as set our below:

- It should include identification of ancient woodland.
- Further assessment of priority species such as harvest mouse and hare, and hedgerow assessments.
- A clearly defined strategy to avoid, and then mitigate the impact on the natural environment, enhancement and restoration*.
- More information about the impact and consequently the visual and ecological mitigation that is required is needed to fully understand the enhancements that could be made.
- A clear strategy to achieve a minimum 10% biodiversity net gain in line with the Environment Bill.
- Consideration should be given to security fencing and lighting that responds to the rural context, and the impact to species commuting and foraging behaviour.
- The proposal should consider protecting the ancient woodland sites by providing additional tree and woodland planting in line with the City Council's Climate and Ecological Emergency declaration and action plans to increase the woodland cover significantly in the Chelmsford District.

*Note. This may include specifying areas for no development, the location of equipment, screening, landscaping and planting.

Landscape and Visual Amenity

This approach would appear to be acceptable in principle. Understanding the landscape and visual impacts of the proposal will be critical to the consideration of the EIA.

The relationship to Glint and Glare Assessment and residential amenity are also material to the consideration of the proposal.

Reference will need to be made to the mitigation strategy and go into more detail on how the effects of the migration will change over time.

The mitigation strategy needs to have regard to the comments made also in respect of heritage and ecology and residential amenity.

Agreements on viewpoints will need to be undertaken with Chelmsford City Council Officers, as well as the Essex County Council Landscape Advisor.

Reference shall be made to the Chelmsford Garden Community.

Noise and Vibration

The assessment needs to have regard to the impact of noise and vibration upon the quality of life of local residents within the boundaries of and within close proximity to the application site.

In addition to individual households, consideration shall be given to the to the communities of Boreham and the Chelmsford Garden Community.

The siting of the solar panels, associated infrastructure including plant rooms, cabling and accessway shall be undertaken such that it does not materially affect residential amenity.

The siting of overhead power lines (OHPS) should not lead to material harm or loss of residential amenity.

The effect of the construction implications of the proposal, including the use of the local highways network, should be assessed to ensure that residential amenity is safeguarded and mitigated at all times.

Transport and Access

The site access should be able to accommodate the type and number of vehicle movements generated during the construction and operation of the site. Two access points/routes are suggested; it should be recognised that these encompass Protected Lanes.

The EIA will need to assess and demonstrate the impact of the proposal on the local highway network having regard to planned development eg: the future Chelmsford NE Bypass, Radial Distributor Road 2, which will extend through the Chelmsford Garden Community, planned works to the Boreham Interchange and a future scheme to widen the A12.

Cross reference shall be made to the Glint and Glare Assessment to ensure that highway users are not materially affected by the proposal.

Other Environmental Topics

Land Quality

Following the completion of the Agricultural Land Classification (ALC) report, the proposal should apply a sequential approach to the siting of the proposal. The proposal shall include an assessment and demonstrate the impact of the proposal on the Best and Most Versatile Agricultural land.

Glint and Glare

The potential impact of glint and glare from the solar panels on landscape/visual amenity, aircraft, rail and road safety and residential amenity will be material to the consideration of the proposal.

Consideration shall be given to the individual households sited next to and within the vicinity of the site and to the communities of Boreham and the Chelmsford Garden Community.

The Glint and Glare Assessment shall be cross reference to other policy sections including Landscape and Visual Amenity and Transport and Access

Other Matters

The opinion does not specifically consider residential amenity.

The effect of the proposal upon the quality of life and amenities of individual households, local residents and the communities of Boreham, the Chelmsford Garden Community and others in Braintree District will be material to the consideration of the application and will include amongst others:

- Landscape and Visual Impact
- Noise and Vibration
- Construction Implications in terms of pollution control and vehicle movements
- Siting of Mitigation
- Glint and Glare

The Officers Report to the Scoping Opinion is appended to these comments.

For a copy of the officers report please view our website www.chelmsford.gov.uk/planningonline and search for application 20/01902/OBS4.

Yours faithfully

David Green

DAVID GREEN
Director of Sustainable Communities

DECISION MADE BY THE DIRECTOR OF SUSTAINABLE COMMUNITIES

Application No	:	20/01902/OBS4 PINS notify us site outside our borough4
Location	:	The Planning Inspectorate Temple Quay House 2 The Square Bristol BS1 6PN
Proposal	:	**Scoping consultation for application by Longfield Solar Energy Farm Limited (the Applicant) for an Order granting Development Consent for the Longfield Solar Farm (the Proposed Development)**
Applicant	:	The Planning Inspectorate
Agent	:	
Date Valid	:	6th November 2020
Development Type	:	Consultations - CM/ ECC3/OBS (D91)
Drawing No(s)	:	
Target Date	:	3rd December 2020
Consult Expiry	:	

Description of the site

The site is located about 6 kilometres (km) north east of Chelmsford, across and north of the A12 / B1137 between Boreham and Hatfield Peverel. It falls within the jurisdictions of Chelmsford City Council and Braintree District Council.

The precise site location has not been confirmed, but it is expected to locate the Solar Farm on around 380 hectares of agricultural farmland separated by several areas of woodland and bounded by the settlements of Gambrels Green/ Terling and Fuller Street.

Details of the proposal

The scheme comprises the installation of solar photovoltaic (PV) generating panels and on-site energy storage facilities together with grid connection infrastructure. It would allow for the generation, storage and export of up to 500 megawatts (MW) of electrical generation capacity.

The principal infrastructure would comprise:

- Solar PV panels – currently two options are being considered comprising fixed or tracked panels.
- PV mounting structures.

- Inverters, transformers, High Voltage (HV) switchgear and control equipment (housed inside a building) – currently two options are being considered: independent outdoor equipment and indoor equipment in a container.

- On site cabling. In certain cases, this will be required to be above ground levels (along a row of racks) and fixed to mounting structures. Where possible cabling will mainly be underground.

- One or more battery energy storage system (batteries expected to be formed of lithium ion batteries storing electric energy). Exact details to be confirmed.

- An electric compound comprising a substation and control building – two options are being considered: (I) connect the proposal to the existing Bulls Lode Substation or (II) form a new substation on land immediately south to the north of the site near Hookley Wood or within the central part of the site next to Toppinghoehall Wood.

- A spare parts storage building or enclosure

- Fencing and security measures typically comprising a 2-3 metre high 'deer fence'.

- Access tracks

- Surface Water Drainage

- Landscaping and biodiversity enhancements. – This will be based upon a Biodiversity and Landscape Management Plan.

Notes:

During the construction phase, one of more temporary construction compounds will be required as well as temporary roadways to facilitate access to all land within the site.

The solar farm will need to connect to the National Grid. Currently two cable route connections are being considered at the northern part of the site located either side of Sandy Wood. 133 kV cables are likely to be required to export the electricity from the Solar Farm to the National Grid Substation. The 132 kV cables may be below ground. As an alternative, Over Head Lines (OHL) may be considered. These will typically be 15m in height and mounted on steel lattice pylons, wooden or composite poles. The route of the existing power lines will be not altered significantly. There will be a tie in for the new National Grid substation which may involve the construction of additional pylons and some temporary diversion works.

It is anticipated that the construction access will be along the A12 utilising the existing access to Waltham Road, Boreham Road at junction 19 (A130 and B1137) of the A12. To minimise the construction of internal access roads, it is proposed to use the minor road network for some deliveries.

As an alternative, access to/from the A130 Essex Regiment Way and Braintree Road is being considered.

Operational access will be confirmed in consultation with Essex Highways Authority and Highways England.

Access tracks within the site will typically comprise 3.5 metres wide.

Environmental Impact Assessment Regulations

The proposed scheme is defined as a Nationally Significant Infrastructure Project (NSIP) under Sections 14((1)(a) and 15 (2) of the Planning Act 2008 as an onshore generating station in England, exceeding 50 MW.

At this stage the grid infostructure connection could comprise either underground or overhead lines. If the latter option is chosen, then the overhead lines may also constitute an NSIP under section 14(10(b) and 16 of the Planning Act 2008.

The proposal falls within the EIA Regulations and is a schedule 2 development. The scheme is a schedule 2 development under paragraph 3(a) as it constitutes industrial installations for the production of electricity, steam and hot water, and 3 (b) as it may constitute industrial installations for carrying gas, steam and hot water, transmission of electrical energy by overhead cables.

The scheme requires an EIA to support the future DCO application.

Comments on the Scoping Opinion

Chelmsford City Council has reviewed the scoping opinion and is satisfied with its contents with the exception of the following:

Relevant Planning Policies

The Chelmsford Local Plan 2013-2036 was adopted in May 2020. The adopted Local Plan replaces all the policies and Proposals (Policies) Maps which formed part of the previous Local Development Framework from 2008. This includes the Core Strategy Development Plan and Development Control Policies Development Plan Document (DPD), February 2008 and Core Strategy Development Plan and Development Control Policies Focused Review DPD, December 2013.
Chapter 11(Noise and vibration) of the Opinion makes reference to the above documents. As these have been superseded, reference should only be made to the adopted Local Plan policies. In addition, this chapter should reference Policy DM8 New buildings and structures in the rural area.

Reference should also be made to the Draft Making Place Supplementary Planning Document (SPD) October 2020, particularly in Chapter 6 Climate Change. This SPD seeks to promote and secure high-quality sustainable new development. It is aimed at all forms of development, from large strategic developments, public spaces and places, to small extensions to individual homes. It sets out detailed guidance on the standards included in Chelmsford's Local Plan for future planning proposals. It also shows how development can go beyond planning policy requirements to create the most sustainable and environmentally friendly development.

Chapter 7 Cultural Heritage and Chapter 8 Ecology should reference Strategic Priority 7 Conserving and enhancing the natural and historic environment, and the Green Belt. Chapter 8 should also reference Strategic Policy S4 Conserving and enhancing the natural environment.

Chapter 12, the correct title for reference (Ref.166) is The Chelmsford Climate and Ecological Emergency Action Plan (2020). This chapter should also include reference to Strategic Policy S10 Securing infrastructure and impact mitigation.

Chapter 13 (Transport and Access), reference should be made to Strategic Policy S3 - Conserving and Enhancing the Historic Environment and Policy DM14 – Non-designated Heritage Assets of the adopted Local Plan. The reason for this is that there are a number of Protected Lanes and byways located near to the site which are of historic and landscape value, and which make an important contribution to the rural character of certain areas, as set out in the Essex County Council Protected Lanes Studies.

Section 13.3 should also reference Strategic Policy S1 Spatial Principles, Strategic Policy S9 Infrastructure Requirements and Strategic Policy S10 Securing infrastructure and impact mitigation in relation to transport impacts.

Cumulative Effects with Other Developments: Chelmsford Garden Community

The opinion does not refer to the Chelmsford Garden Community.

The new Chelmsford Garden Community is allocated in the Chelmsford Local Plan to the south-west of the site, which when complete will deliver in the region of 10,000 new homes and significant new employment. The scope for the scheme to directly provide neighbourhood scale power for the new garden community should be considered.

Paragraph 2.2.3.7 of the Scoping Report advises that 132kV cables are likely to be required to export the electricity produced by the Longfield Solar Farm to the National Grid sub-station. The following paragraph advises that these cables may be below ground but an alternative would be to use overhead lines which will typically be 15m in height and mounted on steel lattice pylons, wooden or composite poles. Overhead power lines which previously extended across the Beaulieu development and close to the Grade I listed New Hall were placed underground; these were a specific requirement of the approved Landscape Design and Management Plan (LDMP) which supported the then adopted North Chelmsford Area Action Plan and have dramatically improved and enhanced the landscape. The LDMP provides the detailed practical measures needed to secure the setting of the Grade I listed New Hall, its Registered Park and Garden and associated listed building groups.

The EIA should assess the visual and landscape impact of these power lines, if required to be above ground, and consider the amenity impacts to both the existing communities and the strategic proposals within the adopted Chelmsford Local Plan, which include the proposed Chelmsford NE Bypass and the new Garden Community (Strategic Growth Site 6), which make up some of the surrounding context.

The EIA will also need to assess and demonstrate the impact of the proposal on the local highway network having regard to planned development eg: the future Chelmsford NE Bypass, Radial Distributor Road 2, which will extend through the Chelmsford Garden Community, planned works to the Boreham Interchange and a future scheme to widen the A12.

Cultural Heritage

The site covers a large area which has a diverse and rich historic environment. Within the Chelmsford boundary there are 10 grade II listed buildings and one grade I listed building within close proximity to the site and more within the wider area. There are also a high number of listed building on the Braintree District Council side of the site. These buildings sit within a rural landscape, which forms part of their settings' and contributes to their significance. There are also a number of buildings/structures/lanes of local interest in close proximity to the site which should be considered as non-designated heritage assets. The landscape includes ancient lanes, woodland and field boundaries.

The proposed scheme will have a considerable impact on the historic environment.

The methodology set out is on the whole adequate to assess the historic environment, but requires some amendment as set out below:

- It should include identification of protected lanes.
- There should be further assessment of other buildings, structures and features within the study area to include all non-designated heritage assets.

- There should be a clearly defined strategy to avoid and minimise of mitigate the impact on the historic environment *
- The list of heritage assets affected is premature given the baseline study has not been completed.
- The criteria for assessing heritage value (table 7.1) should include grade II listed buildings within the 'high' section as their structures are designated for their national importance.

*Note this may include specifying areas for no development, the location of equipment, screening, landscaping and planting.

Ecology

The site covers a large area which has a multitude of diverse habitats. Within the Chelmsford boundary there are several Local Wildlife sites and a Site of Special Scientific Interest (SSSI) within close proximity to the site and more within the wider area. The landscape includes ancient lanes, ancient woodland, ponds and treed field boundaries.

The proposed scheme will have a significant impact on the natural environment.

The methodology set out is on the whole adequate to assess the ecological environment, but requires some amendment as set our below:

- It should include identification of ancient woodland.
- Further assessment of priority species such as harvest mouse and hare, and hedgerow assessments.
- A clearly defined strategy to avoid, and then mitigate the impact on the natural environment, enhancement and restoration*.
- More information about the impact and consequently the visual and ecological mitigation that is required is needed to fully understand the enhancements that could be made.
- A clear strategy to achieve a minimum 10% biodiversity net gain in line with the Environment Bill.
- Consideration should be given to security fencing and lighting that responds to the rural context, and the impact to species commuting and foraging behaviour.
- The proposal should consider protecting the ancient woodland sites by providing additional tree and woodland planting in line with the City Council's Climate and Ecological Emergency declaration and action plans to increase the woodland cover significantly in the Chelmsford District.

*Note. This may include specifying areas for no development, the location of equipment, screening, landscaping and planting.

It is considered that existing site features such as existing hedgerows and ecological features to support connectivity and species movement through the landscape is crucial to maintain landscape character and support biodiversity.

Where possible, the solar farm should minimise the use and height of fencing using natural features such as field hedges. More details should be included of all security and lighting features with consideration given to mitigating impact on the natural environment.

Trees and woodland also provide vital benefits to the environment, including filtering air pollution, reducing noise, and creating and connecting wildlife habitats.

Landscape and Visual Amenity

This approach would appear to be acceptable in principle. Understanding the landscape and visual impacts of the proposal will be critical to the consideration of the EIA.

The relationship to Glint and Glare Assessment and residential amenity are also material to the consideration of the proposal.

Reference will need to be made to the mitigation strategy and go into more detail on how the effects of the migration will change over time.

The mitigation strategy needs to have regard to the comments made also in respect of heritage and ecology and residential amenity.

Agreements on viewpoints will need to be undertaken with Chelmsford City Council Officers, as well as the Essex County Council Landscape Advisor.

Reference shall be made to the Chelmsford Garden Community.

Noise and Vibration

The assessment needs to have regard to the impact of noise and vibration upon the quality of life of local residents within the boundaries of and within close proximity to the application site.

In addition to individual households, consideration shall be given to the to the communities of Boreham and the Chelmsford Garden Community.

The siting of the solar panels, associated infrastructure including plant rooms, cabling and accessway shall be undertaken such that it does not materially affect residential amenity.

The siting of overhead power lines (OHPS) should not lead to material harm or loss of residential amenity.

The effect of the construction implications of the proposal, including the use of the local highways network, should be assessed to ensure that residential amenity is safeguarded and mitigated at all times.

Transport and Access

The site access should be able to accommodate the type and number of vehicle movements generated during the construction and operation of the site. Two access points/routes are suggested; it should be recognised that these encompass Protected Lanes.

The EIA will need to assess and demonstrate the impact of the proposal on the local highway network having regard to planned development eg: the future Chelmsford NE Bypass, Radial Distributor Road 2, which will extend through the Chelmsford Garden Community, planned works to the Boreham Interchange and a future scheme to widen the A12.

Cross reference shall be made to the Glint and Glare Assessment to ensure that highway users are not materially affected by the proposal.

Other Environmental Topics

Land Quality

The site includes Grade 2 agricultural land. Following the completion of the Agricultural Land Classification (ALC) report, the proposal should apply a sequential approach to the siting of the proposal. The proposal shall include an assessment and demonstrate the impact of the proposal on the Best and Most Versatile Agricultural land.

Glint and Glare

The potential impact of glint and glare from the solar panels on landscape/visual amenity, aircraft, rail and road safety and residential amenity will be material to the consideration of the proposal.

Consideration shall be given to the individual households sited next to and within the vicinity of the site and to the communities of Boreham and the Chelmsford Garden Community.

The Glint and Glare Assessment shall be cross reference to other policy sections including Landscape and Visual Amenity and Transport and Access

Other Matters

The opinion does not specifically consider residential amenity.

The effect of the proposal upon the quality of life and amenities of individual households, local residents and the communities of Boreham, the Chelmsford Garden Community and others in Braintree District will be material to the consideration of the application and will include amongst others:

- Landscape and Visual Impact
- Noise and Vibration
- Construction Implications in terms of pollution control and vehicle movements
- Siting of Mitigation
- Glint and Glare

RECOMMENDATION

Chelmsford City Council has reviewed the scoping opinion and has the following **COMMENTS** to make.

Chelmsford City Council has reviewed the scoping opinion and is satisfied with its contents with the exception of the following:

Relevant Planning Policies

The Chelmsford Local Plan 2013-2036 was adopted in May 2020. The adopted Local Plan replaces all the policies and Proposals (Policies) Maps which formed part of the previous Local Development Framework from 2008. This includes

Chapter 11(Noise and vibration) of the Opinion makes reference to the Core Strategy Development Plan and Development Control Policies Development Plan Document (DPD), February 2008 and Core Strategy Development Plan and Development Control Policies Focused Review DPD, December 2013 which have been superceded. Reference should only be made to the adopted Local Plan policies. In addition, this chapter should reference Policy DM8 New buildings and structures in the rural area.

Reference should be made to the Draft Making Place Supplementary Planning Document (SPD) October 2020, particularly in Chapter 6 Climate Change.

Chapter 7 Cultural Heritage and Chapter 8 Ecology should reference Strategic Priority 7 Conserving and enhancing the natural and historic environment, and the Green Belt. Chapter 8 should also reference Strategic Policy S4 Conserving and enhancing the natural environment.

Chapter 12, the correct title for reference (Ref.166) is The Chelmsford Climate and Ecological Emergency Action Plan (2020). This chapter should also include reference to Strategic Policy S10 Securing infrastructure and impact mitigation.

Chapter 13 (Transport and Access), reference should be made to Strategic Policy S3 - Conserving and Enhancing the Historic Environment and Policy DM14 - Non-designated Heritage Assets of the adopted Local Plan. Section 13.3 should also reference Strategic Policy S1 Spatial Principles, Strategic Policy S9 Infrastructure Requirements and Strategic Policy S10 Securing infrastructure and impact mitigation in relation to transport impacts.

Cumulative Effects with Other Developments: Chelmsford Garden Community

The opinion does not refer to the Chelmsford Garden Community.

The scope for the scheme to directly provide neighbourhood scale power for the new garden community should be considered.

Paragraph 2.2.3.7 of the Scoping Report advises that 132kV cables are likely to be required to export the electricity produced by the Longfield Solar Farm to the National Grid sub-station. Overhead power lines which previously extended across the Beaulieu development and close to the Grade I listed New Hall were placed underground; these were a specific requirement of the approved Landscape Design and Management Plan (LDMP) which supported the then adopted North Chelmsford Area Action Plan and have dramatically improved and enhanced the landscape. The LDMP provides the detailed practical measures needed to secure the setting of the Grade I listed New Hall, its Registered Park and Garden and associated listed building groups.

The EIA should assess the visual and landscape impact of these power lines, if required to be above ground, and consider the amenity impacts to both the existing communities and the strategic proposals within the adopted Chelmsford Local Plan, which include the proposed Chelmsford NE Bypass and the new Garden Community (Strategic Growth Site 6), which make up some of the surrounding context.

The EIA will also need to assess and demonstrate the impact of the proposal on the local highway network having regard to planned development eg: the future Chelmsford NE Bypass, Radial Distributor Road 2, which will extend through the Chelmsford Garden Community, planned works to the Boreham Interchange and a future scheme to widen the A12.

Cultural Heritage

The proposed scheme will have a considerable impact on the historic environment.

The methodology set out is on the whole adequate to assess the historic environment, but requires some amendment as set out below:

- It should include identification of protected lanes.

- There should be further assessment of other buildings, structures and features within the study area to include all non-designated heritage assets.
- There should be a clearly defined strategy to avoid and minimise of mitigate the impact on the historic environment *
- The list of heritage assets affected is premature given the baseline study has not been completed.
- The criteria for assessing heritage value (table 7.1) should include grade II listed buildings within the 'high' section as their structures are designated for their national importance.

*Note this may include specifying areas for no development, the location of equipment, screening, landscaping and planting.

Ecology

The proposed scheme will have a significant impact on the natural environment.

The methodology set out is on the whole adequate to assess the ecological environment, but requires some amendment as set our below:

- It should include identification of ancient woodland.
- Further assessment of priority species such as harvest mouse and hare, and hedgerow assessments.
- A clearly defined strategy to avoid, and then mitigate the impact on the natural environment, enhancement and restoration*.
- More information about the impact and consequently the visual and ecological mitigation that is required is needed to fully understand the enhancements that could be made.
- A clear strategy to achieve a minimum 10% biodiversity net gain in line with the Environment Bill.
- Consideration should be given to security fencing and lighting that responds to the rural context, and the impact to species commuting and foraging behaviour.
- The proposal should consider protecting the ancient woodland sites by providing additional tree and woodland planting in line with the City Council's Climate and Ecological Emergency declaration and action plans to increase the woodland cover significantly in the Chelmsford District.

*Note. This may include specifying areas for no development, the location of equipment, screening, landscaping and planting.

Landscape and Visual Amenity

This approach would appear to be acceptable in principle. Understanding the landscape and visual impacts of the proposal will be critical to the consideration of the EIA.

The relationship to Glint and Glare Assessment and residential amenity are also material to the consideration of the proposal.

Reference will need to be made to the mitigation strategy and go into more detail on how the effects of the migration will change over time.

The mitigation strategy needs to have regard to the comments made also in respect of heritage and ecology and residential amenity.

Agreements on viewpoints will need to be undertaken with Chelmsford City Council Officers, as well as the Essex County Council Landscape Advisor.

Reference shall be made to the Chelmsford Garden Community.

Noise and Vibration

The assessment needs to have regard to the impact of noise and vibration upon the quality of life of local residents within the boundaries of and within close proximity to the application site.

In addition to individual households, consideration shall be given to the to the communities of Boreham and the Chelmsford Garden Community.

The siting of the solar panels, associated infrastructure including plant rooms, cabling and accessway shall be undertaken such that it does not materially affect residential amenity.

The siting of overhead power lines (OHPS) should not lead to material harm or loss of residential amenity.

The effect of the construction implications of the proposal, including the use of the local highways network, should be assessed to ensure that residential amenity is safeguarded and mitigated at all times.

Transport and Access

The site access should be able to accommodate the type and number of vehicle movements generated during the construction and operation of the site. Two access points/routes are suggested; it should be recognised that these encompass Protected Lanes.

The EIA will need to assess and demonstrate the impact of the proposal on the local highway network having regard to planned development eg: the future Chelmsford NE Bypass, Radial Distributor Road 2, which will extend through the Chelmsford Garden Community, planned works to the Boreham Interchange and a future scheme to widen the A12.

Cross reference shall be made to the Glint and Glare Assessment to ensure that highway users are not materially affected by the proposal.

Other Environmental Topics

Land Quality

Following the completion of the Agricultural Land Classification (ALC) report, the proposal should apply a sequential approach to the siting of the proposal. The proposal shall include an assessment and demonstrate the impact of the proposal on the Best and Most Versatile Agricultural land.

Glint and Glare

The potential impact of glint and glare from the solar panels on landscape/visual amenity, aircraft, rail and road safety and residential amenity will be material to the consideration of the proposal.

Consideration shall be given to the individual households sited next to and within the vicinity of the site and to the communities of Boreham and the Chelmsford Garden Community.

The Glint and Glare Assessment shall be cross reference to other policy sections including Landscape and Visual Amenity and Transport and Access

Other Matters

The opinion does not specifically consider residential amenity.

The effect of the proposal upon the quality of life and amenities of individual households, local residents and the communities of Boreham, the Chelmsford Garden Community and others in Braintree District will be material to the consideration of the application and will include amongst others:

- Landscape and Visual Impact
- Noise and Vibration
- Construction Implications in terms of pollution control and vehicle movements
- Siting of Mitigation
- Glint and Glare

The Officers Report to the Scoping Opinion is appended to these comments.

Background Papers

Case File

From: Plant Enquiries
To: Longfield Solar Farm
Subject: RE: EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation
Date: 06 November 2020 10:25:31
Attachments: image002.png
image003.png
image004.png
image005.png

Dear Sir/Madam,

Thank you for submitting your recent plant enquiry.

Based on the information provided, I can confirm that Last Mile **does not** have any plant within the area(s) specified in your request.

If you require further assistance with outstanding enquiries, please call 03300 587 443.

Please ensure all plant enquiries are sent to plantenquiries@lastmile-uk.com

Regards

From: Melissa McNiven <Melissa.McNiven@energetics-uk.com>
Sent: 06 November 2020 10:09
To: Network <network@lastmile-uk.com>
Subject: FW: EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation

energetics
Design | Build | Connect

Melissa McNiven
Receptionist,Corporate Services
[redacted]
e: Melissa.McNiven@energetics-uk.com | w: www.energetics-uk.com
a: Fenick House, Lister Way, Hamilton International Technology Park ,Glasgow,G72 0FT

From: Longfield Solar Farm <LongfieldSolarFarm@planninginspectorate.gov.uk>
Sent: 06 November 2020 10:06
Subject: EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation

Dear Sir/Madam

Please see attached correspondence on the proposed Longfield Solar Farm.

Please note the deadline for consultation responses is 4 December 2020 and is a statutory requirement that cannot be extended.

Kind regards

Katherine King

Katherine King
The Planning Inspectorate
The Square Temple Quay
Bristol
Avon
BS1 6PN

Our ref: AE/2020/125636/01-L01
Your ref: EN010118-LSF

Date: 26 November 2020

Dear Ms King

SCOPING CONSULTATION - LONGFIELD SOLAR FARM

LONGFIELD SOLAR FARM

Thank you for you consultation we have reviewed the documents as submitted and are providing the following comments.

Flood Risk

Considering the very large site area, and the relatively small areas of Flood Zones 2 and 3 within the site boundary, the Sequential Approach should be applied to the siting of the development, and the Flood Risk Assessment (identified as to be undertaken paragraph 2.2.50) should show that the solar panels will all be located within Flood Zone 1 wherever possible. The watercourses will not need to be hydraulically modelled, providing that all the solar panels are located within Flood Zone 1.

We recommend that solar panels and their infrastructure are not located within Flood Zones 2 and 3 because there is potential for flood velocity and flood storage volumes to be affected by the panel support structures (legs and any associated bases) and any related infrastructure and buildings. Should flood velocity slow as a result of this, there is the possibility of flood water backing up and increasing flood risk elsewhere, especially upstream.

If any solar panels are to be located in Flood Zones 2 or 3 then hydraulic modelling of the river will be required as the flood zones are only indicatively modelled in his location, this is to ensure that none of the proposed structures lie within Flood Zone 3b

Functional Floodplain, and to determine the flood risk to the site, and the required volumes and levels of compensatory flood storage required. The FRA will need to show how the development will be safe in the event of a flood and not increase flood risk to others.
There is a risk of debris being caught up in the solar panel support structures or solar panels themselves as a result of flooding. The possibility of the solar panels becoming dislodged by flood water should also be investigated as they could pose a blockage risk downstream, especially to culverts.

We have no comments to make on the surface water drainage scheme proposals as we are not the statutory consultee on drainage matters, the Lead Local Flood Authority Essex County Council will comment on these aspects of the works.

Informative – Environmental Permit for Flood Risk Activities

The applicant may need an environmental permit for flood risk activities if they want to do work in, under, over or within 8 metres (m) from a fluvial main river and from any flood defence structure or culvert. The Rivers Ter and Boreham Brook are designated as Main Rivers.

Application forms and further information can be found at:
https://www.gov.uk/guidance/flood-risk-activities-environmental-permits. Anyone carrying out these activities without a permit where one is required, is breaking the law.

Biodiversity

Principles of Sustainable development of a solar farm

The proposal to develop Longfield as a solar farm has the potential to have beneficial impacts on biodiversity but these are only likely to positive if there is an overall decision to aim to balance conservation and the solar enterprise together. Example photographs in the EIA scoping report indicate some pretty bleak scenes of intense layout with bare shaded ground beneath on the one hand and alternatively higher panels set up above longer grass and sheep grazing in another. Dense solar arrays which do not allow for habitat development are likely to impact negatively on existing land denying wildlife of any habitat and causing soil compaction and potential problems with erosion and soil without normal life.

Some solar farms have been developed on sensitive habitats and have managed to enhance these with improved numbers of rare birds whilst maintaining species rich flora, large areas for pollinating insects and habitat for reptiles and mammals. We would suggest that some of the ideas developed for the Broxted solar farm near Haverhill in Suffolk are considered for replication or development here in order to provide a win-win for farmland wildlife, local people and the developer. This Suffolk site has been closely monitored by ecologists since development in 2014.

Watercourse buffers

As with any development The Environment Agency wish to see open watercourses retained and bankside habitats enhanced and buffered with natural vegetation. Ponds and any standing water should also be protected and enhanced. Natural water features should not be shaded or negatively impacted by the proposals. Siting of battery units should be carefully designed to prevent risk to watercourse pollution and consequent harm to fish and aquatic life.

Cont/d..

Soil Conservation

Conservation of soil habitat and soil biodiversity will be an important issue. We would not wish to see areas of land that is completely shaded or routinely treated with herbicide as this would be more liable to erosion and will not support the full natural range of biodiversity of a healthy soil.

Enhancing existing habitats

Working with nature allowing hedges to grow out a little with good buffer zones to watercourses and plentiful blossom for invertebrates and fruit for winter feeding birds could be a great improvement to most intensely farmed arable landscapes.
If the site was seeded with a native wildflower mix before development there would be key long term gains to develop a pollinator strategy here on land that should not need agricultural pesticides for the duration of the solar farm. This could be a huge win-win for landscape and habitats for ailing species. Sward length will also be a key factor in whether the current farmland becomes more of a wildlife haven or a barren industrial site. Reptiles and small mammals will flourish in a slightly tussocky grassland with benefits up the food-chain to top predators.

Landscape and habitat connectivity should also be considered. There are opportunities to link existing habitats and benefit many struggling species. However if fencing surrounds the site and goes to ground-level there will be dire consequences for mammals such as badger, otter and hedgehog.

Landscape screening and softening should embrace the biodiversity opportunities and consider planting native trees and scrub to complement the ancient woodland around the site.

Water Quality

Located on Page 27, para 2.4.7 of the document we would suggest some additional information

The CEMP also needs to reduce any potential polluting impacts (e.g. run off containing silt/sediment or oil pollution arising from a spill) in addition to nuisances. The CEMP should also include a pollution incident response plan. Guidance on producing a plan can be found at:
https://www.gov.uk/guidance/prevent-groundwater-pollution-from-solvents#prepare-for-emergencies-create-a-pollution-incident-response-plan

Battery storage will be provided. Consideration must be given to how a fire and any resulting firefighting run off would be managed to prevent pollution. We recommend that discussions take place with the local fire and rescue service on potential firefighting strategies used on battery storage installations which will help inform development of a pollution incident response plan (see link above). Guidance on pollutant containment systems can be found in the CIRA publication “Containment systems for the prevention of pollution C736F”
https://www.ciria.org/ItemDetail?iProductCode=C736F&Category=FREEPUBS
The applicant should refer to our general pollution prevention guidance for businesses.
https://www.gov.uk/guidance/pollution-prevention-for-businesses

We trust you find this advice useful.

Cont/d..

Yours sincerely

Ms Gemma Allsop
Sustainable Places - Planning Advisor

Direct dial [redacted]
Direct e-mail gemma.allsop@environment-agency.gov.uk

End

Essex County Council
County Planning
County Hall
Chelmsford
Essex CM1 1QH

Essex County Council

Katherine King
Senior EIA Advisor
on behalf of the Secretary of State
By email –
LongfieldSolarFarm@planninginspectorate.gov.uk

Our ref: BDC/LONGFIELD/EIA SO
Your ref: EN010118-LSF
Date: 4 December 2020

Dear Ms King

RE: Environmental Impact Assessment (EIA) Scoping Opinion for Longfield Solar Farm, North West of Chelmsford

Thank you for the opportunity to respond on behalf of Essex County Council (ECC), defined as a S43 Local Authority and statutory consultee, to provide comments on the EIA Scoping Report to inform the Environmental Statement (ES) for the proposed development of a solar farm.

ECC is a key infrastructure and service provider and is responsible for delivering and commissioning a wide range of strategic and local infrastructure requirements and public services. ECC's role covers a wide range of statutory services including (but not limited to) highways and transportation, minerals, waste, surface water management, and public health. We also advise on a number of other related place-making matters to assist in the determination of planning applications.

The Growth and Development team at ECC is responsible for coordinating single corporate responses for major development schemes and Nationally Significant Infrastructure Projects to ensure that the Council's interests and responsibilities to deliver quality and sufficient infrastructure in the right places and at the right time are effectively communicated, and to support good place-making and place-keeping for existing and future communities.

ECC has reviewed the applicant's Scoping Report and has a number of comments and recommendations to make. The nature and scope of ECC's consultation response addresses the following:

- Planning and Development
- Public Health and Wellbeing
- Highways and Transportation

- Minerals and Waste Planning
- Flood Risk and Drainage
- Energy and Low Carbon
- Economic Growth, Regeneration and Skills
- Emergency Planning
- Environment and Green Infrastructure
- Historic Environment

Planning and Development

Development and Climate Change

Longfield Solar Farm is proposed to be located to the north of the county, straddling the boundaries of Chelmsford and Braintree local authorities. The proposal will include the development of ground mounted solar photovoltaic (PV) panels and battery storage, and associated infrastructure including, substations, transformers and connection to the National Grid. Landscaping and biodiversity engagement are also proposed.

The Essex Climate Action Commission[1] was established in October 2019 in response to national requirements to reduce carbon emissions and increase energy and other resource efficiencies. The purpose of the Commission is to:

- identify ways where we can mitigate the effects of climate change, improve air quality, reduce waste across Essex and increase the amount of green infrastructure and biodiversity in the county
- explore how we attract investment in natural capital and low carbon growth

The Commission is considering six core areas of focussed analysis in the first year:

a. Adapting to an already changing climate
b. Transport
c. Built environment
d. Energy
e. Land use, green infrastructure & biodiversity
f. Community engagement

The recommendations from the Commission will be published in March 2021 and will be a programme of targeted climate action. The work of the Commission should be referred to within the climate change chapter, as its recommendations will have an

[1] https://www.essex.gov.uk/climate-action

impact on future ECC policy, strategy and interventions in the near future with regards climate change.

This proposal may have the potential to contribute to the objectives of the Essex Climate Action Commission in principle, although this will be dependent on the likely environmental, social and economic impacts which will be identified through the ES.

Development Description and Extent

The Scoping Report identifies an area of c.582ha of land which incorporates agricultural land interspersed with areas of woodland. Figure 2-1 identifies the red line boundary which establishes the expected maximum extent of land that would be included within the application for a Development Consent Order (DCO). We acknowledge the applicants desire to progress with some design flexibility as referred to within the Scoping Report, and its intention to apply the Rochdale Envelope approach (paragraph 2.1.26), along with a worst-case scenario in some aspects of the scheme. It is also acknowledged that the design approach may be influenced by advances in the solar technology field. It is likely that the actual scheme red line boundary will be amended as the scheme design progresses.

At present indicative locations for all aspects of this proposed development have been shown within the Scoping Report, which will each require more detailed consideration in terms of their scale, design, access for maintenance, landscape and visual impact given its rural location, impact on the biodiversity, flood risk and drainage, and amenity impacts such as noise. This will be necessary to identify the preferred location for this equipment on a consistent basis.

As an example, there are three potential locations for the required substation, and hence at present no known connection routes to the Grid, as indicated in paragraph 2.3.2. These will require further discussion with National Grid and assessment and consultation prior to them being refined, as acknowledged by the applicant. ECC will require the impact of these powerlines to be assessed in relation to the visual and landscape impact, in addition to the amenity impact on existing communities, strategic allocations such as Chelmsford Garden Community (c.10,000 homes) in Chelmsford City Council's adopted Local Plan 2020, and the Chelmsford North East Bypass (CNEB).

Section 2.4 accepts that the phasing of the scheme will be subject to a number of factors, resulting in the peak construction assessment year being reviewed as the anticipated construction programme is considered in more detail during design development. The Scoping Report states that a full justification for the reasonable worst- case scenario that is assessed will be provided in the ES. ECC has identified

that the area to the north east of Chelmsford (Chelmsford Garden Community) will be subject to significant committed development during the peak construction period.

Given the planned growth/ development in proximity to the proposed development, ECC considers it critical that the ES clearly sets out the proposed phasing of all works and include details, such as the anticipated timescales associated. Such detail will be relevant to assessments in the ES. This should include information on how the timescales of the substation and grid connection is related to the phasing of the main development site.

In addition, there is still uncertainty with regards the preferred access to the site during particularly the construction phase, as indicated in paragraph 13.5.5. ECC acknowledges that the scheme is at an early stage and will evolve in time. However, it has been difficult to provide meaningful comments on such matters, and hence re-scoping may be necessary once the preferred scheme and its elements have been identified. It is appreciated that any scheme requires flexibility but these matters are critical to the scheme, and particularly ECC, as highway authority.

The recent Scoping Opinion by the Inspectorate to Bradwell B stated in paragraph 2.3.1:

"The uncertainty and lack of detailed information provided in the Scoping Report has constrained the ability of the Inspectorate, and potentially consultees, to provide meaningful comments on its content and in some cases (particularly in relation to the likely impacts associated with off-site elements) has prevented the Inspectorate from being able to agree to scope matters out of the assessment at this time."

Consequently, the ES in the description of the development will need to clearly explain the changes to the location (including any changes to the red line boundary) and design of the proposed development that have occurred since the time of scoping and detail how such changes affect the baseline assessments, as previously set out and defined in this Scoping Report. The relevant assessments and figures should be presented in the ES.

Where uncertainty exists and flexibility is sought, this should be explained not only in terms of the maximum parameters but also the anticipated limits of deviation, the dimensions, locations, and alignments of the various project elements, including points of access and key structures, such as the substation, location of panels and supporting infrastructure (e.g. switchgear) and the connection to the Grid. This information is important to ensure that the likely significant effects associated with the construction and operation stages have been appropriately assessed. The ES should provide figures to support the project description and depict the necessary detail.

At this stage there is therefore an element of uncertainty around the potential direct and indirect impacts of the proposed development and a worst-case scenario will need to be considered in terms of implications for ECC's infrastructure and service responsibilities. ECC request that the applicant make every effort to narrow the range of options and explain clearly in the ES which elements of the proposed development are still to be finalised and provide the reasons. At the time of application, any proposed development parameters should not be so wide-ranging as to represent effectively different developments.

If changes to the proposed scheme are so wide-ranging it may be necessary to revisit the scoping of the scheme.

Policy Context

As the Minerals and Waste Local Planning Authority for both Chelmsford and Braintree local authorities, we welcome reference to the Essex Minerals Local Plan (2014) and the Essex and Southend-on-Sea Waste Local Plan (2017) in paragraph 1.2.10.

We note that reference is made to the relevant local development plan documents for Braintree and Chelmsford local authorities and recommend that these references are up to date and consistent throughout (for example at paragraph 13.3.1). We also recommend that the Hatfield Peverel Neighbourhood Plan is referenced in this section, as it is in paragraph 7.3.6 under Culture Heritage. The Neighbourhood Plan was 'made' at Full Council on 16 December 2019, and therefore forms part of the development plan for Braintree District.

Public Health and Wellbeing

As noted above, there is flexibility built into the scheme red line boundary identified in Figure 2-1, and there are a number of local communities in close proximity to this area, including Terling, Hatfield Peverel and Boreham, as referred to in paragraph 2.1.7. This creates an element of uncertainty on the extent and magnitude of the potential impact on local residents.

We would like to point out that the maximum extent of land identified in Figure 2-1 is also in close proximity to the Chelmsford Garden Community identified in Chelmsford City Council's adopted Local Plan 2020, and this should be acknowledged within the ES given that the operational life of this scheme could extend beyond the 40 year design life (paragraph 2.6.1).

Whilst it is positive that human health is not proposed to be scoped out of the ES, we are disappointed to note that health is not proposed to have a separate chapter

within the ES, particularly given the aforementioned uncertainty. Health and wellbeing are key cross-cutting issues as identified in paragraph 14.6.1 and we feel this could be a missed opportunity to draw together all health-related aspects in a clear and concise manner.

Highways and Transportation

ECC is the Highway Authority for Braintree and Chelmsford local authorities.

It is noted that a Transport Scoping Note and Access Strategy will be prepared (paragraph 13.1.1). This should be shared with ECC and Highways England (HE) as soon as possible to agree the scope of the Transport Assessment and Construction Environmental Management Plan (CEMP).

CEMP

The CEMP will need to set out vehicle routing, site accesses, proposed temporary traffic management/highway improvements, wheel washing, minor road crossing points and public rights of way (PROW) management.

The CEMP will need to include how maintenance of the highway is to be dealt with during the construction and de-commissioning periods. For example, condition surveys are likely to be required prior to commencement of construction and de-commissioning, and on-going maintenance of carriageways, verges and margins will be required during construction and de-commissioning, together with making good following completion of construction/de-commissioning. This may involve payment of Maintenance Bonds.

The CEMP will need to cover the de-commissioning aspect as well as the construction traffic particularly if abnormal loads are involved. For example, if any mitigation measures are required on the highway network to accommodate abnormal loads during construction, will these be permanent measures; or if they are temporary what the process will be to agree mitigation to accommodate traffic during the decommissioning.

ECC would welcome early engagement in this process.

Transport Assessment

ECC, as highway authority, welcomes the need to agree the scope and approach of the Transport Assessment (TA) for the impact of the scheme. Reference should be made to the TA covering the construction, operation and decommissioning phase of the scheme. The TA will need to be summarised in the ES. The ES should describe

in sufficient detail the anticipated impacts, the resulting effects, any mitigation measures proposed (permanent/temporary) and the significance of residual effects.

Early discussions will need to take place with ECC highways regarding road proposals in the vicinity of the site which would affect not only routing of the construction traffic, but would also affect the timing of construction to avoid major conflict on the road network. For example:

- Beaulieu Radial Distributor Road (RDR) from Essex Regiment Way (ERW) to Boreham Interchange including a new bridge over the railway line and A12 northbound on-slip.
- Boreham Interchange developer improvement scheme including construction of “Hamburger” at Generals Farm roundabout, relocation of Generals Lane roundabout, improvement to Drovers Way roundabout, improvement to A12 slip Roads and connection to RDR.
- Chelmsford NE Bypass (CNEB) connecting from RDR to A131 including new overbridges to accommodate side roads such as Cranham Road
- The proposal for Radial Distributor Road 2 (RDR2) which is included in Chelmsford Local Plan for access to Chelmsford Garden Community, including a connection to CNEB and reconfiguration of the ERW/ Wheelers Hill roundabout as well as an amended link to Cranham Road.
- HE proposals for A12 widening, which is already mentioned in the Scoping Report.

The above committed highways schemes identified above will need to be factored into the TA, and should also be considered in the ES, particularly with regards their cumulative impact given their timescales being similar to the scheme.

The preferred access to the site should be identified early in the process as this will influence the basis of assessments required for the ES. ECC’s preferred route would be from the Boreham Interchange vis RDR to ERW and Wheelers Hill, to avoid HGV traffic travelling through the villages of Boreham and Hatfield Peverel, hence the need for early discussions with ECC and HE.

It is noted that a significant number of PROWs will be affected by the proposals. The following will need to be considered:

- The public’s rights and ease of passage over public footpaths / bridleways / byways should be maintained free and unobstructed at all times to ensure the continued safe passage of the public on the definitive right of way.
- If PROWs have to be temporarily or permanently diverted then no development should not commence on site until an Order securing the diversion of the existing definitive right of way to a route has been agreed and

has been confirmed with ECC and the LPA; and the new route has been constructed.

The scope of the transport modelling will need to be agreed with ECC and HE at an early stage.

Other matters

With regards the criteria to be used for assessing the environmental impacts of road traffic identified in paragraph 13.6.7, additional criteria to those listed could include:

- potential capacity of any road, having regard to amenity and resilience;
- bus passenger delay;
- cyclist delay;
- journey time reliability; and
- noise and air pollution from transport sources be factored into determining the magnitude of change.

Reference is made to 'accidents and safety'. The preferred reference is to 'collision' rather than 'accident'. ECC would welcome prior discussion regarding the identification of specific collision clusters and hotspots within the area of influence.

Road safety audits will be required for any proposed new accesses, minor road crossings or highway improvements/modifications associated with the proposal.

There will need to be cross-referencing to other technical assessments where any potential and/or significant effects are identified. For example, in relation to air quality, visual effects (including 'glint and glare') and any impact on heritage assets.

ECC recommends consideration is given to the design, alignment and movement of the solar panels, as this will have potential implications on the impact of the proposal through 'glint and glare' on the existing communities, CNEB and Chelmsford Garden Community. This will impact on visual amenity to new and existing residents and potential road safety along the new bypass, and potentially A12.

It is imperative that discussions with ECC occurs as early as possible given the significant development in terms of new homes and highway/transport infrastructure that is planned in proximity to the site.

Minerals and Waste Planning

ECC is the Minerals and Waste Local Planning Authority for Chelmsford and Braintree local authorities.

As shown in Appendix 1 of our response, the vast majority of the current extent of the application site is within a Mineral Safeguarding Area (MSA), meaning that it is subject to Policy S8 of the Essex Minerals Local Plan 2014 (MLP), see Appendix 3.

The MSA is a planning constraint and should therefore be included within Figure 2-1 although it is recognised that this would clutter the map.

The intention to produce a high-level CEMP to support the DCO application, with a more detailed CEMP to be produced prior to construction, is noted (paragraph 2.4.7).

Paragraph 2.6.1 states that the design life of the scheme is expected to be at least 40 years, although the operational life could be much longer than this. As such, the scheme does not fall under the exclusionary criteria of the proposal being for 'Applications for temporary buildings, structures or uses (for up to five years)' with regards to the application of Policy S8 of the MLP.

Paragraph 14.5.3 states that details of land designated for Mineral Safeguarding will be included in a Phase 1 Preliminary Risk Assessment (PRA). From this, it is not possible to understand the extent to which details will be provided and the context within which conclusions, if any, will be drawn.

As set out in Policy S8 of the MLP, applications for non-mineral development in land designated as a Minerals Safeguarding Area are required to be supported by a Minerals Resource Assessment (MRA). Further detail is provided in Appendix 3 of this response. It is assumed that the PRA is not intended to substitute for the requirements of MRA.

With reference to Table 14.1, it is stated at Row 6 (Waste) that "*Waste materials will be disposed of by the contractor(s) to appropriate recycling facilities or appropriately licensed landfills in line with a Construction Resource Management Plan (equivalent to a Site Waste Management Plan)*". This is supported. Information within or accompanying the ES should also quantify the volumes of waste re-used on site and leaving the site, as well as demonstrate how the amount of waste forecasted to leave the site has been proactively minimised at construction, operation and deconstruction stages by incorporating sustainable working practices, including a consideration of the material used and their procurement. Waste arising from the site should be assessed in light of the available capacity to manage it where such an assessment can be made.

We would prefer that minerals and waste matters were considered as part of a standalone chapter, contrary to paragraph 14.9.4, even if this mainly serves to signpost other relevant documents.

That aside, paragraph 14.9.1 states that "*A description of the potential streams of construction waste and estimated volumes will be described within the description of development chapter of the ES*" but that "*the CEMP, which would be produced following receipt of a DCO, will set out how waste will be managed on-site, and opportunities to recycle waste will be explored*". It is questioned how the ES can comment on volumes of waste arising ahead of the consideration of how waste will be managed on-site and recycling opportunities explored. Those issues set out to be assessed following DCO consent should instead be addressed as part of the Framework CEMP and submitted at the same time as the ES such that the description of development chapter of the ES is suitably informed.

Table 16.1 scopes out effects on MSAs. The justification is presented as "*the only part of the Site within a Mineral Safeguarding Zone would be for potential cable route to the existing Bulls Lodge Substation*". It is considered that this assessment has potentially confused Mineral Consultation Areas (designated around mineral infrastructure) with Mineral Safeguarding Areas (designated around mineral bearing land).

Appendix 1 of this report shows that the vast majority of the scheme is located within a MSA, and that this proposal will potentially sterilise a considerable amount of mineral resource. The volume which would be sterilised is many times over that which would be allocated within a Minerals Local Plan. The proposal is therefore subject to Policy S8 of the MLP, see Appendix 3.

Flood Risk and Drainage

All information associated with surface water drainage and risk of flooding should be included as part of the DCO application. However, there is no need for additional information to be supplied as part of an EIA.

Energy and Low Carbon

Although the impact of greenhouse gas (GHG) emissions has been identified as a national and global issue (paragraph 6.2.3), it should also be noted that it will have local impacts and the project impacts should also consider the aspirations of the Essex Climate Action Commission (set out above) and Essex's upcoming decarbonisation targets and move to net zero and alignment of the project with these.

Given the proximity of this proposed development to multiple local communities, it is imperative that local residents have the opportunity to realise the benefits throughout the lifetime of the project, which could exceed 40 years. We recommend that a minimum expectation would be the opportunity for part community ownership as well as an ongoing community benefit fund that allows the resident to actively engage

with the development. Consideration could be given to such benefits/ opportunities within the socio-economics and land use chapter.

Economic Growth, Regeneration and Skills

The socio-economics and land use chapter should also take into account other local economy/growth policies including:

- Essex Construction Growth Report 2020-2040
- Essex Prosperity and Productivity Plan 2020
- Essex Skills for Growth Strategy 2019
- North Essex Economic Strategy (Propositions) 2019
- South East Local Economic Partnership (SELEP), Smarter Faster, Together: Towards a Local Industrial Strategy 2018

We would expect to see stronger commentary on the need to support economic growth and productivity in the two districts and the region, taking into account both local business needs and wider opportunities for development.

There is no mention of any initial analysis to estimate likely construction workforce numbers, including peak construction numbers, and therefore no baseline to assess and/or mitigate against any disruption to the local labour market. This also suggests that there is no baseline against which the ES will encourage local skills development and employment.

Emergency Planning

We have no specific comments to make at this stage.

Environment and Green Infrastructure

ECC currently provides advice on green infrastructure schemes (GI) for major developments. ECC have been consultee on GI since the 2018. Although there are no statutory requirements for GI, the 25 Year Environment Plan and emerging Environment Bill will place significant importance on protecting and enhancing GI, accessibility and biodiversity net gain.

In providing advice we look to ensure that adequate provision, protection and improvements of high-quality GI comply with the objectives and planning principles set out in the following documents:

- Relevant Local Plan policies and supporting evidence for Chelmsford and Braintree local authorities regarding their approach to GI provision

- Essex Green Infrastructure Strategy 2020[2] which aims to enhance the urban and rural environment, through creating connected multi-functional GI that delivers multiple benefits to people and wildlife. It meets the Council's aspirations to improve GI and green spaces in our towns, cities and villages, especially close to areas of deprivation

ECC GI position

The UK Government's position on power is set out in the Overarching National Policy Statement for Energy (EN-1), which recognises the importance of understanding and addressing landscape and visual impacts (Department of Energy and Climate Change, 2011). It includes a section on criteria for "good design" for energy infrastructure, which states that:

"*Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area*."

Furthermore, Para 2.4.2 of the National Policy Statement for Renewable Energy Infrastructure (EN-3) also states "*Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology.*"

There are a number of elements associated with a solar farm development which have the potential to influence the significance of the impacts on landscape character and visual amenity. These include:

- Height and layout of the panels
- Colour of the panel's surrounding frames
- Treatment of the ground below and between the panels
- Perimeter fencing

The Scoping Report sets out the proposed scope of the Landscape and Visual Impact Assessment (LVIA) to be included within the ES. It refers to appropriate guideline documents such as the Guidelines for Landscape and Visual Impact Assessment (GLVIA) Third Edition (Landscape Institute and Institute of Environmental Management and Assessment) and gives an outline as to how the report will be set out and the impacts assessed.

[2] https://www.placeservices.co.uk/resources/builtenvironment/essex-gi-strategy/

Moving forward, we would recommend the following are considered as part of the EIA and masterplanning process:

1. To help inform the landscape baseline, we would expect a detailed landscape audit to be provided. This should include details of existing landscape features present across the development sites. Assets should include but not be limited to; existing trees, hedgerows, woodlands/copses and grassland habitats.

2. The landscape and visual receptors need to submitted and approved by the LPAs prior to the assessment being undertaken. Supporting Zone of Theoretical Visibility mapping should also be provided to ensure longdistance views outside the assessment study area need to be considered.

3. All visual representation with any submitted Landscape and Visual Impact Assessment (LVIA) should be in line with The Visual Representation of Development Proposals Technical Guidance Note (TGN) 06/19 (Landscape Institute, September 2019) to ensure the assessment of visual impact is accurate and in turn an appropriate judgement of the assessed impacts can be made.

4. We welcome reference to the Essex GI Stratgey. We would also recommend appropriate consideration is given to relevant guidance on managing the site and improving biodiversity around solar farms, including BRE guidance, which may be of assistance with the ES.

5. Solar farms can have an impact on PROWs (see earlier comments). From a GI perspective, we would therefore expect adequate mitigation and screening to be provided. GI corridors (both recreational and wildlife) should also be appropriate widths and not be confined to narrow corridors formed by security fencing and dense planting, which contrast with the open nature of the landscape.

6. Security lighting should also be minimised; passive infra-red (PIR) technology should be designed and installed to minimise glare, light pollution and impacts on biodiversity (particularly bats).

7. Bio-solar techniques should be explored. For example, site buffers and spacings between array rows should be planted with appropriate wildflower mixes and foraging plants to encourage biodiversity.

8. Details of how surface water run-off will be managed will need to be provided alongside the DCO applications (see earlier comments), especially given the amount of new track proposed. Where possible, we would encourage soft engineered approaches to ensure landscape character is not impacted further and to enhance the GI network.

Historic Environment

There are a large number of listed buildings within the area, many are farmhouses and farm buildings dating to between the 13th and 19th centuries, including the manorial sites of Toppinghoe Hall and Ridley Hall. They illustrate the settlement and agricultural history of the area over a period of seven centuries and also reveal the well preserved historic landscape in which the solar farm is proposed. The site also contains ancient woodland and likely historic hedgerows. Other known archaeological sites are recorded from aerial photographic evidence and include ring ditches, trackways, enclosures and field boundaries which could span dates from the prehistoric to the postmedieval period. Little archaeological investigation has taken place within the vicinity of the proposed site, however long-lived excavations at the adjacent site of Bulls Lodge Quarry have demonstrated prehistoric and medieval settlement and activity within this landscape.

The Scoping Report includes a chapter on Cultural Heritage which will be scoped in to the ES to be provided alongside the DCO application. This chapter sets out the approach to the assessment of the scheme's impacts on cultural heritage (comprising built heritage, archaeology and the historic landscape). The comments below are with regard to the archaeological resource and relate to below ground impact.

The Cultural Heritage Chapter states:

"*In regard to archaeology, the Scheme requires only a small amount of heavy foundations (for the inverters etc.), with the solar panels themselves requiring less intensive piled foundations limiting the potential for effects on below-ground heritage features. However, a geophysical survey will be undertaken which will provide information about buried archaeological assets and will be used to inform the design*" (paragraph 7.5.3)

However, the Scoping Report states that there may be a requirement for "*more complex foundation designs*" for the solar panels and there may be localised trenching for cabling and solar stations, in addition to the concrete bases for the supporting infrastructure. Connection to the main grid may also use underground cabling and there may be further below ground disturbance from construction compounds and access roads. The solar farm covers a large area and cumulatively these impacts on below ground archaeological deposits could be high.
It would be preferable to mount solar panels on steel frames that are pile driven into the ground and to keep cabling above ground where possible, there would be a cumulative effect of many metres of cabling on below ground archaeological remains. Similarly, Overhead Power Lines would be preferred from this perspective to avoid impact on the archaeological resource.

Under sources of information the Scoping Report states:

“Field investigation will be undertaken to refine and augment the desk-based data. The scope and specification of the field investigations has been set out in a Written Scheme of Investigation (WSI), which was agreed with the County Advisor at Essex County Council (ECC). As a minimum, it is anticipated that geophysical (magnetometer) survey will be undertaken in areas of interest, and, where required, to be followed by evaluation trenching post-consent. Further information will be provided regarding building and construction, cabling, infrastructure.” (paragraph 7.6.10)

There has been early engagement regarding the archaeological methodology which has facilitated input from the curatorial officer. A Written Scheme of Investigation (WSI) for geophysical investigation has been submitted and approved and the scope of the field investigations has been discussed. It has been recommended that a programme of aerial rectification be completed to allow for greater accuracy of known cropmark features and the potential for the identification of any unrecorded aerial cropmark features. The scope and specifications of the field investigations has not yet been formalised as an approved WSI for the scheme and evaluation trenching post consent has not been agreed.

The combination of geophysics and aerial photography should allow greater understanding of the nature and significance of any potential archaeological remains, however , these methods, by their nature, can only provide confidence in larger and long lived archaeological features and the proportion of unidentified archaeological remains within the area could be significant. In order to ‘assess the value’ of the heritage assets that may be impacted on there will also need to be an element of intrusive archaeological investigation in order to ground truth the results of the geophysics and aerial photography.

The adoption of the above methodology would provide confidence in the information submitted with any future application and will allow consideration of the nature and scale of the potential impacts arising from the Scheme, the details of which may not be decided until a much later date.

Conclusion

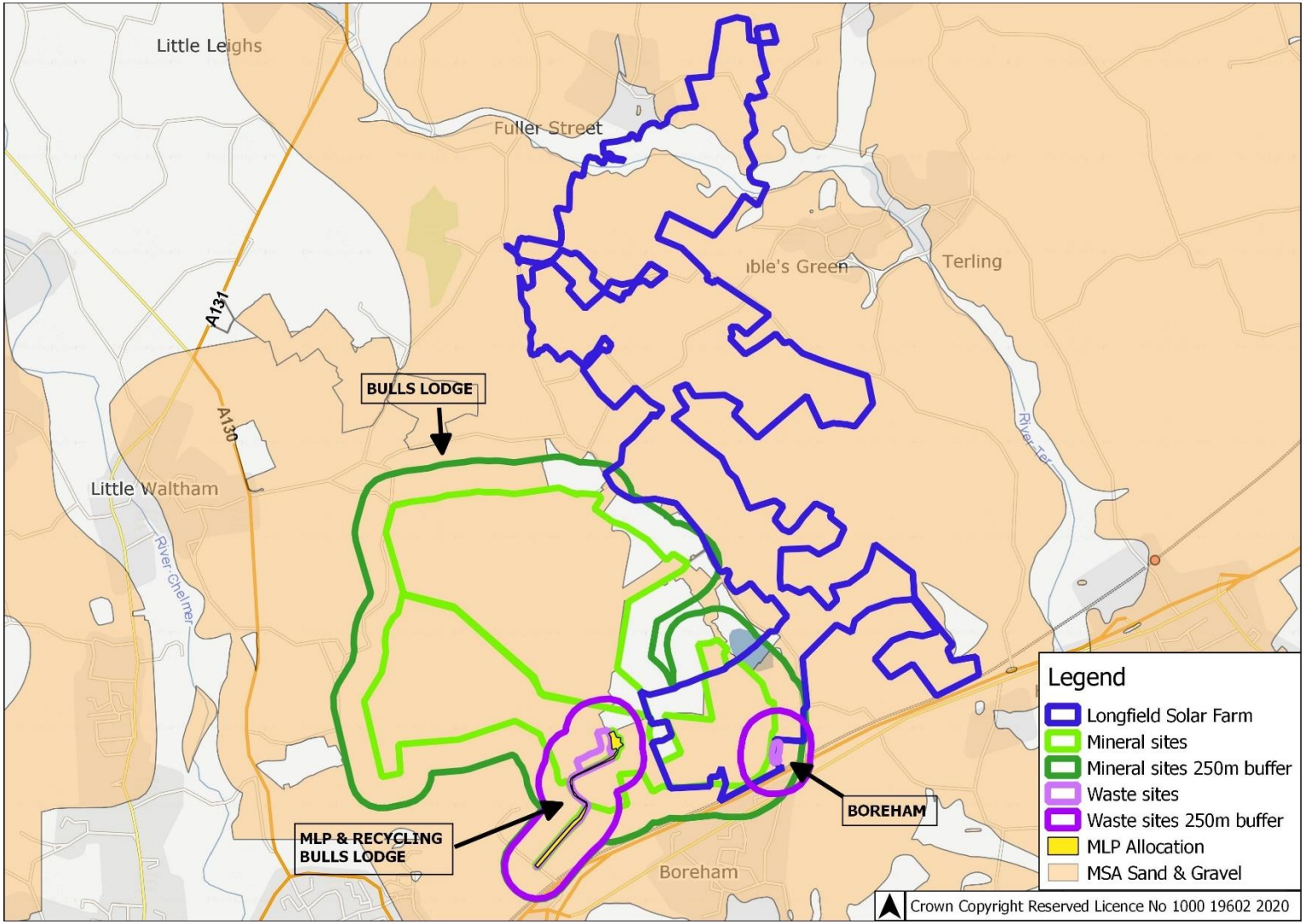
We recommend that the ES takes into account the comments provided in relation to ECC’s statutory and non-statutory services. I hope the above is of assistance – if you require further information on the contents of this single response, please contact Natalie Hayward (Principal Planner) as detailed below. When a decision is made on the applicant’s EIA Scoping Report, any opinion should be sent through to ECC upon publication.

Yours sincerely

Matthew Thomas
Growth and Development Manager
Essex County Council

Enquiries to: Natalie Hayward (Principal Planner – Major Development and New Communities)
Email: natalie.hayward@essex.gov.uk

Appendix 1 – Spatial Representation of Minerals and Waste Designations in Relation to the Proposed Scheme



Appendix 2 – List of Safeguarded Minerals and Waste Infrastructure

Schedule of mineral infrastructure and designations within the study area

Site type	Site name	Planning application number
Mineral Safeguarding Areas (see Appendix 2)	Sand and gravel	N/A
MLP Allocations or Safeguarded Sites (subject to MCA designations, see Appendix 3)	Bulls Lodge Quarry Coated Stone Plant	MLP p196
Minerals Infrastructure (subject to MCA designations see Appendix 3)	Bulls Lodge Quarry Coated Stone Plant	ESS/01/11/CHL
	Bulls Lodge	CHL/1890/87 (to be superseded by ESS/37/15/CHL, pending determination)
	Bulls Lodge	CHL/1019/87 (to be superseded by ESS/36/13/CHL, pending determination)

Schedule of waste infrastructure and designations within the study area

Site type	Site name	Planning application number
Waste management infrastructure (subject to WCA designations, see Appendix 4)	Boreham Recycling Centre	ESS/24/10/CHL/SO
	Bulls Lodge Inert Recycling	ESS/44/17/CHL

Appendix 3 – Generic Schedule of Requirements for when an application for non-mineral development is proposed in land designated as a Mineral Safeguarding Area

Policy S8 of the Essex Minerals Local Plan requires that non-mineral developments which have a site area equating to 5ha or more of land within a Mineral Safeguarding Area must be accompanied by a Minerals Resource Assessment.

MRA Section	Matters to Cover
Site location, relevant boundaries, timescale for development	Application area in relation to MSA/MCA Description of development including layout & phasing Timescale for development Whether there is any previous relevant site history – this could include previous consideration of site or adjacent land in preparation of Minerals Local Plan, any previous mineral assessments and market appraisals, boreholes, site investigations, technical reports and applications to the Minerals Planning Authority for extraction.
Nature of the existing mineral resource	Type of mineral Existing mineral exploration data (e.g. previous boreholes in area) Results of further intrusive investigation if undertaken Extent of mineral – depth & variability Overburden – depth & variability, overburden:mineral ratio. To be expressed as both actual depths and ratio of overburden to deposit, as well as variation across the site. Mineral quality – including silt %/content and how processing may impact on quality. Consideration should give given to the extent to which the material available on site would meet the specifications for construction. An assessment of the amount of material that would be sterilised (whole site area) and could be extracted (following application of any required buffer zones). Estimated economic/market value of resource affected across whole site and that which could be extracted.
Constraints impacting on the practicality of mineral extraction (distinct from those that would arise from the	Ecology designations, Landscape character, Heritage designations, Proximity to existing dwellings, Highways infrastructure, Proximal waterbodies,

primary development)	Hydrology, Land stability, Restoration requirements, Effect on viability of non-minerals development including through delays and changes to landform and character, Utilities present etc. Constraints should be assessed in light of the fact that construction of the non-minerals development would be taking place e.g. landscape issues are to be presented in light of the final landscape likely to be permanent built development. It is held that mitigation methods employed as part of the construction of the non-minerals development may also facilitate prior extraction at that locality.
Potential opportunities for mineral extraction at location	Ability of site to incorporate temporary mineral processing plant, Proximity to existing mineral sites or processing plant, Context of site and mineral within wider mineral resource area, Proximity to viable transport links for mineral haulage, The potential for indigenous material to be used in the construction of the proposed development, thereby reducing/removing the need for import, Potential benefits through mineral restoration e.g. land reclamation, landscape enhancement, Any opportunities for incidental extraction as part of the development of the site such as foundations, footings, landscaping, sustainable drainage systems, Evidence or otherwise of interested operators/local market demand,
Conclusion (as relevant to the findings)	Whether prior extraction is environmentally feasible, Whether the site has the potential to be worked for mineral in the future, Whether prior extraction is practical at the site in the context of the non-mineral development, taking into account the estimated value of the mineral, restoration and the overall viability of the development. How the MRA has informed the proposed non-mineral development, If prior extraction is not practical, the justification for sterilising the mineral, If prior extraction is practical, how this will be phased as part of, or preceding, the non-mineral development,

Borehole logs do not have to be commissioned specifically for an MRA where they already exist, but they must be indicative of the site as a whole, taken from within the application boundary and conform to industry standards.

To ensure that a comprehensive assessment is undertaken on a site, it is recommended that:

- a draft borehole location plan is agreed with the County Council as early as possible and preferably as part of pre-application;
- the borehole depths should be the full extent of the resource;
- borehole analysis must note the depth of the water table; and
- a non-stratified sampling technique is applied. An initial spacing of approximately 100m-150m centre to centre should be considered, with additional locations if required to determine the extent of deposits on site.

The MRA should be prepared using the Pan-European Standard for Reporting of Exploration Results, Mineral Resources and Reserves (PERC) Standard, which was revised and published on 23 May 2013.

Appendix 4 - Generic Schedule of Requirements for when an application for non-mineral development is proposed in land designated as a Mineral Consultation Area

Policy S8 of the Essex Minerals Local Plan requires that non-mineral developments within a Minerals Consultation Area must be accompanied by an assessment into any potential impacts on the safeguarded infrastructure. Assessments are expected to be proportionate to the non-mineral development proposed.

Minerals Infrastructure Assessment Components	Information requirements & sources
Site location, boundaries and area	• Application site area in relation to safeguarded site(s), • Description of proposed development, • Timescale for proposed development,
Description of infrastructure potentially affected	• Type of safeguarded facility e.g. wharf, rail depot, concrete batching plant; asphalt plant; recycled aggregate site, • Type of material handled/processed/supplied, • Throughput/capacity.
Potential sensitivity of proposed development as a result of the operation of existing or allocated safeguarded infrastructure	• Distance of the development from the safeguarded site at its closest point, to include the safeguarded facility and any access routes, • The presence of any existing buildings or other features which naturally screen the proposed development from the safeguarded facility, • Evidence addressing the ability of vehicle traffic to access, operate within and vacate the safeguarded development in line with extant planning permission, • Impacts on the proposed development in relation to: o Noise o Dust o Odour o Traffic o Visual o Light
Potential impact of proposed development on the effective working of the safeguarded infrastructure/allocation	• Loss of capacity – none, partial or total, • Potential constraint on operation of facility – none or partial.
Mitigation measures to be included by the	• External and internal design & orientation e.g. landscaping; living & sleeping areas

Minerals Infrastructure Assessment Components	Information requirements & sources
proposed development to reduce impact from existing or allocated safeguarded infrastructure	facing away from facility, • Fabric and features e.g. acoustic screening & insulation; non-opening windows; active ventilation.
Conclusions	• How the MIIA informed the final layout of the proposed development. • Sensitivity of proposed development to effects of operation of safeguarded infrastructure/facility can be mitigated satisfactorily; or • If loss of site or capacity, or constraint on operation, evidence it is not required or can be re-located or provided elsewhere.

Appendix 5 - Generic Schedule of Requirements for when an application for non-waste development is proposed in land designated as a Waste Consultation Area

Policy 2 of the Essex and Southend-on-Sea Waste Local Plan requires that non-waste related development proposed within land designated as a Waste Consultation Area are shown to not have an adverse impact on the safeguarded infrastructure pertaining to the Waste Consultation Area. The Waste Planning Authority has designed a generic schedule of information requirements that should be addressed as relevant within the supporting evidence of any application which falls within a Waste Consultation Area. The detail to be provided should be in proportion to the nature of the proposed application.

Waste Infrastructure Assessment Components

Waste Infrastructure Assessment Components	Information requirements & sources
Site location, boundaries and area	• Application site area in relation to safeguarded site(s) • Description of proposed development • Timescale for proposed development
Description of infrastructure potentially affected	• Nature of relevant safeguarded facility • Type of material handled/processed/supplied • Throughput/capacity
Potential sensitivity of proposed development as a result of the operation of existing or allocated safeguarded infrastructure	• Distance of the development from the safeguarded site at its closest point, to include the safeguarded facility and any access routes. • The presence of any existing buildings or other features which naturally screen the proposed development from the safeguarded facility • Evidence addressing the ability of vehicle traffic to access, operate within and vacate the safeguarded development in line with extant planning permission. • Impacts on the proposed development in relation to: o Noise o Dust o Odour o Traffic o Visual o Light
Potential impact of proposed development on safeguarded infrastructure/ allocation	• Loss of capacity – none, partial or total • Potential constraint on operation of facility – none, partial or full
Measures to mitigate potential impacts of	• External and internal design & orientation eg landscaping; living & sleeping areas facing away from facility.

operation of infrastructure on proposed development	• Fabric and features eg acoustic screening & insulation; non-opening windows; active ventilation
Conclusions	• Sensitivity of proposed development to effects of operation of safeguarded infrastructure/facility can be mitigated satisfactorily; or • If loss of site or capacity, or constraint on operation, evidence it is not required or can be re-located or provided elsewhere

From:	Jarvis, Neil
To:	Longfield Solar Farm
Subject:	Application by Longfield Solar Energy Farm Limited. Reference ENO 10118- LSF
Date:	16 November 2020 16:00:11

Dear Sir or Madam,

Thank you for seeking the Forestry Commission's advice about the impacts that this application may have. As a non-statutory consultee, the Forestry Commission is pleased to provide you with the information below, which may be helpful when you consider the application. The Environmental Impact Assessment Scoping Report has seven ancient woodlands within of immediately adjacent to the study area that are of particular concern to the Forestry Commission. They are ;

Brickhouse Wood, Hookley Wood, Sandy Wood, Scarlett's Wood, Ringer's Wood, Porters Wood, which is adjacent to Toppinghoehall Wood (north), and Toppinghoehall Wood (south).

Ancient woodlands are irreplaceable. They have great value because they have a long history of woodland cover, great biodiversity and often many heritage features that remain undisturbed. This applies equally to Ancient Semi Natural Woodland (ASNW) and Plantations on Ancient Woodland Sites (PAWS).
It is Government policy to refuse development that will result in the loss or deterioration of irreplaceable habitats including ancient woodland, unless "*there are wholly exceptional reasons and a suitable compensation strategy exists" (*National Planning Policy Framework paragraph 175).

We refer you to further technical information set out in Natural England and Forestry Commission's Standing Advice on Ancient Woodland – plus supporting Assessment Guide and Case Decisions.

Please note that the Standing Advice on Ancient Woodland on GOV.UK includes the recommendation of the incorporation of buffer zones around ancient woodlands to avoid direct or indirect damage to the woodland. The Standing Advice states ;
'Use of buffer zones
A buffer zone's purpose is to protect ancient woodland and individual ancient or veteran trees. The size and type of buffer zone should vary depending on the scale, type, and impact of the development.
For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you are likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic.
A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter.
Where possible, a buffer zone should:

- contribute to wider ecological networks
- be part of the green infrastructure of the area

It should consist of semi-natural habitats such as:

- woodland
- a mix of scrub, grassland, heathland and wetland planting

You should plant buffer zones with local and appropriate native species.
You should consider if access is appropriate and can allow access to buffer zones if the habitat is not harmed by trampling.
You should avoid including gardens in buffer zones.
You should avoid sustainable drainage schemes unless:

- they respect root protection areas
- any change to the water table does not adversely affect ancient woodland or ancient and veteran trees'

With regard to on-site cabling, both below and above ground, it is recommended that its installation avoids tunneling under or crossing through any of the ancient woodland. Similarly, we would recommend that access to sites avoids the ancient woodlands and their buffer zones.
As a Non-Ministerial Government Department, we provide no opinion supporting or objecting to an application. Rather we are including information on the potential impact that the proposed development would have on the ancient woodland.
These comments are based upon information available to us through a desk study of the case, including the Ancient Woodland Inventory (maintained by Natural England), which can be viewed on the MAGIC Map Browser, and our general local knowledge of the area. If the planning authority takes the decision to approve this application, we may be able to give further support in developing appropriate conditions in relation to woodland management mitigation or compensation measures. Please note however that the Standing Advice states that "*Ancient woodland, ancient trees and veteran trees are irreplaceable. Consequently, you should not consider proposed compensation measures as part of your assessment of the merits of the development proposal*."

We hope these comments are helpful to you. If you have any further queries, please do not hesitate to contact me.

Yours sincerely

Neil Jarvis

Local Partnership Advisor
East and East Midlands

Mobile number [redacted]

A summary of Government policy on ancient woodland

Natural Environment and Rural Communities Act 2006 (published October 2006).
Section 40 – "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving

biodiversity".

National Planning Policy Framework (published July 2018).
Paragraph 175 – "*development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists*".

National Planning Practice Guidance – Natural Environment Guidance. (published March 2014)
This Guidance supports the implementation and interpretation of the National Planning Policy Framework. This section outlines the Forestry Commission's role as a non statutory consultee on *"development proposals that contain or are likely to affect Ancient Semi-Natural woodlands or Plantations on Ancient Woodlands Sites (PAWS) (as defined and recorded in Natural England's Ancient Woodland Inventory), including proposals where any part of the development site is within 500 metres of an ancient semi-natural woodland or ancient replanted woodland, and where the development would involve erecting new buildings, or extending the footprint of existing buildings"*

It also notes that ancient woodland is an irreplaceable habitat, and that, in planning decisions, **Plantations on Ancient Woodland Sites (PAWS) should be treated equally in terms of the protection afforded to ancient woodland in the National Planning Policy Framework**. It highlights the Ancient Woodland Inventory as a way to find out if a woodland is ancient.

The UK Forestry Standard (4th edition published August 2017).
Page 23: "Areas of woodland are material considerations in the planning process and may be protected in local authority Area Plans. These plans pay particular attention to woods listed on the Ancient Woodland Inventory and areas identified as Sites of Local Nature Conservation Importance SLNCIs)".

Keepers of Time – A Statement of Policy for England's Ancient and Native Woodland (published June 2005).
Page 10 "The existing area of ancient woodland should be maintained and there should be a net increase in the area of native woodland".

Natural Environment White Paper "The Natural Choice" (published June 2011)
Paragraph 2.53 - This has a "renewed commitment to conserving and restoring ancient woodlands".
Paragraph 2.56 – "The Government is committed to providing appropriate protection to ancient woodlands and to more restoration of plantations on ancient woodland sites".

Standing Advice for Ancient Woodland and Veteran Trees (first published October 2014, revised November 2018)
This advice, issued jointly by Natural England and the Forestry Commission, is a material consideration for planning decisions across England. It explains the definition of ancient woodland, its importance, ways to identify it and the policies that are relevant to it.

The Standing Advice refers to an Assessment Guide. This guide sets out a series of questions to help planners assess the impact of the proposed development on the ancient woodland.

Biodiversity 2020: a strategy for England's wildlife and ecosystem services (published August 2011).

Paragraph 2.16 - Further commitments to protect ancient woodland and to continue restoration of Plantations on Ancient Woodland Sites (PAWS).

Importance and Designation of Ancient and Native Woodland

Ancient Semi Natural Woodland (ASNW)
Woodland composed of mainly native trees and shrubs derived from natural seedfall or coppice rather than from planting, and known to be continuously present on the site since at least AD 1600. Ancient Woodland sites are shown on Natural England's Inventory of Ancient Woodland.

Plantations on Ancient Woodland Site (PAWS)
Woodlands derived from past planting, but on sites known to be continuously wooded in one form or another since at least AD 1600. They can be replanted with conifer and broadleaved trees and can retain ancient woodland features, such as undisturbed soil, ground flora and fungi. Very old PAWS composed of native species can have characteristics of ASNW. Ancient Woodland sites (including PAWS) are on Natural England's Inventory of Ancient Woodland.

Other Semi-Natural Woodland (OSNW)
Woodland which has arisen since AD 1600, is derived from natural seedfall or planting and consists of at least 80% locally native trees and shrubs (i.e., species historically found in England that would arise naturally on the site). Sometimes known as 'recent semi-natural woodland'.

Other woodlands may have developed considerable ecological value, especially if they have been established on cultivated land or been present for many decades.

Information Tools – The Ancient Woodland Inventory

This is described as provisional because new information may become available that shows that woods not on the inventory are likely to be ancient or, occasionally, vice versa. In addition ancient woods less than two hectares or open woodland such as ancient wood-pasture sites were generally not included on the inventories. For more technical detail see *Natural England's Ancient Woodland Inventory*. Inspection may determine that other areas qualify.
As an example of further information becoming available, Wealden District Council, in partnership with the Forestry Commission, Countryside Agency, the Woodland Trust and the High Weald AONB revised the inventory in their district, including areas under 2ha. Some other local authorities have taken this approach.

From: Great & Little Leighs Parish C
To: Longfield Solar Farm
Cc: James Raven; Jeffrey Thurlow
Subject: Great and Little Leighs Comments - Consultation
Date: 04 December 2020 16:15:55

The parish council wish to object to the sizable application and comment on the following:

Stated access to this proposed site is Via Boreham Road, Boreham Road is a country lane and has been historically designated as protected, This road is narrow and not even two car widths in places it is unable to be widen as some Grade 2 listed buildings are close to the road, and as you will be aware at least some of these houses date back many centuries, one at least dating back 300 years. Their foundations will not stand the continues vibrations caused by 40+ HGVs as stated the requirements to transport equipment to and from site for many years.

The Parish church and war memorial are closely by the side of this road and will no doubt be further damaged by constant HGVs furthermore due to the frequent use of these vehicles, Essex County Council are constantly repairing, resurfacing, filling pot holes, and continue to battle water drainage.

Inadequate road safety has seen many minor accidents on this road and one near fatality in the last two years and also the emissions from so many HGVs using Great Leighs or Boreham to access this site has to have a detrimental effect on air quality in the surrounding villages.

Great Leighs alone has been targeted in the local plan for an additional 1,300 properties, with all that entails with site traffic etc, to then place a solar farm within the Parish will turn this area from a reasonably quite village into an industrial hub with many HGVs movements let alone private vehicles.
A potential solution is that the north east bypass would remedy this situation, but it would NOT cure traffic assessing this proposed bypass via Great Leighs.
Great Leighs have and are losing green spaces at an alarming rate and although we have managed to protect Footpaths from developers, site lines in places are severely restricted.

The plans for this solar farm would further exacerbate and restrict the use of some footpaths at least for 3 years whilst construction takes place and probably beyond, all this at a time when Essex County Council and Chelmsford CC are encouraging its residents to take more open air exercise such as walking during and after this Covid epidemic.

Additionally the use of highly graded arable land for use anything else other than farming cannot be condoned in this climate.
At the moment we do not know what Brexit will bring so we need to be working towards growing our own produce therefore using less damaging emissions transporting produce NOT burying good farmland under solar panels.

There has to be a balance between farming, food production and solar energy this is not the case regarding this proposed Solar Farm.
The impact on the wildlife during the construction of the solar farm would potentially be devastating especially as the local areas has been targeted for multiple developments in the local plan which is further restricting the wildlife in this area.
There are multiple sites around Chelmsford and near to the A12 that would be more suitable for this type of project for example Hammonds farm which is also owned by one land owner, and was a site that was looked at during the last local plan consultation.
Therefore, we the Parish Council, cannot support this plan for the largest solar farm in the UK.

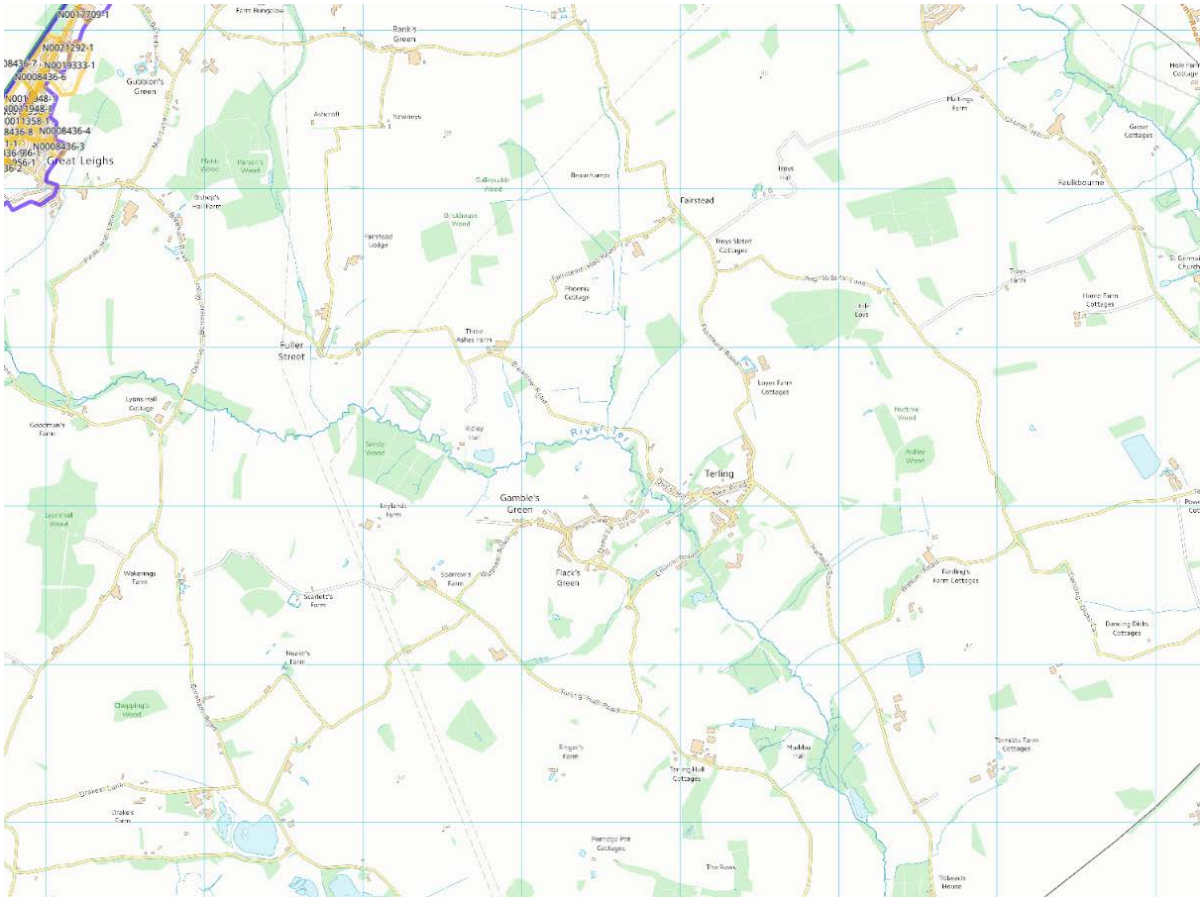
Regards,

Parish Clerk, Great & Little Leighs Parish Council, 34 Valentinus Crescent, Colchester, CO2 7QG Tel:01206 560452(answerphone) Web: http://www.greatandlittleleighspc.org.uk

From: plant.enquiries@bu-uk.co.uk
To: Longfield Solar Farm
Subject: RE: EN010118 - Longfield Solar Farm - EIA Scoping Notificat on and Consultation
Date: 10 November 2020 10:33:15
Attachments: mage001.png

Hello,

We don t ppear to have any assets within the location that you have requested



Bethany Gordon
Projects Coordination Officer
GTC
Synergy House
Woolpit Business Park
Woolpit
Bury St Edmunds
Suffolk, IP30 9UP
Telephone: 01359 242564
Mobile: [redacted]
Email: bethany.gordon@gtc-uk.co.uk
Web: www.gtc-uk.co.uk

From: Customer Services <Customer Services@gtc-uk co uk>
Sent: 06 November 2020 10:14
To: Plant Enquiries <plant enquiries@bu-uk co uk>
Subject: FW: EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation

Hi

Please see email below, which I guess is for you but, if not, please let me know

With kind regards

Christine

Christine Harvey
Customer Services Advisor
GTC
Synergy House
Woolpit Business Park
Woolpit
Bury St Edmunds
Suffolk IP30 9UP
Direct Telephone: [redacted]
Customer Services Telephone: 01359 302640
E-mail: christine harvey@gtc-uk co uk
www gtc-uk co uk

From: Longfield Solar Farm <LongfieldSolarFarm@planninginspectorate gov uk>
Sent: 06 November 2020 10:06
Subject: [EXTERNAL] EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation

---

Dear Sir/Madam

Please see attached correspondence on the proposed Longfield Solar Farm.

Health and Safety Executive

CEMHD - Land Use Planning,
NSIP Consultations,
Building 1.2,
Redgrave Court,
Merton Road,
Bootle, Merseyside
L20 7HS.

HSE email: NSIP.applications@hse.gov.uk

FAO Katherine King
The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN
By email only

Dear Ms King,

19 November 2020

PROPOSED LONGFIELD SOLAR FARM (the project)
PROPOSAL BY LONGFIELD SOLAR FARM LIMITED (the applicant)
INFRASTRUCTURE PLANNING (ENVIROMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (as amended) REGULATIONS 10 and 11

Thank you for your letter of the 6 November 2020 regarding the information to be provided in an environmental statement relating to the above project. HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

HSE's land use planning advice

Will the proposed development fall within any of HSE's consultation distances?

According to HSE's records there are no major accident hazard sites and no major accident hazard pipelines within the proposed DCO application boundary of the proposed Longfield Solar Farm for this nationally significant infrastructure project.

This is based on the current configuration as illustrated in, for example, Figure 1-1: Scheme Location of the ENVIRONMENTAL IMPACT ASSESSMENT SCOPING REPORT OCTOBER 2020; LONGFIELD SOLAR ENERGY FARM LIMITED

HSE's Land Use Planning advice would be dependent on the location of areas where people may be present. When we are consulted by the Applicant with further information under Section 42 of the Planning Act 2008, we can provide full advice

Hazardous Substance Consent

The presence of hazardous substances on, over or under land at or above set threshold quantities (Controlled Quantities) will probably require Hazardous Substances Consent (HSC) under the Planning (Hazardous Substances) Act 1990 as amended. The substances, alone or when aggregated with others for which HSC is required, and the associated Controlled Quantities, are set out in The Planning (Hazardous Substances) Regulations 2015 as amended.

HSC would be required to store or use any of the Named Hazardous Substances or Categories of Substances at or above the controlled quantities set out in Schedule 1 of these Regulations.

Further information on HSC should be sought from the relevant Hazardous Substances Authority.

Consideration of risk assessments

Regulation 5(4) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the assessment of significant effects to include, where relevant, the expected significant effects arising from the proposed development's vulnerability to major accidents. HSE's role on NSIPs is summarised in the following Advice Note 11 Annex on the Planning Inspectorate's website - Annex G – The Health and Safety Executive . This document includes consideration of risk assessments on page 3

Explosives sites

HSE has no comment to make as there are no licensed explosives sites in the vicinity.

Electrical Safety

No comment from a planning perspective.

During lockdown, please send any further communication on this project directly to the HSE's designated e-mail account for NSIP applications at nsip.applications@hse.gov.uk. We are currently unable to accept hard copies, as our offices have limited access.

Yours sincerely,

[redacted]

Monica Langton
CEMHD4 NSIP Consultation Team

Our ref: Longfield Solar
Your ref: EN010118-LSF

Mark Norman
Operations - East
Woodlands
Manton Lane
Bedford MK41 7LW

Direct Line: 0300 470 4938

Major Casework Directorate
Temple Quay House
2 The Square
Bristol
BS1 6PN

24 November 2020

Dear Sir,

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(the EIA Regulations) – Regulations 10 and 11
Application by Longfield Solar Energy Farm Limited (the Applicant) for an Order granting Development Consent for the Longfield Solar Farm (the Proposed Development)
Scoping consultation and notification of the Applicant's contact details and duty to make available information to the applicant requested

I refer to your letter of the 6 November 2020 requesting that Highways England inform the Planning Inspectorate of the information it considers should be provided in the environmental statement for the Longfield Solar Energy Farm application. The proposed project is for a 500 MW solar farm, to the North East of Chelmsford.

We note that the proposals are at an early stage and it is therefore difficult for Longfield Solar Energy Farm Limited to fully inform us of the possible impacts of the proposal on the Strategic Road Network.

We are however, a little disappointed that Longfield Solar Energy Farm Limited has not engaged with Highways England prior to commencing the recent non-statutory public consultation on the proposed solar farm project. The current consultation on the solar farm project runs from 2 November 2020 to 14 December 2020.

We would like to work with the promoter to understand and manage the interactions between the Solar Farm scheme and the A12 J19 to 25 Widening scheme as well as any impacts on the Strategic Road Network.

You may be aware we have plans for widening of the A12 between J19 (Boreham) and J25 (Marks Tey). The Longfield Solar Farm project and the A12 widening project are likely to be under construction at the same time, this will require careful planning (e.g. construction traffic for the Solar Farm during the A12 widening works) and there may be opportunities to work together to save abortive costs.

We will in due course expect to see a Transport Assessment (TA) setting out the impact of the proposal, not just in operation but also during construction and decommissioning at end of life. The TA should be carried out in accordance with Policy laid out in Department of Transport Circular 02/2013, WebTAG and Highways England's protocol on dealing with planning applications. It is strongly advised that you speak to us before undertaking work as this has been shown to result in a smoother passage through the planning process. If transport mitigation on the strategic network is needed then this should be discussed with Highways England to avoid abortive work or collude strategies.

We will also need to know how and where any connecting cables will cross our network, there may be ways of accommodating cable crossings with the A12 widening works, thereby saving disruption and costs for both parties and the travelling public.

We will also need to see a glint and glare report to ensure that users of the A12 are protected from undue distraction.

We will also need to work collaboratively with the provision of Walkers Cyclists and Horse rider's infrastructure and work towards a co funding strategy for third party benefits.

When the time comes HE will need to work with Longfield Solar Farm to agree a Transport Plan and elements of the construction and environmental management plan. It will be necessary to develop a Statement of Common Grounds ahead of examination period for both projects and finally have discussions about the Draft DCOs for the projects.

It would be useful in the near future to have a transport workshop between the Solar Farm, A12 Scheme and Essex County Council Highways to understand and align strategies and DCOs timelines.

Yours faithfully

[redacted]

Mark Norman
Planning Manager
Operations (East)
Email: mark.norman@Ihighwaysengland.co.uk

Date: 3 December 2020
Application Reference: 20/03150/PREAPP (our reference) EN010118-LSF (your reference)

MALDON DISTRICT COUNCIL

Princes Road
Maldon
Essex CM9 5DL

www.maldon.gov.uk

The Planning Inspectorate
Major Casework Directorate
Temple Quay House
2 The Square
Bristol
BS1 6PN

longfieldsolarfarm@planninginspectorate.gov.uk

Enquiries to: Kathryn Mathews
Email: dc.planning@maldon.gov.uk

Dear Sirs

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(the EIA Regulations) – Regulations 10 and 11

Application by Longfield Solar Energy Farm Limited (the Applicant) for an Order granting Development Consent for the Longfield Solar Farm (the Proposed Development)

Scoping consultation and notification of the Applicant's contact details and duty to make available information to the Applicant if requested

Thank you for your consultation letter dated 6 November 2020, regarding the above. It is noted that the solar farm proposed would lie more than 1km from the boundary of the District of Maldon and beyond the section of the A12 which links Hatfield Peverel and Boreham.

The subject of the consultation is as follows:-

- Inform the Planning Inspectorate of the information Maldon District Council considers should be provided in the Environmental Statement; or
- Confirm that Maldon District Council do not have any comments.

Based on the contents of the Scoping Report submitted by the Applicant, I write to advise that Maldon District Council does not have any comments to make on the content proposed for the Environmental Statement.

The duty under Regulation 11(3) of the EIA Regulations to make available information in the possession of the Council which is considered relevant to the preparation of the ES, if so requested by the Applicant, is noted.

Yours faithfully

[redacted]

Matt Leigh
Lead Specialist - Place

Decision Notice

MC/20/2863

Serving You

Longfield Solar Energy Farm Limited
LongfieldSolarFarm@planninginspectorate.gov.uk

Applicant Name:

Planning Service
Physical & Cultural Regeneration
Regeneration, Culture, Environment & Transformation
Gun Wharf
Dock Road
Chatham
Kent
ME4 4TR
01634 331700
01634 331195
Planning.representations@medway.gov.uk

Town and Country Planning Act 1990

Location: Longfield Solar Farm, , , ,

Proposal: Consultation from the Planning Inspectorate - Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) - Regulations 10 and 11 for a solar and battery infrastructure, grid connections and other associated and ancillary development

---

I refer to your letter of consultation regarding the above and would inform you that the Council **RAISES NO OBJECTION** to it.

0 Medway Council have no comments to make in respect of the development.

Your attention is drawn to the following informative(s) :-

1 This comment has been provided in response to the consultation from PINs received 11 November 2020.

[redacted]

David Harris
Head of Planning
Date of Notice 2 December 2020

National Grid house
Warwick Technology Park
Gallows Hill, Warwick
CV34 6DA

Anne Holdsworth
DCO Liaison Officer
Land & Business Support

Anne.Holdsworth@nationalgrid.com
Tel: [redacted]

www.nationalgrid.com

SUBMITTED ELECTRONICALLY:
LongfieldSolarFarm@planninginspectorate.gov.uk

30 November 2020

Dear Sir/Madam

APPLICATION BY LONGFIELD SOLAR ENERGY FARM LIMITED (THE APPLICANT) FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE LONGFIELD SOLAR FARM (THE PROPOSED DEVELOPMENT)

SCOPING CONSULATION REPONSE

This is a response on behalf of National Grid Electricity Transmission PLC (NGET) and National Grid Gas PLC (NGG). I refer to your letter dated 6th November 2020 in relation to the above proposed application. Having reviewed the scoping report, I would like to make the following comments:

National Grid infrastructure within / in close proximity to the order boundary

Electricity Transmission
National Grid Electricity Transmission has a high voltage electricity overhead transmission line and a high voltage substation within the scoping area. The overhead line and substation form an essential part of the electricity transmission network in England and Wales.

Substation

BULLS LODGE 400KV Sub Station
Associated fibre cables

Overhead Lines

4VB 400 kV OHL	Braintree-Pelham-Rayleigh Main Circuit 1
	Braintree-Bramford-Rayleigh Main Circuit 2

National Grid house
Warwick Technology Park
Gallows Hill, Warwick
CV34 6DA

I enclose two plans showing the location of National Grid's apparatus in the scoping area as follows:

- overhead line; and
- Overhead line, the substation and cable routes

Gas Transmission Infrastructure:
National Grid Gas Transmission has no assets within the scoping area.

Specific Comments – Electricity Infrastructure:

- National Grid's Overhead Line/s is protected by a Deed of Easement/Wayleave Agreement which provides full right of access to retain, maintain, repair and inspect our asset
- Statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3m to the lowest conductor. National Grid recommends that no permanent structures are built directly beneath overhead lines. These distances are set out in EN 43 – 8 Technical Specification for "overhead line clearances Issue 3 (2004)".
- If any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances.
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive's (www.hse.gov.uk) Guidance Note GS 6 "Avoidance of Danger from Overhead Electric Lines" and all relevant site staff should make sure that they are both aware of and understand this guidance.
- Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum "sag" and "swing" and overhead line profile (maximum "sag" and "swing") drawings should be obtained using the contact details above.
- If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.
- Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or "pillars of support" of any existing tower. These foundations always extend beyond the base area of the existing tower and foundation ("pillar of support") drawings can be obtained using the contact details above.

National Grid house
Warwick Technology Park
Gallows Hill, Warwick
CV34 6DA

- National Grid Electricity Transmission high voltage underground cables are protected by a Deed of Grant; Easement; Wayleave Agreement or the provisions of the New Roads and Street Works Act. These provisions provide National Grid full right of access to retain, maintain, repair and inspect our assets. Hence we require that no permanent / temporary structures are to be built over our cables or within the easement strip. Any such proposals should be discussed and agreed with National Grid prior to any works taking place.

- Ground levels above our cables must not be altered in any way. Any alterations to the depth of our cables will subsequently alter the rating of the circuit and can compromise the reliability, efficiency and safety of our electricity network and requires consultation with National Grid prior to any such changes in both level and construction being implemented.

To download a copy of the HSE Guidance HS(G)47, please use the following link:
http://www.hse.gov.uk/pubns/books/hsg47.htm

Further Advice

We would request that the potential impact of the proposed scheme on National Grid's existing assets as set out above and including any proposed diversions is considered in any subsequent reports, including in the Environmental Statement, and as part of any subsequent application.

Where any diversion of apparatus may be required to facilitate a scheme, National Grid is unable to give any certainty with the regard to diversions until such time as adequate conceptual design studies have been undertaken by National Grid. Further information relating to this can be obtained by contacting the email address below.

Where the promoter intends to acquire land, extinguish rights, or interfere with any of National Grid apparatus, protective provisions will be required in a form acceptable to it to be included within the DCO.

National Grid requests to be consulted at the earliest stages to ensure that the most appropriate protective provisions are included within the DCO application to safeguard the integrity of our apparatus and to remove the requirement for objection. All consultations should be sent to the following email address: **box.landandacquisitions@nationalgrid.com**

I hope the above information is useful. If you require any further information, please do not hesitate to contact me.

The information in this letter is provided not withstanding any discussions taking place in relation to connections with electricity customer services.

Yours faithfully

[redacted]

Anne Holdsworth
DCO Liaison Officer, Land and Acquisitions

nationalgrid | Longfield Solar Farm Plan 1

Legend:

- Substations Commissioned
- Circuits
  - Commissioned
  - Decommissioned Group
  - Planned and Spares
- OHL 400Kv Commissioned
- OHL 275Kv Commissioned
- OHL 132Kv & Below Commissioned
- Towers Commissioned
- Buried Cable Commissioned
- Fibre Cable Commissioned
- Pilot Cable
- Oil Pipe
- Cooling Pipe
- Cooling Station
- RAMM
- Cable Tunnel
- Gas Operational Boundary
- Gas Site Boundary
- Trial Hole
- Vantage Point
- Aerial Marker Post
- Pipe Crossing Point
- CP Test Post
- Transformer Rectifier
- Pipeline Crossing Sleeve
  - Nitrogen Sleeve
  - Other Sleeves
- Pipe Line Control Point
- Named Pipeline Section
- River Crossings

Notes:

Longfield Solar Farm Plan 1

0 0.38 0.8 Kilometers

Date: 26/11/2020
Time: 17:15:36

Page size: A3 Landscape Scale: 1: 15,000
Print by: **Holdsworth, Anne**

N

nationalgrid | Longfield Solar Farm Plan 2

Legend:

- Substations Commissioned
- Circuits
  - Commissioned
  - Decommissioned Group
  - Planned and Spares
- OHL 400Kv Commissioned
- OHL 275Kv Commissioned
- OHL 132Kv & Below Commissioned
- Towers Commissioned
- Buried Cable Commissioned
- Fibre Cable Commissioned
- Pilot Cable
- Oil Pipe
- Cooling Pipe
- Cooling Station
- RAMM
- Cable Tunnel
- Gas Operational Boundary
- Gas Site Boundary
- Trial Hole
- Vantage Point
- Aerial Marker Post
- Pipe Crossing Point
- CP Test Post
- Transformer Rectifier
- Pipeline Crossing Sleeve
  - Nitrogen Sleeve
  - Other Sleeves
- Pipe Line Control Point
- Named Pipeline Section
- River Crossings

Notes:

Longfield Solar Farm Plan 2

Date: 26/11/2020
Time: 17:16:31

Page size: A3 Landscape Scale: 1: 20,000
Print by: **Holdsworth, Anne**

From:	Vicki Enston on behalf of ONR Land Use Planning
To:	Longfield Solar Farm
Subject:	RE: EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation
Date:	11 November 2020 10:45:03
Attachments:	image001.png

Good morning

This application is not within an ONR Land Use Planning consultation zone, therefore ONR have no comment to make.

You can find information concerning our Land Use Planning consultation process here: (http://www.onr.org.uk/land-use-planning.htm).

Kind regards

Vicki

Vicki Enston
Regulatory Officer
Land Use Plannng
Emergency Preparedness &Response
Office for Nuclear Regulation

T: [redacted] | **E:** ONR-Land.use-planning@onr.gov.uk

Office for Nuclear Regulation

The Office for Nuclear Regulation's mission is to provide efficient and effective regulation of the nuclear industry, holding it to account on behalf of the public.

Website: www.onr.org.uk **Twitter:** @ONRpressoffice

From: Longfield Solar Farm <LongfieldSolarFarm@planninginspectorate.gov.uk>
Sent: 06 November 2020 10:06
Subject: EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation

Dear Sir/Madam

Please see attached correspondence on the proposed Longfield Solar Farm.

Please note the deadline for consultation responses is 4 December 2020 and is a statutory requirement that cannot be extended.

Kind regards

Public Health England

Environmental Hazards and Emergencies Department
Centre for Radiation, Chemical and Environmental Hazards (CRCE)
Seaton House
City Link
London Road
Nottingham
NG2 4LA

nsipconsultations@phe.gov.uk

www.gov.uk/phe

Your Ref: EN010118-LSF
Our Ref: CIRIS 55407

Ms Katherine King
Senior EIA Advisor
The Planning Inspectorate
Temple Quay House
2 The Square
Bristol, BS1 6PN

3rd December 2020

Dear Ms King

Nationally Significant Infrastructure Project:
Longfield Solar Energy Farm Limited
Scoping Consultation Stage

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Advice offered by PHE is impartial and independent.

PHE exists to protect and improve the nation's health and wellbeing and reduce health inequalities; these two organisational aims are reflected in the way we review and respond to Nationally Significant Infrastructure Project (NSIP) applications.

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. Although assessing impacts on health beyond direct effects from for example emissions to air or road traffic is complex, there is a need to ensure a proportionate assessment focused on an application's significant effects.

Having considered the submitted scoping report, we wish to make the following specific comments and recommendations:

Environmental Public Health

We understand that the promoter will wish to avoid unnecessary duplication and that many issues including air quality, emissions to water, waste, contaminated land etc. will be covered elsewhere in the Environmental Statement (ES). We believe the summation of relevant issues into a specific section of the report on human health provides a focus which ensures that public health is given

adequate consideration. The section should summarise key information, risk assessments, proposed mitigation measures, conclusions and residual impacts, relating to human health. Compliance with the requirements of National Policy Statements and relevant guidance and standards should also be highlighted.

In terms of the level of detail to be included in an ES, we recognise that the differing nature of projects is such that their impacts will vary. The attached appendix summarises PHE's requirements and recommendations regarding the content of and methodology used in preparing the ES. Please note that where impacts relating to health and/or further assessments are scoped out, promoters should fully explain and justify this within the submitted documentation.

We note that the location of this installation is in close proximity to surface water features that might impact upon drinking water. This should be considered carefully for all stages of the development to ensure human health is protected, including the impact of accidents on drinking water supplies.

Recommendation
Our position is that pollutants associated with road traffic or combustion, particularly particulate matter and oxides of nitrogen are non-threshold; i.e., an exposed population is likely to be subject to potential harm at any level and that reducing public exposures of non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards will have potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), maximise co-benefits (such as physical exercise). We encourage their consideration during development design, environmental and health impact assessment, and development consent. We recommend that the impacts on air quality and human health are considered during construction and decommissioning, or adequate justification to scope this out provided.

It is noted that the current proposals scope out possible health impacts of Electric and Magnetic Fields (EMF).

Recommendation
We request that the ES clarifies this and if necessary, the proposer should confirm either that the proposed development does not impact any receptors from potential sources of EMF; or ensure that an adequate assessment of the possible impacts is undertaken and included in the ES.

Human Health and Wellbeing

This section of PHE's scoping response, identifies the wider determinants of health and wellbeing we expect the Environmental Statement (ES) to address, to demonstrate whether they are likely to give rise to significant effects. PHE has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements. The four themes are:

- Access
- Traffic and Transport
- Socioeconomic
- Land Use

Having considered the submitted scoping report PHE wish to make the following specific comments and recommendations:

Methodology
Population and human health

The scoping report does not identify a definition of health. The scoping report should accept the broad definition of health proposed by the World Health Organisation (WHO) and also include specific reference to mental health within the definition of health.

The scoping report identifies the intention to not have a separate health chapter within the Environmental Statement, but embed population and human health within other chapters. This will require the separate assessment of sensitivity, magnitude and significance specific to population and human health within each relevant chapter. This should be kept under review and a specific chapter may be required if significant negative effects are identified across the Environmental Statement.

It should be acknowledged that local communities will experience a number of environmental impacts, which in combination may be deemed significant. As such, we expect population and human health impacts to be considered within the cumulative effects assessment as a specific section.

Recommendation
The EIA should accept the broad definition of health proposed by the World Health Organisation (WHO) and also include specific reference to mental health within the definition of health.

The EIA must define the assessment of sensitivity, magnitude and significance specific to population and human health. This will require the separate assessment of significance specific to population and human health within each relevant chapter.

Population and human health impacts should be considered within the cumulative effects assessment in order to identify any in combination effects.

Vulnerable populations
An approach to the identification of vulnerable populations, other than deprivation, has not been provided. The impacts on health and wellbeing and health inequalities of the scheme may have particular effect on vulnerable or disadvantaged populations (including those that fall within the list of protected characteristics).

Recommendation
The EIA should clearly identify the range of vulnerable populations that have been considered within the assessment.

Mental health
Mental well-being is fundamental to achieving a healthy, resilient and thriving population. It underpins healthy lifestyles, physical health, educational attainment, employment and productivity, relationships, community safety and cohesion and quality of life.

Recommendation
There should be parity between mental and physical health, and any assessment of health impact should include the appreciation of both.

An estimation of community anxiety and stress should be included as part of the assessment and mitigation of the proposed plans.

Physical activity and active travel / access to open space

The scoping report identifies that a traffic assessment will be completed for the ES. This should include how non-motorised user (NMU) will be impacted from using the existing road network, including cumulative impacts (see comments regarding the need for a cumulative effects assessment). Active travel forms an important part in helping to promote healthy weight environments and as such it is important that any changes have a positive long-term impact where possible.

A large number of PRoW have been identified within the scoping report. Impact on the use of the local community assets should include tranquillity, in addition to access and visual impacts suggested in the report.

Recommendations

The impact of the proposal on the use of the PRoW or other public open space must be included within the noise assessment.

The overall risk to NMU/Walking/Cycling/Horse riding and impact on active travel should be considered on a case-by-case basis, taking into account, the number and type of users identified within the traffic assessment.

The scheme should continue to identify any additional opportunities to contribute to improved infrastructure provision for active travel and physical activity.

Yours sincerely

For and on behalf of Public Health England
nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

Appendix: PHE recommendations regarding the scoping document

Introduction

The Planning Inspectorate's Advice Note 11: Working with Public Bodies covers many of the generic points of interaction relevant to the Planning Inspectorate and Public Health England (PHE). The purpose of this Annex is to help applicants understand the issues that PHE expect to see addressed by applicants preparing an Environmental Statement (ES) as part of their Nationally Significant Infrastructure Planning (NSIP) submission.

We have included a comprehensive outline of the type of issues we would expect to be considered as part of an NSIP which falls under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). PHE encourages applicants to contact us as early in the process as possible if they wish to discuss or clarify any matters relating to chemical, poison, radiation or wider public health.

General Information on Public Health England

PHE was established on 1 April 2013 to bring together public health specialists from more than 70 organisations into a single public health service. We are an executive agency of the Department of Health and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the National Health Service (NHS) in a professionally independent manner.

We operate across 4 regions in England and work closely with public health professionals in Wales, Scotland and Northern Ireland, and internationally.[1] We have specialist teams advising on specific issues such as the potential impacts of chemicals, air quality, ionising and non-ionising radiation and other factors which may have an impact on public health, as well as on broader issues such as the wider determinants of health, health improvement and health inequalities.

PHE's NSIP related roles and responsibilities and geographical extent

PHE is a statutory consultee in the NSIP process for any *applications likely to involve chemicals, poisons or radiation which could potentially cause harm to people and are likely to affect significantly public health*.[2] PHE will consider the potential significant effects (direct and indirect) of a proposed development on population and human health and the impacts from chemicals, radiation and environmental hazards.

Role of Public Health England and NSIP with respect to Environmental Impact Assessments

PHE has a statutory role as a consultation body under the EIA Regulations. Where an applicant has requested a scoping opinion from the Planning Inspectorate[3] in relation to a proposed NSIP, PHE will be consulted by the Planning Inspectorate about the scope, and level of detail, of the information to be provided in the ES and will be under a duty to make information available to the applicant. PHE's standard recommendations in response to EIA scoping consultations are below.

PHE also encourages applicants to discuss with them the scope of the ES at an early stage to explore, for example, whether careful site selection or other design issues could minimise or eliminate public health impacts or to outline the requirement for, scope and methodology of any assessments related to public health.

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[1] https://www.gov.uk/government/organisations/public-health-england/about#priorities

[2] The Infrastructure Planning (Interested Parties and Miscellaneous Prescribed Provisions) Regulations 2015

[3] The scoping process is administered and undertaken by the Planning Inspectorate on behalf of the Secretary of State

PHE's recommendations to applicants regarding Environmental Impact Assessments
General approach

Applicants are reminded that Section 5(2)(a) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 specifically includes a requirement that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on population and human health.

PHE is of the opinion that this requirement encompasses the wider determinants of public health, as well as chemicals, poisons and radiation. Further information on PHE's recommendations and requirements is included below.

It is the role of the applicant to prepare the ES. PHE provides advice relating to EIA within this document and during the NSIP consultation stages.

When preparing an ES the applicant should give consideration to best practice guidance such as the Government's Handbook for scoping projects: environmental impact assessment[4] , IEMA Guide to Delivering Quality Developments[5], and Guidance: on Environmental Impact Assessment[6]

The Planning Inspectorate's Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements also provide guidance to applicants and other persons with interest in the EIA process as it relates to NSIPs.
It is important that the submitted ES identifies and assesses the potential public health impacts of the activities at, and emissions from, the development.

PHE understands that there may be separate sections of the ES covering the assessment of impacts on air, land, water and so on, but expects an ES to include a specific section summarising potential impacts on population and health. This section should bring together and interpret the information from other assessments as necessary. The health and population impacts section should address the following steps.

1. Screening: Identify and significant effects.
    a. Summarise the methodologies used to identify health impacts, assess significance and sources of information
    b. Evaluate any reference standards used in carrying out the assessment and in evaluating health impacts (e.g., environmental quality standards)
    c. Where the applicant proposes the 'scoping out' of any effects a clear rationale and justification should be provided along with any supporting evidence.

2. Baseline Survey :
    a. Identify information needed and available, Evaluate quality and applicability of available information

[4] https://www.gov.uk/government/publications/handbook-for-scoping-projects-environmental-impact-assessment
[5] https://www.iema.net/assets/newbuild/documents/Delivering%20Quality%20Development.pdf
[6] https://www.gov.uk/guidance/environmental-impact-assessment#the-purpose-of-environmental-impact-assessment

b. Undertake assessment

3. Alternatives:
    a. Identify and evaluate any realistic alternative locations, routes, technology etc.

4. Design and assess possible mitigation
    a. Consider and propose suitable corrective actions should mitigation measures not perform as effectively predicted.

5. Impact Prediction: Quantify and Assess Impacts:
    a. Evaluate and assess the extent of any positive and negative effects of the development. Effects should be assessed in terms of likely health outcomes, including those relating to the wider determinants of health such as socio-economic outcomes, in addition to health outcomes resulting from exposure to environmental hazards. Mental health effects should be included and given equivalent weighting to physical effects.
    b. Clearly identify any omissions, uncertainties and dependencies (e.g., air quality assessments being dependant on the accuracy of traffic predictions)
    c. Evaluate short-term impacts associated with the construction and development phase
    d. Evaluate long-term impacts associated with the operation of the development
    e. Evaluate any impacts associated with decommissioning
    f. Evaluate any potential cumulative impacts as a result of the development, currently approved developments which have yet to be constructed, and proposed developments which do not currently have development consent

6. Monitoring and Audit (not a statutory requirement)
    a. Identify key modelling predictions and mitigation impacts and consider implementing monitoring and audit to assess their accuracy / effectiveness.

Any assessments undertaken to inform the ES should be proportionate to the potential impacts of the proposal, therefore we accept that, in some circumstances particular assessments may not be relevant to an application, or that an assessment may be adequately completed using a qualitative rather than quantitative methodology. In cases where this decision is made, the applicant should fully explain and justify their rationale in the submitted documentation.

Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, the EIA process should start at the stage of site selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES[7].

Human and environmental receptors

The applicant should clearly identify the development's location and the location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land.

Identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities, as well as other vulnerable population groups such as those who are young, older, with disabilities or long-term conditions, or on low incomes) in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development

[7] DCLG guidance, 1999 http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf

Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points.

Impacts arising from construction and decommissioning

Any assessment of impacts arising from emissions or activities due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.

We would expect the applicant to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential negative impact on health from emissions (point source, fugitive and traffic-related) and activities. An effective Construction Environmental Management Plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The applicant should ensure that there are robust mechanisms in place to respond to any complaints made during construction, operation, and decommissioning of the facility.

Emissions to air and water

Significant impacts are unlikely to arise from industrial installations which employ Best Available Techniques (BAT) and which meet regulatory requirements concerning emission limits and design parameters. However, PHE has a number of comments regarding the assessment of emissions from any type of development in order that the ES provides a comprehensive assessment of potential impacts.

When considering a baseline (of existing environmental quality) and in the assessment and future monitoring of impacts these should:

- include appropriate screening assessments and detailed dispersion modelling where this is screened as necessary
- encompass the combined impacts of all pollutants which may be emitted by the development with all pollutants arising from associated development and transport, considered in a single holistic assessment (ie, of overall impacts)
- include Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES
- consider the construction, operational, and decommissioning phases
- consider the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts
- fully account for fugitive emissions
- include appropriate estimates of background levels
    - when assessing the human health risk of a chemical emitted from a facility or operation, background exposure to the chemical from other sources should be taken into account
- identify cumulative and incremental impacts (ie, assess cumulative impacts from multiple sources), including those arising from associated development, other existing and proposed development in the local area, and new vehicle movements associated with the proposed development; associated transport emissions should include consideration of non-road impacts (ie, rail, sea, and air)
- include consideration of local authority, Environment Agency, Natural Resources Wales, Defra national network, and any other local site-specific sources of monitoring data
- compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium. Where available, the most recent UK standards for the appropriate media (ie, air, water, and/or soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants
- where UK standards or guideline values are not available, use those recommended by the European Union or World Health Organization:

    - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (eg, a Tolerable Daily Intake or equivalent)
    - This should consider all applicable routes of exposure (eg, include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion)
- when quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants, PHE does not favour the use of mathematical models to extrapolate from high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the 'Margin of Exposure' (MOE) approach[1] is used
- identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities) in the area(s) which may be affected by emissions. This should include consideration of any new receptors arising from future development

Whilst screening of impacts using qualitative methodologies is common practice (eg, for impacts arising from fugitive emissions such as dust), where it is possible to undertake a quantitative assessment of impacts then this should be undertaken.

PHE's view is that the applicant should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above. This should include consideration of any emitted pollutants for which there are no set emission limits. When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure. Further to assessments of compliance with limit values, for non-threshold pollutants (ie, those that have no threshold below which health effects do not occur) the **benefits** of development options which reduce population exposure should be evaluated.

Additional points specific to emissions to air
When considering baseline conditions (of existing air quality) and the assessment and future monitoring of impacts, these should include:
- consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs)
- modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst-case conditions)
- modelling taking into account local topography, congestion and acceleration
- evaluation of the public health **benefits** of development options which reduce air pollution – even below limit values – as pollutants such as nitrogen dioxide and particulate matter show no threshold below which health effects do not occur

Additional points specific to emissions to water
When considering baseline conditions (of existing water quality) and the assessment and future monitoring of impacts, these should:
- include assessment of potential impacts on human health and not focus solely on ecological impacts
- identify and consider all routes by which emissions may lead to population exposure (e.g., surface watercourses, recreational waters, sewers, geological routes etc.)
- assess the potential off-site effects of emissions to groundwater (eg, on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure
- include consideration of potential impacts on recreational users (eg, from fishing, canoeing etc.) alongside assessment of potential exposure via drinking water

Land quality

We would expect the applicant to provide details of any hazardous contamination present on site (including ground gas) as part of a site condition report.
Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the migration of material off-site should be assessed[8] and the potential impact on nearby receptors and control and mitigation measures should be outlined.

Relevant areas outlined in the Government's Good Practice Guide for EIA include:

- effects associated with ground contamination that may already exist
- effects associated with the potential for polluting substances that are used (during construction / operation) to cause new ground contamination issues on a site, for example introducing / changing the source of contamination
- impacts associated with re-use of soils and waste soils, for example, re-use of site-sourced materials on-site or offsite, disposal of site-sourced materials offsite, importation of materials to the site, etc.

Waste

The applicant should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).
For wastes arising from the development the ES should assess:

- the implications and wider environmental and public health impacts of different waste disposal options
- disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated

If the development includes wastes delivered to the installation:

- Consider issues associated with waste delivery and acceptance procedures (including delivery of prohibited wastes) and should assess potential off-site impacts and describe their mitigation

Other aspects

Within the ES, PHE would expect to see information about how the applicant would respond to accidents with potential off-site emissions (e.g., flooding or fires, spills, leaks or releases off-site). Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.

PHE would expect the applicant to consider the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations: both in terms of their applicability to the development itself, and the development's potential to impact on, or be impacted by, any nearby installations themselves subject to these Regulations.

There is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report[9], jointly published by Liverpool John Moores University and the Health Protection Agency (HPA), examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report suggested: "*Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical*

[8] Following the approach outlined in the section above dealing with emissions to air and water i.e. comparing predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as Soil Guideline Values)
[9] Available from: http://www.cph.org.uk/wp-content/uploads/2012/08/health-risk-perception-and-environmental-problems--summary-report.pdf

health risks may be negligible." PHE supports the inclusion of this information within ES' as good practice.

Electromagnetic fields (EMF)

This advice relates to electrical installations such as substations and connecting underground cables or overhead lines. PHE advice on the health effects of power frequency electric and magnetic fields is available on the Gov.UK website.[10]

There is a potential health impact associated with the electric and magnetic fields around substations, overhead power lines and underground cables. The field strengths tend to reduce with distance from such equipment.

The following information provides a framework for considering the health impact associated with the electric and magnetic fields produced by the proposed development, including the direct and indirect effects of the electric and magnetic fields as indicated above.

Policy Measures for the Electricity Industry

A voluntary code of practice is published which sets out key principles for complying with the ICNIRP guidelines.[11]

Companion codes of practice dealing with optimum phasing of high voltage power lines and aspects of the guidelines that relate to indirect effects are also available.[12],[13]

Exposure Guidelines

PHE recommends the adoption in the UK of the EMF exposure guidelines published by the International Commission on Non-ionizing Radiation Protection (ICNIRP). Formal advice to this effect, based on an accompanying comprehensive review of the scientific evidence, was published in 2004 by the National Radiological Protection Board (NRPB), one of PHE's predecessor organisations[14]

Updates to the ICNIRP guidelines for static fields have been issued in 2009 and for low frequency fields in 2010. However, Government policy is that the ICNIRP guidelines are implemented as expressed in the 1999 EU Council Recommendation on limiting exposure of the general public (1999/519/EC):[15]

Static magnetic fields

For static magnetic fields, the ICNIRP guidelines published in 2009 recommend that acute exposure of the general public should not exceed 400 mT (millitesla), for any part of the body, although the previously recommended value of 40 mT is the value used in the Council Recommendation. However, because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of people with implanted electronic medical devices and implants containing ferromagnetic materials, and injuries due to flying ferromagnetic objects, and these considerations can lead to much lower restrictions, such as 0.5 mT.

Power frequency electric and magnetic fields

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[10] https://www.gov.uk/government/collections/electromagnetic-fields#low-frequency-electric-and-magnetic-fields
[11] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf
[12] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf
[13] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224766/powerlines_vcop_microshocks.pdf
[14] http://webarchive.nationalarchives.gov.uk/20140629102627/http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/
[15] http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Publichealth/Healthprotection/DH_4089500

At 50 Hz, the known direct effects include those of induced currents in the body on the central nervous system (CNS) and indirect effects include the risk of painful spark discharge on contact with metal objects exposed to electric fields. The ICNIRP guidelines published in 1998 give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively 5 kV m^{-1} (kilovolts per metre) and 100 μT (microtesla). The reference level for magnetic fields changes to 200 μT in the revised (ICNIRP 2010) guidelines because of new basic restrictions based on induced electric fields inside the body, rather than induced current density. If people are not exposed to field strengths above these levels, direct effects on the CNS should be avoided and indirect effects such as the risk of painful spark discharge will be small. The reference levels are not in themselves limits but provide guidance for assessing compliance with underlying basic restrictions and reducing the risk of indirect effects.

Long term effects

There is concern about the possible effects of long-term exposure to electromagnetic fields, including possible carcinogenic effects at levels much lower than those given in the ICNIRP guidelines. In the NRPB advice issued in 2004, it was concluded that the studies that suggest health effects, including those concerning childhood leukaemia, could not be used to derive quantitative guidance on restricting exposure. However, the results of these studies represented uncertainty in the underlying evidence base, and taken together with people's concerns, provided a basis for providing an additional recommendation for Government to consider the need for further precautionary measures, particularly with respect to the exposure of children to power frequency magnetic fields.

The Stakeholder Advisory Group on ELF EMFs (SAGE)

The Stakeholders Advisory Group on ELF EMF's (SAGE) was set up to explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF EMFs), and to make practical recommendations to Government:[16]
Relevant here is SAGE's 2007 First Interim Assessment, which makes several recommendations concerning high voltage power lines. Government supported the implementation of low cost options such as optimal phasing to reduce exposure; however it did not support the option of creating corridors around power lines in which development would be restricted on health grounds, which was considered to be a disproportionate measure given the evidence base on the potential long term health risks arising from exposure. The Government response to SAGE's First Interim Assessment is available on the national archive website.[17]

The Government also supported calls for providing more information on power frequency electric and magnetic fields, which is available on the PHE web pages.

Ionising radiation

Particular considerations apply when an application involves the possibility of exposure to ionising radiation. In such cases it is important that the basic principles of radiation protection recommended by the International Commission on Radiological Protection[18] (ICRP) are followed. PHE provides advice on the application of these recommendations in the UK. The ICRP recommendations are implemented in the Euratom Basic Safety Standards[19] (BSS) and these form the basis for UK legislation, including the Ionising Radiation Regulations 1999, the Radioactive Substances Act 1993, and the Environmental Permitting Regulations 2016.

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[16] http://www.emfs.info/policy/sage/

[17] http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_107124

[18] These recommendations are given in publications of the ICRP notably publications 90 and 103 see the website at http://www.icrp.org/

[19] Council Directive 96/29/EURATOM laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation.

As part of the EIA process PHE expects applicants to carry out the necessary radiological impact assessments to demonstrate compliance with UK legislation and the principles of radiation protection. This should be set out clearly in a separate section or report and should not require any further analysis by PHE. In particular, the important principles of justification, optimisation and radiation dose limitation should be addressed. In addition compliance with the Euratom BSS and UK legislation should be clear.

When considering the radiological impact of routine discharges of radionuclides to the environment PHE would, as part of the EIA process, expect to see a full radiation dose assessment considering both individual and collective (population) doses for the public and, where necessary, workers. For individual doses, consideration should be given to those members of the public who are likely to receive the highest exposures (referred to as the representative person, which is equivalent to the previous term, critical group).

Different age groups should be considered as appropriate and should normally include adults, 1 year old and 10 year old children. In particular situations doses to the fetus should also be calculated[20].

The estimated doses to the representative person should be compared to the appropriate radiation dose criteria (dose constraints and dose limits), taking account of other releases of radionuclides from nearby locations as appropriate. Collective doses should also be considered for the UK, European and world populations where appropriate.

The methods for assessing individual and collective radiation doses should follow the guidance given in 'Principles for the Assessment of Prospective Public Doses arising from Authorised Discharges of Radioactive Waste to the Environment August 2012 [21]

It is important that the methods used in any radiological dose assessment are clear and that key parameter values and assumptions are given (for example, the location of the representative persons, habit data and models used in the assessment).

Any radiological impact assessment, undertaken as part of the EIA, should also consider the possibility of short-term planned releases and the potential for accidental releases of radionuclides to the environment. This can be done by referring to compliance with the Ionising Radiation Regulations and other relevant legislation and guidance.

The radiological impact of any solid waste storage and disposal should also be addressed in the assessment to ensure that this complies with UK practice and legislation; information should be provided on the category of waste involved (e.g. very low level waste, VLLW). It is also important that the radiological impact associated with the decommissioning of the site is addressed.

Of relevance here is PHE advice on radiological criteria and assessments for land-based solid waste disposal facilities[22]. PHE advises that assessments of radiological impact during the operational phase should be performed in the same way as for any site authorised to discharge radioactive waste. PHE also advises that assessments of radiological impact during the post operational phase of the facility should consider long timescales (possibly in excess of 10,000 years) that are appropriate to the long-lived nature of the radionuclides in the waste, some of which may have half-lives of millions of years.

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[20] HPA (2008) Guidance on the application of dose coefficients for the embryo, fetus and breastfed infant in dose assessments for members of the public. Doc HPA, RCE-5, 1-78, available at https://www.gov.uk/government/publications/embryo-fetus-and-breastfed-infant-application-of-dose-coefficients

[21] The Environment Agency (EA), Scottish Environment Protection Agency (SEPA), Northern Ireland Environment Agency, Health Protection Agency and the Food Standards Agency (FSA).
Principles for the Assessment of Prospective Public Doses arising from Authorised Discharges of Radioactive Waste to the Environment August 2012.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296390/geho1202bklh-e-e.pdf

[22] HPA RCE-8, Radiological Protection Objectives for the Land-based Disposal of Solid Radioactive Wastes, February 2009

The radiological assessment should consider exposure of members of hypothetical representative groups for a number of scenarios including the expected migration of radionuclides from the facility, and inadvertent intrusion into the facility once institutional control has ceased.

For scenarios where the probability of occurrence can be estimated, both doses and health risks should be presented, where the health risk is the product of the probability that the scenario occurs, the dose if the scenario occurs and the health risk corresponding to unit dose.

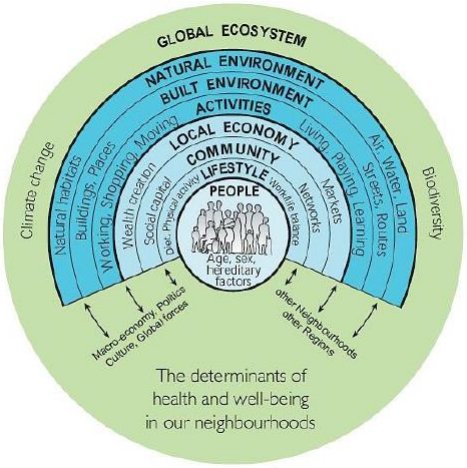
For inadvertent intrusion, the dose if the intrusion occurs should be presented. It is recommended that the post-closure phase be considered as a series of timescales, with the approach changing from more quantitative to more qualitative as times further in the future are considered.

The level of detail and sophistication in the modelling should also reflect the level of hazard presented by the waste. The uncertainty due to the long timescales means that the concept of collective dose has very limited use, although estimates of collective dose from the 'expected' migration scenario can be used to compare the relatively early impacts from some disposal options if required.

Wider Determinants of Health

World Health Organization (WHO's) defines health as "a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity" (WHO, 1948).

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people.



Barton and Grant[23]

PHE recognises that evaluating an NSIP's impacts on health through the wider determinants is more complex than assessing a project's direct impacts against clearly defined regulatory protections (e.g. protected species). However, this does not mean that their assessment should be side-lined; with the 2017 EIA Regulations clarifying that the likely significant effects of a development proposal on human health must be assessed.

We accept that the relevance of these topics and associated impacts will vary depending on the nature of the proposed development and in order to assist applicants PHE has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from

[23] Barton H, Grant M. A health map for the local human habitat. The Journal of the Royal Society for the Promotion of Health 2006; 126(6): 252-3.

an analysis of the wider determinants of health mentioned in the National Policy Statements. PHE has developed a list of 21 determinants of health and wellbeing under four broad themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements (NPS). If the applicant proposes to scope any areas out of the assessment, they should provide clear reasoning and justification.

The four themes are:
- Access
- Traffic and Transport
- Socioeconomic
- Land Use

Methodology

PHE will expect assessments to set out the methodology used to assess each determinant included in the scope of the assessment. In some instances, the methodologies described may be established and refer to existing standards and/or guidance. In other instances, there may be no pre-defined methodology, which can often be the case for the wider determinants of health; as such there should be an application of a logical impact assessment method that:

- identifies effected populations vulnerable to impacts from the relevant determinant
- establishes the current baseline situation
- identifies the NSIP's potential direct and indirect impacts on each population
- if impacts are identified, evaluates whether the potential impact is significant in relation to the affected population
- identifies appropriate mitigation to minimise impacts or the subsequent effects on health
- identifies opportunities to achieve benefits from the scheme
- identifies appropriate monitoring programmes

Currently there is no standard methodology for assessing the population and human health effects of infrastructure projects, but a number of guides exist, including:

- Institute of Environmental Management and Assessment, 2017: Health in Environmental Assessment, a primer for a proportionate approach;
- NHS London Healthy Urban Development Unit (HUDU), 2015. Healthy Urban Planning Checklist and Rapid Health Impact Assessment Tool;
- Wales Health Impact Assessment Unit, 2012: HIA a practical guide;
- National Mental Wellbeing Impact Assessment Development Unit 2011: Mental Wellbeing Impact Assessment Toolkit;

Determining significant effects

Neither the EIA regulations nor the National Policy Statements provide a definition of what constitutes a 'significant' effect, and so PHE have derived a list of factors which it will take into consideration in the assessment of significance of effects, as outlined below. these list of factors should be read in conjunction with guidance from the above guides.

1. Sensitivity:

Is the population exposed to the NSIP at particular risk from effects on this determinant due to pre-existing vulnerabilities or inequalities (for example, are there high numbers in the local population of people who are young, older, with disabilities or long-term conditions, or on a low income)? Will the NSIP widen existing inequalities or introduce new inequalities in relation to this determinant?

2. Magnitude:

How likely is the impact on this determinant to occur? If likely, will the impact affect a large number of people / Will the impact affect a large geographic extent? Will the effects be frequent or continuous? Will the effects be temporary or permanent and irreversible?

3. Cumulative effects:

Will the NSIP's impacts on this determinant combine with effects from other existing or proposed NSIPs or large-scale developments in the area, resulting in an overall cumulative effect different to that of the project alone?
What are the cumulative effects of the impacts of the scheme on communities or populations. Individual impacts individually may not be significant but in combination may produce an overall significant effect.

4. Importance:

Is there evidence for the NSIP's effect on this determinant on health? Is the impact on this determinant important in the context of national, regional or local policy?

5. Acceptability:

What is the local community's level of acceptance of the NSIP in relation to this determinant? Do the local community have confidence that the applicants will promote positive health impacts and mitigate against negative health effects?

6. Opportunity for mitigation:

If this determinant is included in the scope for the EIA is there an opportunity to enhance any positive health impacts and/or mitigate any negative health impacts?

Scoping

The scoping report may determine that some of the wider determinants considered under human and population health can be scoped out of the EIA. If that, should be the case, detailed rationale and supporting evidence for any such exclusions must be provided. PHE will expect an assessment to have considered all of the determinants listed in Table1 of Appendix 1 as a minimum.

Vulnerable groups

Certain parts of the population may experience disproportionate negative health effects as a result of a development. Vulnerable populations can be identified through research literature, local population health data or from the identification of pre-existing health conditions that increase vulnerability.

The on health and wellbeing and health inequalities of the scheme will have particular effect on vulnerable or disadvantaged populations, including those that fall within the list of protected characteristics. Some protected groups are more likely to have elevated vulnerability associated with social and economic disadvantages. Consideration should be given to language or lifestyles that influence how certain populations are affected by impacts of the proposal, for example non-English speakers may face barriers to accessing information about the works or expressing their concerns.

Equality Impact Assessments (EqIA) are used to identify disproportionate effects on Protected Groups (defined by the Equality Act, 2010), including health effects. The assessments and findings of the Environmental Statement and the EqIA should be crossed reference between the two documents, particularly to ensure the assessment of potential impacts for health and inequalities and that resulting mitigation measures are mutually supportive.

The Wales Health Impact Assessment Support Unit (WHIASU), provides a suggested list of vulnerable groups

Age related groups
- Children and young people
- Older people

Income related groups
- People on low income
- Economically inactive

• Unemployed/workless
• People who are unable to work due to ill health

Groups who suffer discrimination or other social disadvantage
• People with physical or learning disabilities/difficulties
• Refugee groups
• People seeking asylum
• Travellers
• Single parent families
• Lesbian and gay and transgender people
• Black and minority ethnic groups
• Religious groups

Geographical groups
• People living in areas known to exhibit poor economic and/or health indicators
• People living in isolated/over-populated areas
• People unable to access services and facilities

Mental health

PHE supports the use of the broad definition of health proposed by the World Health Organisation (WHO). Mental well-being is fundamental to achieving a healthy, resilient and thriving population. It underpins healthy lifestyles, physical health, educational attainment, employment and productivity, relationships, community safety and cohesion and quality of life. NSIP schemes can be of such scale and nature that will impact on the over-arching protective factors, which are:
• Enhancing control
• Increasing resilience and community assets
• Facilitating participation and promoting inclusion.

There should be parity between mental and physical health, and any assessment of health impact should include the appreciation of both. A systematic approach to the assessment of the impacts on mental health, including suicide, is required. The **Mental Well-being Impact Assessment (MWIA)** could be used as a methodology. The assessment should identify vulnerable populations and provide clear mitigation strategies that are adequately linked to any local services or assets

Perceptions about the proposed scheme may increase the risk of anxiety or health effects by perceived effects. "Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard.

Evidence base and baseline data

An assessment should be evidence based, using published literature to identify determinants and likely health effects. The strength of evidence identifying health effects can vary, but where the evidence for an association is weak it should not automatically be discounted.

There will be a range of publicly available health data including:

- National datasets such as those from the Office of National Statistics,
- Public Health England (PHE), including the fingertips data sets,
- Non-governmental organisations,
- Local public health reports, such as the Joint Strategic Needs Assessment, Health and Wellbeing Strategies;
- Consultation with local authorities, including local authority public health teams;
- Information received through public consultations

Mitigation

If the assessment has identified that significant negative effects are likely to occur with respect to the wider determinants of health, the assessment should include a description of planned mitigation measures the applicant will implement to avoid or prevent effects on the population.

Mitigation and/or monitoring proposals should be logical, feasible and have a clear governance and accountability framework indicating who will be responsible for implementation and how this will be secured during the construction and/or operation of the NSIP.

Positive benefits from the scheme

The scale of many NSIP developments will generate the potential for positive impacts on health and wellbeing; however, delivering such positive health outcomes often requires specific enabling or enhancement measures. For example, the construction of a new road network to access an NSIP site may provide an opportunity to improve the active transport infrastructure for the local community. PHE expects developments to consider and report on the opportunity and feasibility of positive impacts. These may be stand alone or be considered as part of the mitigation measures.

Monitoring

PHE expects an assessment to include consideration of the need for monitoring. It may be appropriate to undertake monitoring where:

- Critical assumptions have been made
- There is uncertainty about whether negative impacts are likely to occur as it may be appropriate to include planned monitoring measures to track whether impacts do occur.
- There is uncertainty about the potential success of mitigation measures
- It is necessary to track the nature of the impact and provide useful and timely feedback that would allow action to be taken should negative impacts occur

How to contact PHE

If you wish to contact us regarding an existing or potential NSIP application please email: nsipconsultations@phe.gov.uk

Appendix 1

Table 1 – Wider determinants of health and wellbeing

Health and wellbeing themes			
Access	Traffic and Transport	Socioeconomic	Land Use
Wider determinants of health and wellbeing			
Access to : • local public and key services and facilities. • Good quality affordable housing. • Healthy affordable food. • The natural environment. • The natural environment within the urban environment. • Leisure, recreation and physical activities within the urban and natural environments.	• Accessibility. • Access to/by public transport. • Opportunities for access by cycling and walking. • Links between communities. • Community severance. • Connections to jobs. • Connections to services, facilities and leisure opportunities.	• Employment opportunities, including training opportunities. • Local business activity. • Regeneration. • Tourism and leisure industries. • Community/social cohesions and access to social networks. • Community engagement.	• Land use in urban and/or /rural settings. • Quality of Urban and natural environments

1) **Access**

a. Access to local, public and key services and facilities

Access to local facilities can increase mobility and social participation. Body mass index is significantly associated with access to facilities, including factors such as the mix and density of facilities in the area. The distance to facilities has no or only a small effect on walking and other physical activities. Access to recreational facilities can increase physical activity, especially walking for recreation, reduce body weight, reduce the risk of high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions.

Local services include health and social care, education, employment, and leisure and recreation. Local facilities include community centres, shops, banks/credit unions and Post Offices. Services and facilities can be operated by the public, private and/or voluntary sectors. Access to services and facilities is important to both physical and mental health and wellbeing. Access is affected by factors such as availability,

proximity to people's place of residence, existence of transport services or active travel infrastructure to the location of services and facilities, and the quality of services and facilities.

The construction or operation of an NSIP can affect access adversely: it may increase demand and therefore reduce availability for the existing community; during construction, physical accessibility may be reduced due to increased traffic and/or the blockage of or changes to certain travel routes. It is also possible that some local services and facilities are lost due to the land-take needed for the NSIP.

Conversely if new routes are built or new services or facilities provided the NSIP may increase access. NSIPs relating to utilities such as energy and water can maintain, secure or increase access to those utilities, and thereby support health and wellbeing.

b. Access to good-quality affordable housing

Housing refurbishment can lead to an improvement in general health and reduce health inequalities. Housing improvements may also benefit mental health. The provision of diverse forms and types of housing is associated with increased physical activity. The provision of affordable housing is strongly associated with improved safety perceptions in the neighbourhood, particularly among people from low-income groups. For vulnerable groups, the provision of affordable housing can lead to improvements in social, behavioural and health related outcomes. For some people with long term conditions, the provision of secure and affordable housing can increase engagement with healthcare services, which can lead to improved health-related outcomes. The provision of secure and affordable housing can also reduce engagement in risky health-related behaviours. For people who are homeless, the provision of affordable housing increases engagement with healthcare services, improves quality of life and increases employment, and contributes to improving mental health.

Access to housing meets a basic human need, although housing of itself is not necessarily sufficient to support health and wellbeing: it is also important that the housing is of good quality and affordable. Factors affecting the quality of housing include energy efficiency (eg effective heating, insulation), sanitation and hygiene (eg toilet and bathroom), indoor air quality including ventilation and the presence of damp and/or mould, resilience to climate change, and overcrowding. The affordability of housing is important because for many people, especially people on a low income, housing will be the largest monthly expense; if the cost of housing is high, people may not be able to meet other needs such as the need for heating in winter or food. Some proposals for NSIPs include the provision of housing, which could be beneficial for the health and wellbeing of the local population. It is also possible that some housing will be subject to a compulsory purchase order due to the land-take needed for an NSIP.

c. Access to affordable healthy food

Access to healthy food is related to the provision of public and active transport infrastructure and the location and proximity of outlets selling healthier food such as fruit and vegetables. For the general population, increased access to healthy, affordable food through a variety of outlets (shops, supermarkets, farmers' markets and community gardens) is associated with improved dietary behaviours, including attitudes towards healthy eating and food purchasing behaviour, and improved adult weight. Increased access to unhealthier food retail outlets is associated with increased weight in the general population and increased obesity and unhealthy eating behaviours among children living in low-income areas. Urban agriculture can improve attitudes towards healthier food and increase fruit and vegetable consumption.

Factors affecting access to healthy affordable food include whether it is readily available from local shops, supermarkets, markets or delivery schemes and/or there are opportunities to grow food in local allotments or community gardens. People in environments where there is a high proportion of fast food outlets may not have easy access to healthy affordable food.

d. Access to the natural environment

Availability of and access to safe open green space is associated with increased physical activity across a variety of behaviours, social connectedness, childhood development, reduced risk of overweight and obesity and improved physical and mental health outcomes. While the quantity of green space in a neighbourhood helps to promote physical activity and is beneficial to physical health, eg lower rates of mortality from cardiovascular disease and respiratory disease in men, the availability of green environments is likely to contribute more to mental health than to physical health: the prevalence of some disease clusters, particularly anxiety and depression, is lower in living environments which have more green space within a 1-km radius.

The proximity, size, type, quality, distribution, density and context of green space are also important factors. Quality of green space may be a better predictor of health than quantity, and any type of green space in a neighbourhood does not necessarily act as a venue for, or will encourage, physical activity. 'Walkable' green environments are important for better health, and streetscape greenery is as strongly related to self-reported health as green areas. Residents in deprived areas are more likely to perceive access to green space as difficult, to report poorer safety, to visit the green space less frequently and to have lower levels of physical activity. The benefits to health and wellbeing of blue space include lower psychological distress.

The natural environment includes the landscape, waterscape and seascape. Factors affecting access include the proximity of the natural environment to people’s place of residence, the existence of public transport services or active travel infrastructure to the natural environment, the quality of the natural environment and feelings of safety in the natural environment. The construction of an NSIP may be an opportunity to provide green and/or blue infrastructure in the local area. It is also possible that green or blue infrastructure will be lost due to the land-take needed for the NSIP.

e. Access to the natural environment within the urban environment

Public open spaces are key elements of the built environment. Ecosystem services through the provision of green infrastructure are as important as other types of urban infrastructure, supporting physical, psychological and social health, although the quality and accessibility of green space affects its use, C19, ethnicity and perceptions of safety. Safe parks may be particularly important for promoting physical activity among urban adolescents. Proximity to urban green space and an increased proportion of green space are associated with decreased treatment of anxiety/mood disorders, the benefits deriving from both participation in usable green space near to home and observable green space in the neighbourhood. Urban agriculture may increase opportunities for physical activity and social connections.

A view of 'greenery' or of the sea moderates the annoyance response to noise. Water is associated with positive perceptive experiences in urban environments, with benefits for health such as enhanced contemplation, emotional bonding, participation and physical activity. Increasing biodiversity in urban environments, however, may promote the introduction of vector or host organisms for infectious pathogens, eg green connectivity may potentiate the role of rats and ticks in the spread of disease, and bodies of water may provide habitats for mosquitoes. Owing to economic growth,

population size and urban and industrial expansion in the EU, to maintain ecosystem services at 2010 levels, for every additional percentage increase in the proportion of 'artificial' land, there needs to be a 2.2% increase in green infrastructure.

The natural environment within the urban environment includes the provision of green space and blue space in towns and cities. Factors involved in access include the proximity of the green and/or blue space to people's place of residence, the existence of transport services or active travel infrastructure to the green and/or blue space, the quality of the green and/or blue space and feelings of safety when using the green and/or blue space. The construction of an NSIP may be an opportunity to provide green and/or blue infrastructure in the local urban environment. It is also possible that green or blue infrastructure in the urban environment will be lost due to the land-take needed for the NSIP.

f. Access to leisure, recreation and physical activity opportunities within the urban and natural environments.

Access to recreational opportunities, facilities and services is associated with risk factors for long-term disease; it can increase physical activity, especially walking for recreation, reduce body mass index and overweight and obesity, reduce the risk of high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions. It can also enhance social connectedness. Children tend to play on light-traffic streets, whereas outdoor activities are less common on high-traffic streets. A perception of air pollution can be a barrier to participating in outdoor physical activity. There is a positive association between urban agriculture and increased opportunities for physical activity and social connectivity. Gardening in an allotment setting can result in many positive physical and mental health-related outcomes. Exercising in the natural environment can have a positive effect on mental wellbeing when compared with exercising indoors.

Leisure and recreation opportunities include opportunities that are both formal, such as belonging to a sports club, and informal, such as walking in the local park or wood. Physical activity opportunities include routine activity as part of daily life, such as walking or cycling to work, and activity as part of leisure or recreation, such as playing football. The construction of an NSIP may enhance the opportunities available for leisure and recreation and physical activity through the provision of new or improved travel routes, community infrastructure and/or green or blue space. Conversely, construction may reduce access through the disruption of travel routes to leisure, recreation and physical activity opportunities.

2) **Traffic and Transport**

a. Accessibility

Walkability, regional accessibility, pavements and bike facilities are positively associated with physical activity and negatively related to body weight and high blood pressure, and reduce the number of vehicle trips, the distances travelled and greenhouse gas emissions. Body mass index is associated with street network accessibility and slope variability.

Accessibility in relation to transport and travel has several aspects including whether potential users can gain physical access to the infrastructure and access to the services the infrastructure provides. The design and operation of transport infrastructure and the associated services should take account of the travel needs of all potential users including people with limited mobility. People whose specific needs should be considered include pregnant women, older people, children and young people and people with a disability. Other aspects of transport infrastructure affecting

accessibility include safety and affordability, both of which will affect people's ability to travel to places of employment and/or key local services and facilities and/or access their social networks.

b. Access to / by public transport

Provision of high-quality public transport is associated with higher levels of active travel among children and among people commuting to work, with a decrease in the use of private cars. Combining public transport with other forms of active travel can improve cardiovascular fitness. Innovative or new public transport interventions may need to be marketed and promoted differently to different groups of transport users, eg by emphasising novelty to car users while ensuring that the new system is seen by existing users as coherently integrated with existing services.

Transport facilitates access to other services, facilities and amenities important to health and wellbeing. Public transport is any transport open to members of the public including bus, rail and taxi services operated by the public, private or community sectors. For people who do not have access to private transport, access to public transport is important as the main agency of travel especially for journeys >1 mile. Access to public transport is not sufficient, however, and access by public transport needs to be taken into account: public transport services should link places where people live with the destinations they need or want to visit such as places of employment, education and healthcare, shops, banks and leisure facilities. Other aspects of access to public transport include affordability, safety, frequency and reliability of services.

c. Opportunities for / access by cycling & walking

Walking and cycling infrastructure can enhance street connectivity, helping to reduce perceptions of long-distance trips and providing alternative routes for active travel. Prioritising pedestrians and cyclists through changes in physical infrastructure can have positive behavioural and health outcomes, such as physical activity, mobility and cardiovascular outcomes. The provision and proximity of active transport infrastructure is also related to other long-term disease risk factors, such as access to healthy food, social connectedness and air quality. The perception of air pollution, however, appears to be a barrier to participating in active travel.

Perceived or objective danger may also have an adverse effect on cycling and walking, both of which activities decrease with increasing traffic volume and speed, and cycling for leisure decreases as local traffic density increases. Health gains from active travel policies outweigh the adverse effects of road traffic incidents. New infrastructure to promote cycling, walking and the use of public transport can increase the time spent cycling on the commute to work, and the overall time spent commuting among the least-active people. Active travel to work or school can be associated with body mass index and weight, and may reduce cardiovascular risk factors and improve cardiovascular outcomes. The distance of services from cycle paths can have an adverse effect on cycling behaviour, whereas mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking.

d. Links between communities

Social connectedness can be enhanced by the provision of public and active transport infrastructure and the location of employment, amenities, facilities and services.

e. Community severance

In neighbourhoods with high volumes of traffic, the likelihood of people knowing and

trusting neighbours is reduced.

f. Connections to jobs

The location of employment opportunities and the provision of public and active transportation infrastructure are associated with risk factors for long-term disease such as physical activity. Good pedestrian and cycling infrastructure can promote commuting physical activity. Improved transport infrastructure has the potential to shift the population distribution of physical activity in relation to commuting, although a prerequisite may be a supportive social environment. Mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking.

The ease of access to employment, shops and services including the provision of public and active transport are important considerations and schemes should take any opportunity to improve infrastructure to promote cycling, walking and the use of public transport

g. Connections to services, facilities and leisure opportunities

Mixed land use, higher densities and reduced distances to non-residential destinations promote transportation walking. Access to recreational opportunities and the location of shops and services are associated with risk factors for long-term disease such as physical activity, access to healthy food and social connectedness. Increased distance of services from cycle paths can have an adverse effect on cycling behaviour.

3) **Socio Economic**

a. Employment opportunities including training opportunities

Employment is generally good for physical and mental health and well-being, and worklessness is associated with poorer physical and mental health and well-being. Work can be therapeutic and can reverse the adverse health effects of unemployment for healthy people of working age, many disabled people, most people with common health problems and social security beneficiaries. Account must be taken of the nature and quality of work and its social context and jobs should be safe and accommodating. Overall, the beneficial effects of work outweigh the risks of work and are greater than the harmful effects of long-term unemployment or prolonged sickness absence. Employment has a protective effect on depression and general mental health.

Transitions from unemployment to paid employment can reduce the risk of distress and improve mental health, whereas transitions into unemployment are psychologically distressing and detrimental to mental health. The mental health benefits of becoming employed are also dependent on the psychosocial quality of the job, including level of control, demands, complexity, job insecurity and level of pay: transition from unemployment to a high-quality job is good for mental health, whereas transition from unemployment to a low-quality job is worse for mental health than being unemployed. For people receiving social benefits, entry into paid employment can improve quality of life and self-rated health (physical, mental, social) within a short time-frame. For people receiving disability benefits, transition into employment can improve mental and physical health. For people with mental health needs, entry into employment reduces the use of mental health services.

For vocational rehabilitation of people with severe mental illness (SMI), Supported Employment is more effective than Pre-vocational Training in helping clients obtain competitive employment; moreover, clients in Supported Employment earn more and

work more hours per month than those in Pre-vocational Training.

b. Local Business Activity

It is important to demonstrate how a proposed development will contribute to ensuring the vitality of town centres. Schemes should consider the impact on local employment, promote beneficial competition within and between town centres, and create attractive, diverse places where people want to live, visit and work

In rural areas the applicant should assess the impact of the proposals on a prosperous rural economy, demonstrate how they will support the sustainable growth and expansion of all types of business and enterprise in rural areas, promoting the development and diversification of agricultural and other land based rural businesses.

c. Regeneration

Following rebuilding and housing improvements in deprived neighbourhoods, better housing conditions are associated with better health behaviours; allowing people to remain in their neighbourhood during demolition and rebuilding is more likely to stimulate life-changing improvements in health behaviour than in people who are relocated. The partial demolition of neighbourhoods does not appear to affect residents' physical or mental health. Mega-events, such as the Olympic Games, often promoted on the basis of their potential legacy for regeneration, appear to have only a short-term impact on mental health.

d. Tourism and Leisure Industries

The applicant should assess the impact of the proposed development on retail, leisure, commercial, office, tourism, cultural, community and residential development needed in town centres. In rural locations assessment and evaluation of potential impacts on sustainable rural tourism and leisure developments that benefit businesses in rural areas, communities and visitors should be undertaken.

e. Community / social cohesion and access to social networks

The location of employment, shops and services, provision of public and active transport infrastructure and access to open space and recreational opportunities are associated with social connectedness. Access to local amenities can increase social participation. Neighbourhoods that are more walkable can increase social capital. Urban agriculture can increase opportunities for social connectivity. Infrastructure developments, however, can affect the quality of life of communities living in the vicinity, mediated by substantial community change, including feelings of threat and anxiety, which can lead to psychosocial stress and intra-community conflict.

f. Community engagement

Public participation can improve environmental impact assessments, thereby increasing the total welfare of different interest groups in the community. Infrastructure development may be more acceptable to communities if it involves substantial public participation.

4) **Land Use**

a. Land use in urban and / or rural settings

Land-use mix including infrastructure:
Land use affects health not only by shaping the built environment, but also through

the balance of various types of infrastructure including transport. Vulnerable groups in the population are disproportionately affected by decisions about land use, transport and the built environment. Land use and transport policies can result in negative health impacts due to low physical activity levels, sedentary behaviours, road traffic incidents, social isolation, air pollution, noise and heat. Mixed land use can increase both active travel and physical activity. Transportation walking is related to land-use mix, density and distance to non-residential destinations; recreational walking is related to density and mixed use. Using modelling, if land-use density and diversity are increased, there is a shift from motorised transport to cycling, walking and the use of public transport with consequent health gain from a reduction in long-term conditions including diabetes, cardiovascular disease and respiratory disease.

Proximity to infrastructure:
Energy resource activities relating to oil, gas and coal production and nuclear power can have a range of negative effects on children and young people. Residing in proximity to motorway infrastructure can reduce physical activity. For residents in proximity to rail infrastructure, annoyance is mediated by concern about damage to their property and future levels of vibration. Rural communities have concerns about competing with unconventional gas mining for land and water for both the local population and their livestock."

b. Quality of urban and natural environments

Long-term conditions such as cardiovascular disease, diabetes, obesity, asthma and depression can be moderated by the built environment. People in neighbourhoods characterised by high ‘walkability’ walk more than people in neighbourhoods with low ‘walkability’ irrespective of the land-use mix. In neighbourhoods associated with high ‘walkability’ there is an increase in physical activity and social capital, a reduction in overweight and blood pressure, and fewer reports of depression and of alcohol abuse. The presence of walkable land uses, rather than their equal mixture, relates to a healthy weight. Transportation walking is at its highest levels in neighbourhoods where the land-use mix includes residential, retail, office, health, welfare and community, and entertainment, culture and recreation land uses; recreational walking is at its highest levels when the land-use mix includes public open space, sporting infrastructure and primary and rural land uses. Reduced levels of pollution and street connectivity increase participation in physical activity.

Good-quality street lighting and traffic calming can increase pedestrian activity, while traffic calming reduces the risk of pedestrian injury. 20-mph zones and limits are effective at reducing the incidence of road traffic incidents and injuries, while good-quality street lighting may prevent them. Public open spaces within neighbourhoods encourage physical activity, although the physical activity is dependent on different aspects of open space, such as proximity, size and quality. Improving the quality of urban green spaces and parks can increase visitation and physical activity levels.

Living in a neighbourhood overlooking public areas can improve mental health, and residential greenness can reduce the risk of cardiovascular mortality. Crime and safety issues in a neighbourhood affect both health status and mental health. Despite the complexity of the relationship, the presence of green space has a positive effect on crime, and general environmental improvements may reduce the fear of crime. Trees can have a cooling effect on the environment – an urban park is cooler than a non-green site. Linking road infrastructure planning and green infrastructure planning can produce improved outcomes for both, including meeting local communities' landscape sustainability objectives.

From: Bader, Gregor on behalf of Customer
To: Longfield Solar Farm
Cc: wecare@cadentgas.com
Subject: RE: EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation
Date: 06 November 2020 12:38:54
Attachments: image001.png
image004.png

Good Afternoon Katherine,

Thank you for your email, however as this is outside SGN's footprint ten we have no comments to make on this.

I have copied in Cadent who are the gas transporter for the Chelmsford, Essex area in case they make to wants comments.

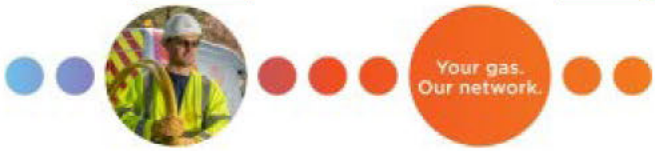
Kind Regards

Gregor Bader, Customer Service Advisor

Talk to us on Live Chat or email customer@sgn.co.uk

Extra Help for those who need it

SGN, Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ
Find us on Facebook and follow us on Twitter: @SGNgas



Smell gas? Call 0800 111 999

Classified as Internal

From: Longfield Solar Farm <LongfieldSolarFarm@planninginspectorate.gov.uk>
Sent: 06 November 2020 10:06
Subject: EN010118 - Longfield Solar Farm - EIA Scoping Notification and Consultation

Dear Sir/Madam

Please see attached correspondence on the proposed Longfield Solar Farm.

Please note the deadline for consultation responses is 4 December 2020 and is a statutory requirement that cannot be extended.

Southend-on-Sea Borough Council
Deputy Chief Executive,
Executive Director (Growth and Housing) : Andrew Lewis
Civic Centre, Victoria Avenue, Southend-on-Sea, Essex SS2 6ER
01702 215000
www.southend.gov.uk

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The Planning Inspectorate
Environmental Services
Central Operations
Temple Quay House
2 The Square
Bristol
BS1 6PN

Our ref: 20/01881/NBC
Your ref: EN010118-LSF
Date: 27 November 2020
Enquiries: Spyridon Mouratidis
Telephone: 01702 215069 & [redacted]
Email: spyrosmouratidis@southend.gov.uk

Dear Sir/Madam,

Town & Country Planning Act 1990 (as amended)

Site address: **Longfield Solar Farm Waltham Road Boreham Chelmsford Essex**
Proposal: **Planning Inspectorate Scoping opinion: Application by Longfield Solar Energy Farm Limited for an order granting Development Consent for the Longfield Solar Farm**

Thank you for your consultation request which was received on 6th November 2020 and has been allocated the case reference 20/01881/NBC.

We understand that the Applicant has asked the Planning Inspectorate on behalf of the Secretary of State (SoS) for its opinion (a Scoping Opinion) as to the information to be provided in an Environmental Statement (ES) relating to the Proposal. We have reviewed the document accompanying the request titled 'Environmental Impact Assessment: Scoping Report' dated October 2020.

The Planning team at Southend-on-Sea Borough Council consulted with other departments of the Council, including its Highways team. We consider that the information the Applicant intends to submit would be proportionate to the project and sufficient to allow the assessment of the ES, particularly in terms of socio-economic and transport impacts. No further comments are submitted for the scoping opinion request. Please inform us in the normal way for any future requests or applications in relation to this project.

Yours faithfully,

Spyros Mouratidis
Senior Planner

T: [redacted]
E: spyrosmouratidis@southend.gov.uk

Our Ref: SCC/CON/4544/20EIASCOPING
Date: 03 December 2020
Enquiries to: Andy Rutter
Tel: 01473 263766
Email: andrew.rutter@suffolk.gov.uk

Suffolk County Council

Katherine King
Senior EIA Advisor
Major Casework Directorate
The Planning Inspectorate
Temple Quay House
2 The Square
Bristol
BS1 6PN

Sent By Email Only

Dear Katherine,

Planning Act 2008 (As amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulations 10 and 11.

Your Ref No: EN010118-LSF

Proposal: EIA Scoping Notification and Consultation for an Order granting Development Consent for the Longfield Solar Farm.

Location: Longfield Solar Farm, Essex.

Thank you for consulting Suffolk County Council on the above EIA Scoping Consultation. Suffolk County Council wish to make the following comments on the proposed development, whilst also providing comments from some 'lessons learnt' from a similar project in Suffolk (Sunnica Solar Farm) which is expected to be submitted to PINS in Q2 of 2021.

SCC Economic Development

"Within the scoping document there is a section on how the applicant will assess Socio – Economics effects which is great to see.

The construction period is expected to be 2024 to 2026 at the earliest, during this time period we are expecting significant activity on a number of other NSIP's that will put pressure on available labour.

Sizewell C (SZC) will be in its Civil construction phase and Scottish Power Renewables will also be undertaking its 3-year onshore construction phase, locally there is also the A12/A120 widening scheme. These projects alone have the potential to draw in all available local civils construction labour leading to negative displacement effects in our local labour market. With the additional pressure of another local NSIP providing a draw on an already pressured labour market this could be further exasperated.

This proposed scheme could also have a cumulative impact on the SZC transport modelling assumptions. If labour in the South of the county is expected to be drawn to employment at SZC and modelled as such if another scheme, such as this, is delivered it will significantly change these assumptions and we may see more labour being drawn from more North and/or West of the county.

Looking at it in a more positive light it is also a major opportunity to provide legacy employment/opportunity for the region, if we are creating a workforce and talent pools of people that can take up the opportunities that SZC and other projects present, dependant on timing, this project can either support a lead in to major projects or help with re brokering of workers and companies as projects demobilise. It should also be coupled to the Sunnica Solar Farm project in the west of the county.

Therefore it will be extremely important to ensure that cumulative impacts are considered and that the correct projects are scoped in (or not scoped out…) to ensure robustness in this assessment."

SCC Archaeology

"The archaeological potential, indicated by known sites and remains recorded on the County Historic Environment Record (HER) and the landscape position, varies enormously across the proposed development area. For Sunnica East (the Suffolk side of the scheme) the proposed development site around Red Lodge and Worlington is thought to have lower archaeological potential. By contrast the archaeological potential of the proposed development site in the Lark Valley near Isleham and to the north of Freckenham is extremely high. This is supported by evidence recorded on the County Historic Environment Record (HER) and the favourable topographic location (on the fen edge in a river valley, at the confluence of two watercourses etc.)

The archaeological remains in these areas may represent a significant constraint in terms of any development, due to their extent and significance, and these areas may need to be excluded from the scheme on archaeological grounds. Suffolk County Council Archaeological Service (SCCAS) were concerned that if these fields only had minimal archaeological trial trench evaluation pre DCO consent this would not sufficiently characterise heritage assets and identify areas of constraint to be removed from the proposed scheme. In discussions with Isaac Nunn, Isaac confirmed that the DCO wording can be written in a way to secure that any areas of constraint identified post DCO consent are still able to be removed from the scheme (which is in contrast to Town and Country Planning for if sites are investigated pre-determination or thorough suitably worded conditions). Currently that DCO wording has not been agreed, so we cannot pass it on to Essex at this stage.

For the archaeological trial trench evaluation strategy pre DCO consent trenching is still at a higher level of trenching in the areas of significant archaeological potential, with lower level trenching in the areas around Red Lodge and Worlington which will still test anomalies identified in the geophysical survey etc. There is also a higher level of trenching in areas of limited flexibility such as compounds, Battery Energy Storage Systems (BESS), substations etc. Post DCO consent a second phase of archaeological trial trench evaluation will be undertaken across all areas, including the cable corridor etc. These results, along with the first phase results will be required prior to being able to agree on mitigation.

Ensuring that all documents reflect if they are first phase of archaeological trial trench evaluation and that a second phase of evaluation will be required in order to form mitigation

We requested that the levels of archaeological fieldwork and recording they are proposing are stated including the minimum requirement of archaeological trial trench evaluation they are committed to pre and post consent

Ensuring a PPA/charging is in place. There was misunderstanding by the applicant that they had to pay for pre-application involvement on a DCO

The application area red line evolved through discussions but this was not reflected and the new red line areas and Historic Environment Record (HER) searches updated through the archaeological Desk Based Assessments and documents submitted for the ES, PEIR etc.

Getting the non-intrusive surveys, such as geophysics, aerial photography, LiDAR, landscape etc. undertaken asap. Some areas of Sunnica East still have outstanding geophysical survey/areas are being surveyed at present and the archaeological trenching array for phase 1 cannot be approved without it but the applicants are wishing to start on site asap.

The results of these surveys need to be 'ground truthed' and the weight given to the geophysical survey results should be proportionate as well as recognise its limitations. "Blank" areas as well as anomalies to be tested in the archaeological trial trench evaluation
Getting the applicants to understand that it is not only the location and impact of the PV arrays but the impacts of but mounting structures, inverters, transformers, switchgears, on site cabling, Battery Energy Storage Systems (BESS), electrical compounds comprising a substation and control building, the substation at Burwell, office/warehouses, fencing and security measures, drainage, internal access roads and car parking, ecological areas, landscaping including habitat creation areas and construction laydown areas that may have an impact on significant heritage assets so also need to be taken into account

For the cable corridors, are the applicants able to propose reduced impacts, including working easements, track matting etc.? At Sunnica currently AECOM are proposing a commitment to the use of track-matting to avoid below ground impacts within the Cable Corridor working area. We require a statement regarding proposals to protect by using track matting where heavy construction vehicles will manoeuvre and by fencing off areas, including declaration of depths of fencing, with the acknowledgement that below ground impacts from fencing may also require archaeological evaluation/mitigation. Committing to specific practices that do not result in significant ground disturbance in these areas and that this will be undertaken for construction, operation and decommissioning

Further information and agreement on the planting and management regime needs to be undertaken. Conserving archaeological remains is welcome, but we need to be sure of the strategy. For the landscaping, tree planting etc. we recommend the removal of the term "watching brief". All works should be under archaeological controlled conditions. An archaeological monitoring of tree planting is unacceptable and not something that we can support. The Forest Research https://www.forestresearch.gov.uk/tools-and-resources/historic-environment-resources/woodland-and-archaeology/ discusses the impact of forests and woodlands on archaeological deposits. For example, please see "Tree Roots" and "Archaeological assessment prior to new woodland establishment" (which is in "Archaeological preservation during woodland expansion". Areas of planting need to be included in the archaeological trial trench evaluation.

We need to have further information and agreement regarding how the biodiverse grassland, dry acid grassland creation/restoration and marshy grassland (floodplain and grazing marsh) creation/restoration will be created and managed. For example, does the creation of the wetland involve scrapes, ponds and ditches, will soil inversion be the technique employed to create suitable soil conditions for grassland creation? Such works have dramatic detrimental impact on buried archaeological remains if invasive creation techniques are to be used these areas need to be incorporated into the evaluation strategy

We recommended that the Statement of Impact must recognise, at a high level, the potential impacts of the proposed scheme upon above and below ground archaeology (both designated and non-designated heritage assets) and heritage and include a list of impacts to be considered as part of the proposed scheme. It should clearly state areas of constraint which need to be removed from the proposed development area. For surviving below ground archaeological heritage assets, where (1) development impacts are proposed that will damage or destroy remains and (2) where mitigation through recording is considered acceptable, the resultant mitigation included should include proposals to record and advance understanding of the significance of heritage assets before they are damaged or destroyed. Appropriate mitigation techniques, such as excavation prior to development, will be based upon the results of the suite of evaluation and assessment work undertaken.

Proposals for outreach and enhanced public understanding as part of this mitigation work must also be included. It would be welcome if this statement also demonstrated a commitment to delivering enhanced public understanding/benefit and legacy as part of mitigation beyond appropriate publication of the results and archiving. Following discussion with Suffolk and Cambridgeshire County Council a programme of community outreach should be agreed and undertaken. This may stretch to long term management of assets, provision of outreach opportunities such as public open days, visits to schools, temporary displays/'pop-up' museums –

hosted by local institutions, newsletters, social media updates, public talks, popular publication with the results of the work easily available to the public, long-term displays - to be hosted in places relevant to the scheme, community involvement, and strategic linking of archaeology with any other landscape/tourism initiatives and public space works.

That it is not just the impacts of the construction of the proposed development but the opening/running and decommissioning that need to be considered. AECOM are proposing to have very fixed and constraining vehicle movement to reduce the areas that need to be archaeologically investigated. These same routes would need to be used during the opening/running and decommissioning of the scheme. This should be included in the Construction Environmental Management Plan (CEMP) and Decommissioning Environmental Management Plan

A joined-up approach between archaeological works and any other site investigations works involving ground disturbance should be undertaken, to avoid potential disturbance to archaeological deposits. There needs to be a coherent approach so that approaches are legally compliant between landscape, ecology, archaeology etc.

Any and all groundworks will have an archaeological impact. There should be links to other documents in the DCO, for example, the Outline Pre commencement Archaeology Execution Plans (OPCAEP), Archaeology Execution Plans, which deal with matters beyond the archaeological WSI(s), Construction Environmental Management Plan (CEMP), Construction Operative Plan (COP), Landscape and Ecology Management Plan (LEMP), Dust and Sediment Management Plans etc. as a trigger for engagement. A commitment that contractors and Managers who use those must be mindful of the archaeological mitigation strategy so that regular and full discussions can be had with archaeological managers to prevent breaches of DCO.

As has been shown by other Nationally Significant Infrastructure Projects in the region, for example, the EA1 scheme, time will again be a critical factor for the Sunnica scheme. Archaeological and heritage assessments, evaluations and mitigation phases must be programmed into the project at the earliest opportunity, with sufficient time allowed to enable fieldwork to be completed prior to the start of construction works, so as to avoid any delays to the development schedule."

SCC Highways

"In general it looks to have limited impact on Suffolk in transport terms. However, I would ask that the following matters are included in our response.

The scoping does not provide any volumes of construction traffic. Until this is provided it is suggested that the potential transport impacts on SRN that may impact on LHA maintained roads such as capacity and safety at A142/A14 Copdock remain in scope of the ES & TA. SCCs concerns are that the cumulative impact with other NSIPs in the region is appropriately assessed.

SCC would require details of the movement of AILs particularly if the origin is Ipswich or Felixstowe to assess the appropriateness of proposed routes, particularly where these include the local road network.

Construction Management Plans should address routing of construction traffic, for example that large vehicles use the SRN rather than diverting via local authority roads such as A134 or A131 which pass through a number of communities and an air quality management area (Sudbury)

In its response to a number of recent NSIPs SCC has commented on the appropriateness of using GEART as an assessment tool. The Council considers that this can be a coarse method of analysis and care should be taken when applying it to specific local transport issues."

SCC Landscape

"Paragraph 2.1.5 (p.8) of the Scoping Report (October 2020) states:

'The Site comprises a single parcel of land separated by several areas of woodland approximately 582ha in size.'

It can only be assumed that the 582ha refer to the total area of the site, rather than the areas of woodland contained within.

It has to be anticipated that not all landscape and visual effects resulting from this large-scale project can be entirely successfully mitigated.

Landscape and visual effects on Suffolk and Dedham Vale AONB

Paragraph 10.4.25 (p.107) states:

'Neither the study area, nor the Site boundary is covered by any statutory landscape designations, i.e. National Parks nor Areas of Outstanding Natural Beauty (AONB). The Dedham Vale AONB is approximately 23km to the north-east of the Site boundary and due to the distance and intervening features an assessment of impacts to the AONB is scoped out of the LVIA.'

The proposal site is located at a considerable distance from the Suffolk Border and, according to the Scoping Report, 23km from the Dedham Vale AONB.

It is considered that the proposal would neither affect the Suffolk landscape as a resource nor result in noticeable effects on Suffolk's landscape character areas.

It is further considered that effects on visual receptors within Suffolk and the Dedham Vale AONB would be negligible, even if localised long-distance views were available.

As Suffolk is located to the north/north-east of the site, the likelihood of glint and glare is very limited, as solar panels would be orientated either west and east or south, and would cause glint and glare into those directions.

The fact that a number of PRoWs may need to be temporarily closed, could lead to some users travelling further afield, including visits to Suffolk. The likelihood and effects of this may need to be further explored, so that they can be appropriately assessed or scoped out.

Further comments

Paragraph 10.7.9 (p.119) states:

'A lighting assessment is scoped out of the assessment, as any lighting during the construction phase would be temporary and any lighting during operation will be on temporarily.'

Any external lighting should be assessed with regards to its effect on the night sky, light pollution and wildlife. This should not be scoped out.

Recommendations

Common Ground and baseline

- *The LPAs involved co-operate in dealing with the project and provide a joint response to the applicant.*

- *Landscape, Rights of Way, Cultural Heritage and Ecology work closely together to achieve common goals.*

- *Landscape Officer(s) allow(s) for several site visits for familiarisation with the site.*

- *LPAs develop a mitigation philosophy early (e.g. screening of development in all circumstances vs retaining views at cost of seeing solar panels) and share this with the Applicant.*

- *LPAs and Applicant agree LVIA methodology early (both for landscape and visual assessment). Although it will be based on GLVIA3, there remains a lot to be agreed. (The methodology presented in the Scoping Report, for example, seems too rigid, as it links susceptibility too closely to value and does neither allow for a highly valued landscape with capacity for change nor a landscape of limited value with a high susceptibility to the proposals.)*

- *LPAs and Applicant agree methodology for LLCAs early. This should nest in and be developed from higher level landscape character assessments. Any diversions need to be justified. The methodology for the field work should be based on existing guidance (such as Natural England's, 'An Approach to Landscape Character Assessment', October 2014)*

- *Landscape Officer(s) verify and agree Viewpoints early, but reserve options for reviews should site boundaries and/or the design change/evolve.*

- *LPAs and Applicant agree viewpoint heights early, considering, where equestrian users need to be included as visual receptors.*

- *LPAs and Applicant agree early whether 'Residential Visual Amenity Assessment' is required.*

- *LPAs and Applicant discuss and agree any other assumptions (e.g. location of different types of fencing, access requirements, required external lighting).*

- *Existing vegetation needs to be mapped and assessed. Any losses need to be mapped and assessed and appropriately mitigated. (Tree Constraints Plan, Hedgerow appraisal).*

<u>Effects and mitigation</u>

- *Inter and intra-cumulative effects; a project of this scale is equivalent to several independent proposals of the same type within the same area and warrant to be assessed as such; it is insufficient to reduce intra-cumulative effects to residual effects of noise, vibration and air pollution; the sequential impacts when moving through the area and their effect on the receptors' perception of the landscape also need to be fully assessed.*

- *The effects of external lighting should not be scoped out.*

- *Secondary effects need to be assessed (temporary closures of PRoWs could result in adverse effects in ecologically sensitive areas, as these become more frequently visited; within the scheme itself, proposed improvements for access to the countryside may counteract ecological enhancement measures; the effects of mitigation planting may not always be beneficial; etc.)*

- *Mitigation measures need to be locally appropriate.*

<u>Presentation of information</u>

LPAs and Applicant agree how assessments are communicated.

- *If findings will be presented largely online, this may require a different approach from what would be appropriate, if there was a physical exhibition (in particular with regards to visualisations).*

- *LPAs and Applicant agree best structure for report and tables, in order to ease communication and avoid repetition.*

- *LPAs and Applicant agree the information required to accompany figures early (symbols and presentation of viewpoints; identification of viewpoints in location maps on figures; information regarding the image; annotations of the view; etc;).*

Suffolk County Council's Cabinet recently reviewed a similar proposal and agreed the emerging joint (with West Suffolk) response. The Cabinet Report (item 9) and emerging joint response is available here: https://committeeminutes.suffolk.gov.uk/DocSetPage.aspx?MeetingTitle=(10-11-2020),%20The%20Cabinet This could assist Essex Authorities prepare and consider their position, including for this scoping stage."

If you would like to discuss further any of the responses provided, then please get in touch using my contact details at the top of the letter.

Yours sincerely,

[redacted]

Andy Rutter
Planning Officer
Growth, Highways & Infrastructure

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2nd December 2020

Katherine King
Senior EIA Advisor
Major Casework Directorate
The Planning Inspectorate
Temple Quay House
2 The Square
Bristol
BS1 6PN

Dear Ms King

Re: Longfield Solar Farm, Essex (Ref EN010118 LSF)

Thank you for your letter of 6th November 2020.

The Parish Council (PC) has now considered the EIA Scoping Opinion and enclose our responses.

- In reviewing the consultation proposals, the Parish Council recognises that solar energy development can help meet targets for reducing carbon emissions, reduce reliance on fossil fuels and provide local energy security.

- It is recognised that the EIA is submitted to the Secretary of State under the Rochdale Envelop principles and there is limited detailed information regarding the environmental impact at this stage, and further information is needed from detailed studies ahead of a judgement being made.

- The Parish Council welcomes the opportunity to engage further with the proposal and supports the need for further assessment to be undertaken prior to any submission of the DCO application. This includes reviewing the Agricultural Land Classification (ALC), landscape and visual impact, biodiversity and nature conservation, flood risk and drainage, impacts of noise, vibration, glint and glare, impact on land changes, traffic and transport studies, impact on the historic environment, cumulative impacts and socio-economic impacts and community gain. The Parish Council has fundamental concerns and reservations as to the size, scale and massing of the proposals land take, certain elements proposed especially the battery storage buildings/compounds, sub-stations, transformers and DC/AC converter houses.

- The consultation response requests further, more detailed information is provided at future consultations in respect of the community benefits and wider benefits of the electricity generation, what the temporary features are, how the site will be delivered, access points/routes detail, site design and impact on the wider local area. In addition, more details regarding the reasons for the scale, location of the proposal, potential traffic impacts, mitigation and decommissioning are sought. The Parish Council also seeks the applicant to demonstrate the connect between their proposals in our community and alternative locations and sources of electric supply.

- As the proposal (and its buffer zones) is mostly contained within the parish, the Parish Council also welcomes the opportunity to comment on the draft Statement of Community Consultation (SoCC) and the proposals for consulting local people, stakeholders and communities on future statutory consultations. The applicant has posted to the wider community an information booklet and questionnaire and requested that comments are returned to the applicant's agent by 14th December 2020. There are differences between the EIA and the booklet and the Parish Council brings these to your attention in the attached submission. (For ease of reference we also attach a copy of the booklet).

We note that in the Planning Inspectorate attendance note of 4th September 2020, the Inspectorate highlighted to the applicant the risks of having both informal Scoping and a Statutory consultation running in parallel.

I would be grateful if you would confirm receipt of this letter and its contents.

Yours sincerely

[redacted]

FRANKIE KILLBY
PARISH CLERK
TERLING AND FAIRSTEAD PARISH COUNCIL

Enc: 1. Terling &Fairstead Council Response to EIA Scoping Opinion
Enc: 2. Longfield Solar Farm Consultation Booklet

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Longfield Solar Farm; Environmental Impact Assessment (EIA) prepared by AECOM ref 60624362 and dated October 2020

Response to Planning Inspectorate (PI) Ref EN 010118-lsf

Introduction

The Parish Council [PC] was contacted by the Planning Inspectorate [PI] by email on 6th November 2020 requiring a formal response by 4 December 2020. The PC did request an extension of time mindful that nationwide Covid 19 lockdown was only instructed by HMG on 6 November 2020. This was not agreed to by the PI.

The PI attendance note on 4 September 2020 states the applicant has secured the land needed for the project under an option. There is no plan attached and no period of the option is advised.

The PC has canvassed the views and observations of the wider community within the proposed areas and buffer zones; it has also engaged with other statutory consultees in the area set out in the EIA.

The PC appreciates the EIA has been submitted to the PI under the Rochdale envelop principles. The PC recognises there is limited information regarding the environmental impact at this stage and further information is needed from detailed studies ahead of a judgement being made. We now understand more certainty will come forward during the gestation of the design and specification parameters at subsequent stages of the application process to the PI.

These representations to the PI are the combined views of parishioners. Their separate views will come forward at subsequent stages of the application consultation process.

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Observations

The comments below relate to various paragraphs in the EIA submission that has been made to the PI.

2. The Scheme

2.1.5 States the site comprises a single parcel of land separated by several areas of woodland and fails to mention the most northerly section is separated from the rest by a road to the East of Fuller Street. If this becomes the preferred site for the substation how would both construction and, later, maintenance traffic access this northern part of the site?

We draw to the PI's attention the apparent difference in the stated planned area of the EIA (582 ha) and that area in the applicant's public consultation booklet of (380 ha). This difference needs to be explained. Could the larger area include the buffer zone as set out in the EIA?

2.1.6 A statement is made that the fields are of small to moderate size which are of irregular shape. This is misleading as there are some large fields and the statement is subjective. At this stage there is no mention of the land being grade 2 though this is covered later in this submission.

2.1.7 A failure to mention the spread-out hamlet of Fairstead (of which Fuller Street is just part) to the East of the most northerly area of the proposed site.

2.1.12 Lists Public Rights of Way (PRoW) which cross or are adjacent to the Site Boundary. This list is incomplete failing to detail PRoW around the Fairstead area and should be rectified going forward. Fairstead and Fuller Street are a combined community.

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2.1.23 The DCO boundary in plans 1.1 and 1.2 show the maximum area for the scoping document, the detail only becomes capable of detailed analysis when enlarged. Many parishioners would welcome such enlarged copies. The "red line" of the proposed application site, as may become defined, is difficult to determine. Many comments of this lack of clarity of the red line position relate to the settlements of Fuller Street and Boreham Road.

2.2.13 – 2.2.36 The photographs in this section clearly show the significant landscape impact the proposals will have. This is particularly the case with 2.2.31 which shows battery storage units. These are foreign in an agricultural landscape and should be screened within an Essex Barn style of vernacular design.

2.2.38 The 132 kV cables may be below ground, whichever location, this has to be preferred to overhead cables to avoid further unsightly infrastructure.

2.2.42 & 2.3.2 The existing Bulls Lodge substation location would be the preferred location for substation/battery storage as the land is already a brownfield site designated for this purpose. It would thus avoid sacrificing Grade 2 agricultural land and avoid planning blight on the properties close to the other two proposed sites, with the associated loss of amenity. It appears this substation compound will occupy 3.7acres and be 10 m high which is 4.5 storeys. That is a significant intrusion to the landscape.

2.2.44 A potential 3m high perimeter fence around the operational areas of the site would have an adverse effect on access to wildlife, particularly deer which roam freely over this part of the proposed site.

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When combined with perimeter lighting (perhaps switching on/off to suit the detection sensors), and CCTV monitoring towers 5m high, observation has been made that this has by default become a secure industrial solar energy production centre (and the description of ”farm” is questionable for the scale proposed). Does the need for such monitoring determine there will be a permanent 24/365 manned presence on the planned installation?

2.2.49 The drainage design should address the known high-water table in the area and the seasonal range. If there is set to be 43-48% site cover of impervious panels and infrastructure containment lagoons, their position needs to be addressed in section 9 of the EIA.

2.4.5 The applicant proposes to use the network of minor roads around the site for some deliveries. It must be noted that many of the lanes are totally unsuitable for HGVs (even if they are not officially designated as such by ECC Highways). Of note are the Braintree Road as it runs through Fuller Street and Fairstead Hall Road, but there are many others.

The anticipated worst-case construction traffic mentioned would put tremendous pressure on the parish with 42 HGVs plus an unspecified extra LGV movements per day for 2-3 years. This is a very quiet, rural area, the lanes are much used and loved by walkers and cyclists alike and there are no pavements, apart from two in the centre of the village of Terling. This amenity would be lost, albeit temporarily over the construction and decommission phases.

There are question marks over whether there will be on-site residential accommodation during the construction process, and what the hours of work will be during the construction and demobilisation stage?

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What are set to be the conditions for reinstatement and will there be the opportunity for wider community engagement at that time. Will photographic and drone surveys be undertaken as a matter of record?

2.4.11 Refers to a Biodiversity and Landscape management plan, it would be important to see this to sensibly comment.

3. Alternatives considered

3.1.2 This section focuses on layouts and site location and it is important that it includes features such as battery storage and also scale of the development. We understand the location(s) of these battery storage areas has yet to be finalised.

3.2.1 There is a statement that alternative sites were considered and dismissed but no details are provided to allow an understanding of this statement. Many of the responses on this EIA to the PC question the lack of detailed analysis of alternative sites where EDF is already established viz Sizewell B and Bradwell Power stations. At these sites the infrastructure is established within secure boundaries, materials may be delivered by sea and future opportunities to combine tidal and hydrogen electric generation at both locations would appear to combine a diversity of sustainable electric generation.

The PC is aware that HMG called in 2018/2019 for sites in single ownerships capable of installation of solar power facilities of 350-500MW. It is acknowledged the site under option within this EIA appears to be under single control.

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4. Consultation

4.5.3 This section refers to consultation. It is important to note that effective consultation is difficult to achieve remotely due to Covid mandates and this might necessitate a delay. The PC requested an extension to the period of the PI consultation but has been refused.

4.5.5 The PC has made the EIA available to the wider community on its village web site and village Facebook hub.

5. EIA Methodology

5.4.8 and 5.4.10 The PC notes the operational life is stated as 2065 and there will be EIAs in the interim to an agreed period. Is there set to be community engagement at those times conditioned in the planning permission?

Additionally, it is stated that the operational period may be extended beyond 2065. Will this require a new planning application prior to such an extension being granted?

5.7.2 This point deals with land production capability and the effects on soils and access. The loss of amenity with regards to the extensive network of PRoW across the proposed site must be assessed and the effect of glint and glare on those utilising the PRoWs is also a factor.

6. Climate Change

This section on climate change impact must include, analyse and establish to scrutinise the loss of land covered by crops and grassland will have as a Carbon Sink.

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7. Cultural Heritage

7.4.3 A list of the closest listed buildings to the site boundary should surely be extended to those which would be affected by noise/vibration within 500m of the proposed substation/battery storage as they would be considerably impacted. They should not just be grouped under the '275 listed buildings within 3km of the study area' criteria. For example, Fairstead Lodge (Grade II Listed) in Fuller Street is not mentioned.

7.5.1 The Scheme has the potential to impact assets close to the site boundary yet only heritage assets are listed. There is no provision elsewhere in the Scoping Report for the potential blight on other residential properties which are not Grade I or II Listed. This is a serious omission.

The great majority of those listed in 7.5.1 are owned by the family/companies closely linked to the landowner. Most of these properties are tenanted yet appear to be subject to planning blight.

The private owners of residential properties in Fuller Street, Fairstead, Ranks Green, along the Boreham Road, and elsewhere within, and close to, the site boundaries will not benefit and will suffer from property planning blight. The Scoping Report fails to consider this. This concern will be exacerbated if the battery storage areas are located close to these settlements.

In addition, some of the properties potentially affected by planning blight in the wider buffer zone are occupied by agricultural tenants whose employment relates to the application area and its buffer zones which is set to disappear. The expected employment analysis to be provided in

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paragraph 12.7.1 should include reference to these dwellings and their occupational status.

7.5.2 The PC combines to the view that this is THE most important paragraph in the EIA. "In all case the scheme has the potential to diminish the assets and to diminish their significance to a significant effect". This will be robustly analysed by the community in subsequent stages of the application process.

7.5.3 The community has a Historic Terling Group which has an archive of data relating to historic uses of the land, including buildings, previous settlements, battle sites and tented barracks. They will be advancing a request to the applicants to be included in such surveys and their results.

8. Ecology

8.4.3 Non-Statutory Sites - This paragraph clearly illustrates the value of woodland areas, but not mentioned in this report is the need to carry out ecological surveys over a reasonable period of time and covering all seasons. The effect previously mentioned inclusion and discrete enclosures of boundary fences must be recognised.

9. Flood Risk Drainage and Surface Water

9.4.16 Paragraphs under 9 relate to flood risks, the identified pollution at Great Leighs should be noted.

9.4.2 The applicant's attention is drawn to the occasional use of Terling Ford and Paulk Lane Ford for summer bathing.

9.5 Potential effects during construction, operation and decommissioning phases are identified but mitigation is not discussed.

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9.5.3 The adverse impacts of flooding at construction could be significant but the mitigation suggested seems ineffective.

9.5.4 Refers to the impacts on flood risk from increased run off from new impervious areas across the site. It is positive that this is recognized. The significance of rainfall will require the applicant's response in the EIA.

Will there be any containment lagoons to ensure the surface water drainage systems and natural absorption will not become over charged especially at times of high-water table.

Has snow loading been considered in the management of drainage?

10. Landscape and visual amenity

This section deals with Landscape and Visual Amenity which is a very subjective area.

10.4.23 Tranquillity. The Report correctly identifies the tranquillity increases northwards across the site due to the reduction in audible noise. With the possible location of a substation at the northern extremity of the site, this tranquillity would be totally lost. There is concern as to noise generation and containment both at the site's perimeters and the face of houses in proximity which needs to be justified in due course.

10.4.24 No sense of remoteness - Again this is subjective, but it is disingenuous to mention vehicles on lanes as a factor to entirely dismiss remoteness. Braintree Road, as it passes through Fuller Street is very quiet with perhaps only 10 vehicles an hour at peak times.

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10.4.26 The proximity of the northern and mid-site possible substation and battery storage locations are of concern as they are both close to ancient woodlands, making these sites unfavourable. The adverse effects of development, including light pollution, noise and vibrations close to ancient woodland is well documented.

10.4.27 The EIA states there is no conservation area of Terling appraisal, the PC is seeking further information on this statement.

10.4.36 It is noted that fieldwork carried out in August/September when vegetation was fully in leaf. (subsequently note in 10.4.40) Therefore the statement that the overall visibility of the site boundary is localized is misleading and requires future justification.

10.5.2 The stated adverse landscape effects fundamentally change the nature of the area for both residents and visitors who have come to enjoy the quiet, open farmland spaces adjoining the PRoWs, lanes for recreational purposes, cycling, running, walking, etc. This will inevitably be lost, despite the use of mitigation measures.

10.5.3 "The scheme has the potential to result in significant adverse landscape effects." This is an important statement, and it should be noted that large numbers of walkers and cyclists visit the area and therefore the landscape cannot be considered just from the point of view of local residents.

10.6.28 Glint and glare stated that this can be significant but appears to be minimized in the report, though this is covered later in section 14.4.

11. Noise and Vibration

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11.2.1 The Report identifies a Study Area within 500m of the site boundary', yet there are properties within the 500m range (such as Fairstead Lodge, Grade II) not mentioned. There are others not shown on Figure 11-1. Only properties actually on the boundary or within the proposed site are being considered at this stage despite the methodology set out in **11.2.1**. This should be corrected at the next stage and detail all those in the proposed buffer zones.

The PC expects in the next stage to see an analysis of noise generated from substations and battery storage enclosures, especially when integral cooling fans are in operation both day and night. We would expect reference in subsequent EIAs to World Health Organisation standards both at the face of building and within bedrooms and seek conformation that the applicant's proposals will meet these standards.

11.4.2 The Report acknowledges that the dominant sources of sound in the potential site area are limited to specific areas (such as traffic noise from A12 in the south of the area under consideration). None of these sound sources apply in two of the areas being considered for the substation/battery storage at the north and in the middle of the proposed site. This indicates the Bulls Lodge site, close to the A12 is preferable, as it is located within an area already blighted by noise.

11.5.5 Accepts there will be operational noise.

11.5.7 States there will be no associated operational vibration effects and they propose that operational vibration to be scoped out of further assessment. However, Appendix B 3.6 comments that in a heatwave the battery storage facilities will regulate temperature 24/7/365. Clarity is needed as to whether this regulation will involve vibration. If some is

expected then operational vibration must not be scoped out of further assessment, however, construction and decommission vibration effects should be included in the next assessment. The PC would expect to see monitoring measures and limits to ensure compliance during construction, operation and de-commissioning phases.

11.5.8 No specific noise mitigation measures have been included at this stage of the consultation process.

12. Socio Economics and Land Use

This is an important section and the resulting EIA statements that relate to this part of the report should be critical in the decision on the planning application.

12.6.11 "loss of BMV is a measure of the effect of the scheme. A loss of 20 ha+ is identified as potentially significant." This scheme is 580 or 380 ha (which requires confirmation in paragraph 2.1.5) and so this area is the potential Achilles Heel.

12.6.12 The potential loss of ha of BMV agricultural land proposed by this scheme is extremely concerning. Food production loss would be significant. The National Planning Policy Framework [2012] does not generally permit development of land of this calibre. Due to the scale of this proposed project there is a danger that a precedent could be set which would have a major negative impact on food security in the future.

12.6.5-6 The effect of those employed within the planned area, including the buffer zone, needs to be assessed at a later stage and the possible mitigation of such effects by way of examples suggested in other

national significant schemes, should be tabled for consideration by the community

12.7.1 The PC looks forward to receiving analysis from the landowners of existing employment numbers within the application site and buffer zones.

13. Transport

Note that 2024 will be the peak construction year and the inadequacy of local minor roads must be noted.

The assessment should include internal access to the remote sites on the minor roads.

Access across bridging points of the rivers Ter and its tributaries need to be amplified and combined with PRoWs.

14. Other Environmental topics

14.3 Land Quality

14.3.1 This paragraph states that it should be demonstrated that poorer quality land is used in preference to higher quality and options are explored for continued agricultural use. There are no proposals in the scheme to use poorer land [all land is Grade 2]. We note this assessment was made in October 2020. The PC will be interested to see if any practical options other than a significant reduction in the size of the scheme are proposed after this re-assessment [NB reference is made to MAFF which disappeared many years ago!].

14.4 The PC would seek assurance that Glint and Glare will be assessed from all roads and PRoWs within the buffer-zoned areas.

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14.7 Major Accidents or Disasters

Of particular concern are the Lithium-ion batteries which are a major fire risk. The applicant has confirmed to the Planning Inspectorate [minutes of a meeting held 4th September 2020] that they are aware of safety concerns which came to light during the Cleve Hill application. Measures to mitigate, and the reality of the potential dangers, must be clearly set out for the public consultation. Consideration must be given to both internal causes of fire to the enclosures and grass fires [exceptionally].

Table 14.1 - This table lists the potential for fire as result of battery storage elements of the scheme. The EIA will have to clearly show mitigation for this risk.

It also comments on the bio-diversity risk from imported non-native planting schemes introduced. The PC would seek further assurances on these potential risks.

15. Structure of EIS

Noted.

16. Summary and Conclusions

The tables and rationales are helpful indicators to subsequent stages.

Appendices -B

3.1 An assessment of snow and its possible temporary affects (perhaps on glinting) should be considered.

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3.4 Thunderstorms. The relationship between the present HV pylons across the planned area and the earthing influences on the present proposals needs to be risk assessed.

7. Terrorism targets. The PC notes the present comments with interest. We shall expect amplified comments in due course.

CONCLUSIONS

The scoping report is comprehensive and covers most of the adverse effects of the proposals but at a very high level and acknowledges its preparation has been confined to the established Rochdale principles. It will be important to see if the future EIA and supporting reports and analyses adequately covers mitigation of these effects which for several e.g. agricultural land loss, landscape, massing and scale of the proposal seem unlikely. There are areas of the report that under- estimate the adverse effects and some comments that suggest a bias towards supporting the proposals.

Informatives

We note the applicant is a joint venture special purpose vehicle between EDF Renewables UK (51% shares) and Padero Solar (49% shares). The company will be a leaseholder of the land. The company has stated in public it may seek to sell its leasehold interest at some time. The community will be seeking assurance that the costs and obligations of future re-statement as may be conditioned in any planning permission are guaranteed or bonded.

The PC appreciates that it may be possible for the battery storage areas (yet to be defined as to location) to both be charged at night from the

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national grid, presumably generated by atomic power (when consumer demand is low and presumably at an advantageous buy in rate when there is no sunlight), and then resell when demand requires. This places the physical location, operation, security and management on an even more sensitive agenda for the Fuller Street community.

The PC notes from the booklet and questionnaire circulated on 30 October 2020 to all residents within the proposed site and buffer zone the statement on page 10: *"*We will conduct a vigorous programme of environmental impact assessments as we prepare our scheme proposals. These will include assessments of the scheme's potential environmental impacts such as cultural heritage, landscape and visual impact, existing infrastructure, flood risk, noise and vibration, socioeconomics, transport and access, air quality, ground conditions and glint and glare." The PC expects the applicant to deliver on its undertaking to the community.

The PC has to-date not had any engagement on possible future community contributions that may be made by the applicant. The PC is aware of such contributions in other locations following installation and once the facility is in operation.

The EIA ignores and downplays the importance of the Essex Way at Fuller Street and national cycle network that pass within the buffer zone. The PC would seek to increase the profile of these assets in subsequent EIAs.

The PC would request to be informed and consulted further on the style and aspect of the preferred panels

The PC would seek further information of agro chemical treatments for the application areas and buffer zones for the period of the operation to 2065 and as may be extended. Will this provide an opportunity for

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complementary agriculture and food production? Less intensive farming and ceasing physical cultivation may make significant improvements to wildlife corridors and conservation areas. The present EIA is silent on these important matters and of continuing concern to this community. The regular periods of EIAs throughout the operational and decommissioning periods as may be re-specified is welcomed by the PC.

The PC is told this application site is set to be one of the largest in the UK. The PC has received a number of representations from the community that, in line with a demonstration of proper corporate governance, the applicant company should consider appointing a non-executive director from the local community to promote its representation at Board level.

The PC suggests the EIA shows disconnect from other infrastructure projects that are set to become advanced in the application process. We cite the widening works of the A12 and A120 improvements from Braintree to Marks Tey.

The PC will be seeking further confirmation as to the appropriate authority[ies] to approve planning conditions as may be approved by the Secretary of State, development control and monitoring and any possible enforcement action that may become necessary.

3rd December 2020

Longfield
Solar Farm

Public Consultation Booklet

2 November –
14 December 2020

Introduction

This booklet sets out our early proposals for Longfield Solar Farm.

We are in the process of developing our proposals for a new solar energy farm, co-located with battery storage, to help meet the country's need for low carbon energy. Longfield Solar Farm proposes to use ground mounted solar panels to generate electricity from the sun, while the batteries would store energy for when it is most needed. It would be located on farmland north east of Chelmsford and north of the A12 between Boreham and Hatfield Peverel. As Longfield Solar Farm would have the capacity to generate more than 50 megawatts (MW) of electricity, it is classified as a Nationally Significant Infrastructure Project (NSIP) requiring a Development Consent Order (DCO) under the Planning Act 2008.

The Planning Act 2008 requires promoters of NSIPs to carry out consultation in a particular way (this is called "statutory consultation"). As we are in the early stages of developing our proposals, this consultation is classed as a "non-statutory consultation", which means it is being carried out before we undertake another round of consultation that will meet the requirements of the Planning Act 2008. This approach is in line with best practice so that we can gain valuable feedback that will help us to prepare our proposals in more detail. Following this consultation, we will consider the feedback and update our proposals for further consultation. For this reason, we are not presenting detailed information on design at this stage.

This is our first round of consultation. We will carry out a further round of consultation in 2021 which will contain a proposed design for the solar farm and the preliminary results of our environmental impact assessment work and our proposed mitigation measures. We set out more information about the planning process and the requirements for consultation later in the booklet.

Due to the ongoing COVID 19 pandemic, this is a remote consultation. We recognise that this presents challenges to how we consult, so we have thought carefully about how we ensure that everyone who is interested in our proposals can respond to the information that we are presenting. We explain how to find out more about our proposals and respond to this consultation later in this booklet.

Who is proposing Longfield Solar Farm?

Longfield Solar Farm is being brought forward by Longfield Solar Energy Farm Ltd, a joint venture between two established developers of renewable energy: EDF Renewables (EDFR) and Padero Solar. The two organisations have brought together a highly experienced project team with an excellent track record in successfully delivering nationally significant infrastructure of this kind.

EDF Renewables has more than 25 years' worth of experience in delivering renewable energy projects in more than 20 countries around the world. In the UK, it provides much needed new affordable low carbon energy through 36 wind farms and one of the UK's largest battery storage units (together totalling almost 1GW). It has a portfolio of rooftop solar and grid scale solar energy generation in development.

Padero Solar has helped to develop more than 25 Solar Farms in the UK, and this has delivered over 390MWs of renewable energy. Padero Solar is part of a group of three companies. These include; PS Renewables, who are behind a number of solar projects, including Eveley Solar Farm (Hampshire), and PSH Operations, an Operations & Maintenance business managing over 1.3GWs of Solar Farm assets in the UK.

Our goal as project partners is to contribute to a net zero energy future through Longfield Solar Farm. Projects like this are creating business opportunities and economic activity which contribute to the country's green recovery.

Together, we are committed to the communities in which we work and exercise good stewardship over our projects for the long term.

Why is Longfield Solar Farm needed?

The UK is undergoing a major change in the way it meets its energy needs. In 2019, the Government legislated to commit the country to achieving 'net zero' carbon emissions by 2050 in comparison to emissions at 1990 levels.

Energy generation currently makes up a significant amount of the UK's carbon emissions. The UK must reduce this through a variety of measures including the introduction of new, cleaner methods of electricity generation that are able to come online and provide energy to the grid. This will happen at the same time as older, carbon-intensive methods of energy generation are being phased out.

In addition, the ways in which we use electricity are also changing. As we increasingly use electricity to power new modes of transport and industrial activity, it is anticipated that demand for electricity is likely to increase.

This can be seen through the increasing use of electric vehicles. National Grid has predicted that there may be up to 36 million electric vehicles on the UK's roads by 2040. This means that demand and supply for electricity and power flows will become increasingly complex.

To meet the national need caused by these trends we need to adapt our infrastructure to offer clean, low carbon sources of energy generation that are fit for the future. Solar energy is one of these sources and we are bringing forward proposals that do just this.

The battery storage element of the scheme would complement the shift towards renewable forms of energy generation. Solar and other forms of renewable energy generation are intermittent by their nature. Battery storage means that electricity can be stored when more is being produced than is needed and released again when it is needed.

Battery storage also has an important role to play in stabilising the National Grid. At times of an excess or shortfall in demand, battery storage facilities can balance the National Grid by making up for any shortfalls or by removing surplus power from the grid and storing it to be released later.

In addition to this, the Government has stated that the UK's economic recovery from the COVID-19 pandemic should prioritise the delivery of low carbon projects. The proposed Longfield Solar Farm would play an important part in this national effort.

There is therefore an urgent national need for energy generation and storage of this type. To meet the Government's target of achieving net zero carbon emissions by 2050, the UK requires significant investment in new renewable energy generation at scale and this is one of a number of schemes being brought forward in the UK on that basis.

What is proposed?

Longfield Solar Farm is a proposed new solar energy farm, co-located with battery storage. The proposals include grid infrastructure to connect Longfield Solar Farm to the National Grid and any necessary and appropriate environmental mitigation. We also need to secure development consent for infrastructure needed for building and maintaining Longfield Solar Farm such as construction compounds and site offices.

We have secured a grid connection agreement which would allow us to export or import up to 500MW of electricity to and from the National Grid. The proposed generating capacity of the Longfield Solar Farm means that it will be a Nationally Significant Infrastructure Project (NSIP) and an application for a development consent order will be required – we set out more information on this on page 14.

We are still at an early stage in the design process. The design of the scheme will be subject to a number of stages as we proceed through this process. These will be informed by the feedback that you give us and through the results of our environmental impact assessment activity. We will be able to provide more specific details of our proposals as the design is developed in the coming months, which will then form part of the consultation that we will undertake in 2021.

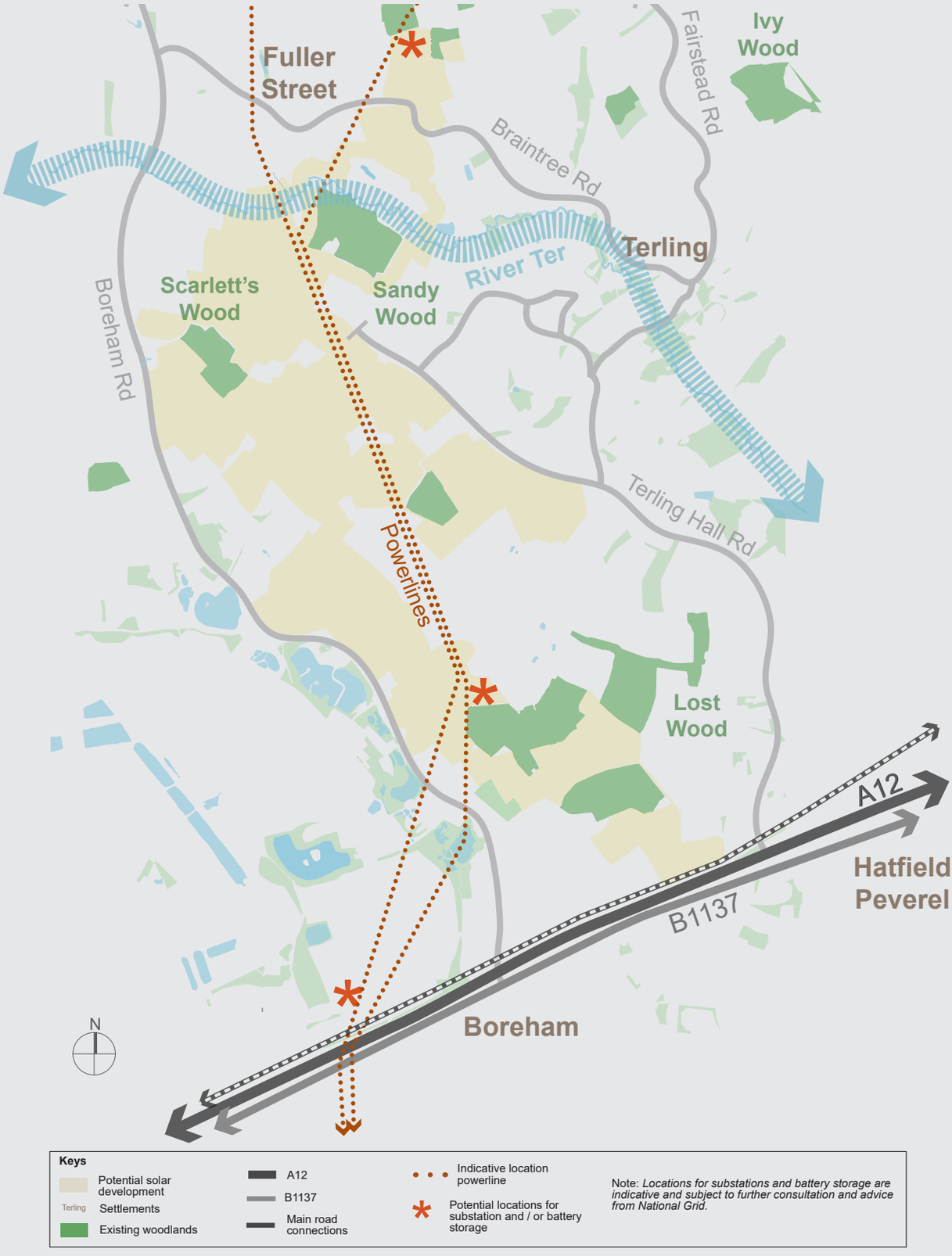
We currently expect to locate Longfield Solar Farm on around 380 hectares of land. The plan on page 7 shows the current area proposed for development, including land for two different route options for the grid connection infrastructure to connect into the National Grid. This plan is indicative and may change. Within this area, we will look to include:

- Ground mounted solar photovoltaic (PV) panels to generate electricity from the sun;
- Battery storage that will allow Longfield Solar Farm to import, store and export electricity to the National Grid, with priority being given to the solar PV generated electricity;
- Substations, inverters, transformers, switchgear, internal cabling and other electrical infrastructure required to support the solar PV panels and battery storage;
- Grid connection infrastructure which will allow us to export or import up to 500MW of electricity to and from the National Grid, including a new substation;
- Mitigation for environmental impacts that the scheme would have;
- Habitats to enable biodiversity and landscape improvements;
- Other associated infrastructure required for the construction and operation of the site, such as construction compounds, access tracks and welfare facilities.

Location

We are proposing to locate the scheme across an area of farmland north east of Chelmsford and north of the A12 between Boreham and Hatfield Peverel.

The plan on this page shows how the site chosen for Longfield Solar Farm fits into this broader context – including options for the point that it will connect to the National Grid.



Technology

Solar photovoltaic (PV) panels

Longfield Solar Farm will use ground mounted PV panel arrays to generate electricity from the sun. Solar PV is a clean technology. Once set up the panels make use of sunlight to generate electricity. To manage the electricity generated by the panels, our proposals will require localised cabling and solar stations at regular intervals within the array of panels to safely transfer the electricity to substations and onwards to the National Grid and the battery storage facility.

Each solar station involves the following elements:

- Inverter: the inverters convert the direct current (DC) electricity generated by the solar PV panels into alternating current (AC) electricity. This needs to happen to ensure that the electricity generated can be exported to the national electricity transmission system;
- Transformer: transformers are required to control the voltage of the electricity generated at the site before it reaches a substation. From a substation, the electricity is then exported to the national electricity transmission system;
- Switchgear: a switchgear is a combination of electrical disconnect switches, fuses and circuit breakers. They are used to control, protect, and isolate the individual pieces of electrical equipment that make up the scheme.

We are yet to make final design choices on how the solar stations will appear.

Battery storage

We will also include battery energy storage as part of Longfield Solar Farm. This will allow electricity to be stored at times when demand is lower and released to the National Grid at times when it is needed. It will be included primarily to help manage the fact that the solar PV panels will not generate electricity at a constant rate, but it may also take surplus energy from the National Grid.

Battery storage technology is safe and makes use of tried and tested technology, much of which we also use in our day-to-day lives. One of the partners in Longfield Solar Farm, EDF Renewables UK, already operates one of the UK's largest battery storage projects in Nottinghamshire and this has operated safely since 2018.

We are yet to make final design choices on how the battery storage element of the proposals will appear or where it will be located. The plan on page 7 shows the locations we are currently considering for battery energy storage. We will present updated design information at the next stage of consultation.

Components of a typical solar farm

1. Solar Energy
2. Fencing
3. Solar Panels
4. Inverter (DC to AC power converter)
5. Landscape Area
6. Substation
7. Battery Storage
8. Cables

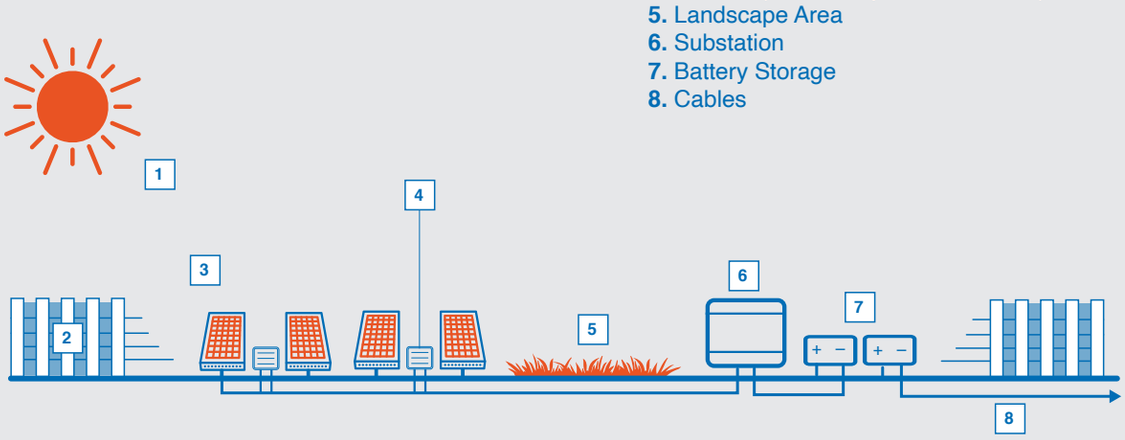


Figure not to scale and for the indicative purposes only.

Connecting to the grid

We have secured a grid connection agreement which would allow us to export or import up to 500MW of electricity to and from the National Grid.

This connection will be established through a new substation built on site at Longfield Solar Farm. This substation will then connect to an existing electricity line running through to the site. We are currently looking at three options for the location of the substation, as well as two options for the cable route connecting to it. These are shown on page 7.

The Solar PV panels, solar stations, battery storage system and the grid connection will be connected by a system of cabling. As we are still at an early stage in the design process, we are exploring options that include both underground cabling and overhead lines.

We would welcome your views on these options. We will present more information on the location and design of the new substation and of the design of our cabling route at the statutory consultation.

Environmental impact assessment

We recognise that, as with any major infrastructure project, our proposals have potential environmental impacts, which need to be understood and managed.

We will conduct a rigorous programme of environmental impact assessments as we prepare our scheme proposals. These will include assessments of the scheme's potential environmental impacts such as cultural heritage, landscape and visual impact, existing infrastructure, flood risk, noise and vibration, socioeconomics, transport and access, air quality, ground conditions and glint and glare. Where appropriate, we will propose mitigation. This may also provide the opportunity for local habitat improvements.

To ensure that these assessments are accurate and capture large amounts of information, we need to carry out these assessments iteratively, over time. During these initial stages of the project, we are engaging with relevant bodies such as local authorities, technical stakeholders and environmental groups, as well as with the local community, to understand the scope and focus of our assessments.

1. Scope

Consult with statutory bodies on the type and method of assessments we need to carry out.

2. Conduct assessments

Including air quality, landscapes and visual amenity, transport, noise, vibration, socioeconomics, cultural heritage, water and flood risk, ecology and nature conservation, and any cumulative effects.

3. Consult

Publish the preliminary results of our findings during the statutory consultation.

4. Consider

Consider all feedback received and finalising our Environmental Statement.

5. Submit

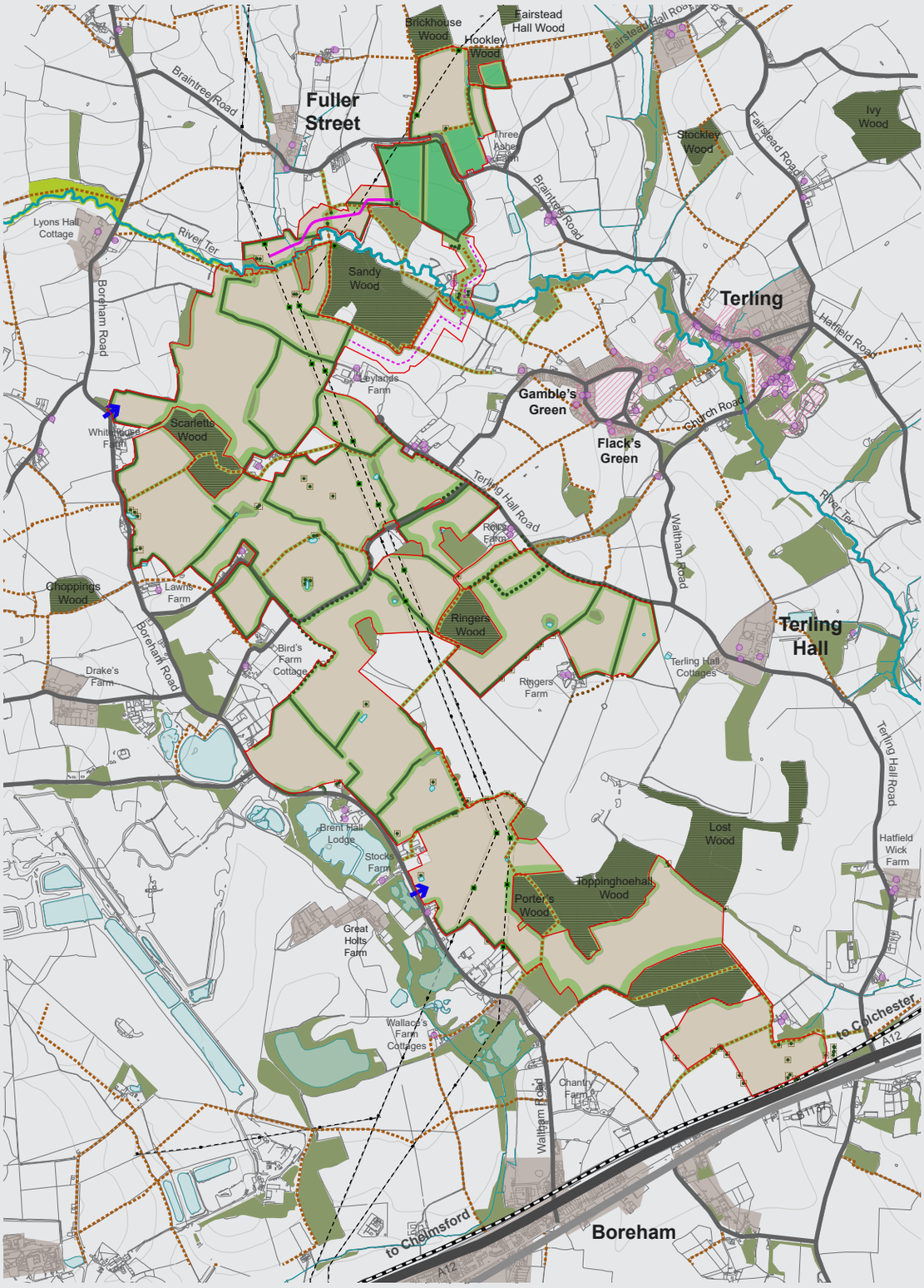
We must submit an Environmental Statement as part of our DCO application.

That means that the information we are sharing with you at this non-statutory consultation includes some details of the types of assessments we plan to carry out, but does not present the preliminary results of our environmental assessment work, which will be presented during the second consultation in 2021. The plan on page 11 shows environmental factors we need to consider in developing our proposals. Following this consultation, we will consider the feedback that we receive and will conduct assessments to allow us to present more detailed information when we next consult.

We are in the process of preparing a Scoping Report for submission to the Planning Inspectorate (PINS). This will set out the areas that we think should be covered by our environmental impact assessments. Once we have submitted our Scoping Report, PINS will publish an opinion on the scoping required which we will use to guide our future environmental impact assessment.

We will prepare and submit an Environmental Statement as part of our DCO application. This will set out the outcomes of our assessments, as well as details of any proposed mitigation. More information will be available during the statutory consultation in 2021 where we will share the preliminary results of our Environmental Impact Assessment (EIA) through a Preliminary Environmental Information Report (PEIR) which you will be able to view and consider as part of the statutory consultation.

Site Features and Concept Masterplan



Site Features

- Site boundary
- Existing settlements
- Listed buildings
- Conservation area
- Woodland
- Ancient Woodland (hatched)
- Indicative landcape buffer
- Site of Special Scientific Interest
- Existing hedgerow
- Existing scattered trees
- Trees
- Indicative tree roots
- Water
- A12
- B1137
- Main road connections
- Indicative location powerline and buffer
- Public Right of Way

Concept Masterplan Proposals

- Potential solar development
- Potential access
- Preferred location for cable route
- Alternative location for cable route
- Potential connection
- Not solar - set aside location

Construction, operations and management

We are still at an early stage in the design process for Longfield Solar Farm. We need to develop our scheme design in more detail before we can confirm the way we will build and manage Longfield Solar Farm.

As such, we can present information on the techniques we are likely to use in building and managing Longfield Solar Farm, but this is indicative. We will present more information on these topics during the statutory consultation.

Transport

We recognise that the routes that vehicles will take to and from site is a topic of significant interest. We have conducted an initial assessment and plan to use the following routes in construction, operations and decommissioning:

- To/From the A12 J19 (i.e. access to/from the south of the scheme) via the B1137 Main Road, Boreham and Waltham Road/ Boreham Road;
- To/From the A130 Essex Regiment Way (i.e. access to/from the north of the scheme) via Wheelers Hill, Cranham Road and Boreham Road.

We still need to assess these routes in detail. This may impact on our final choice of routes. We will present more information at the next stage of consultation.

Construction

If the scheme were to receive consent, we anticipate that the total construction period would take approximately 36 months to complete.

We would likely use the following techniques while building the scheme:

- Solar PV: the installation of the solar PV panels would require dug foundations. The mountings for the panels would then be inserted into these foundations with the remaining structures being mounted by hand. Some localised trenching would be required to install the necessary cabling and solar stations;
- Battery storage: the construction of the battery storage would require us to dig foundations and install the required cabling and equipment to allow the batteries to export and import electricity to and from the National Grid;
- Cabling: we are still determining the proposed installation method for cabling and will present more information on this at the next consultation.

Operations

While the scheme is operational, activity across the sites would be minimal and largely restricted to monitoring, maintenance, and the management of the visual and ecological mitigation features.

Decommissioning

Solar farms are temporary and typically have an operational lifespan of 40 years. Once Longfield Solar Farm reaches the end of its lifespan, its infrastructure can be dismantled and the site returned to its previous condition. This will be funded through the operational lifetime of the solar farm.

Community

We are committed to helping secure local economic benefits from the scheme and will engage with education providers about the potential for Longfield Solar Farm to support local skills development initiatives. We want to hear your views on how this could work in practice and welcome your feedback as part of this non-statutory consultation.

The companies behind Longfield Solar Farm have a proud history of investing in the communities in which they work and establishing community benefits for the duration of a project's operating life.

The planning process

The scheme is classified as a Nationally Significant Infrastructure Project (NSIP) because its generating capacity would be more than 50MW. NSIPs are major developments which require development consent to be granted by the relevant Secretary of State through a Development Consent Order (DCO). This is a process established by the Planning Act 2008.

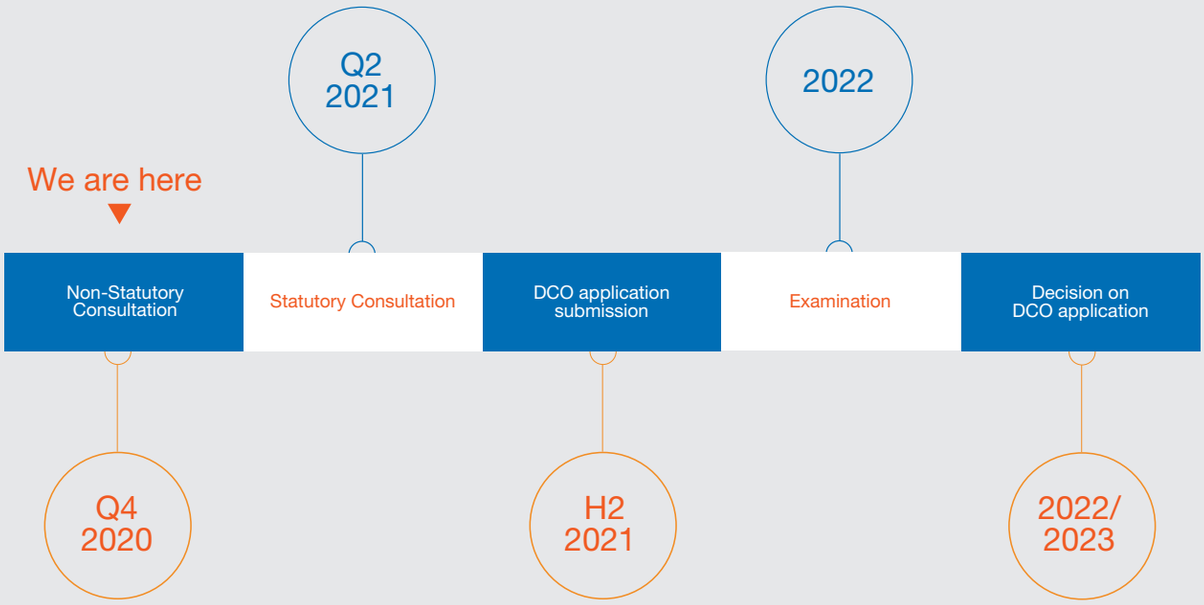
Unlike local planning permissions, which are considered by local authorities, DCO applications are made to the Planning Inspectorate (PINS). PINS administers the application process on behalf of the Secretary of State. In this case, the relevant Government Department is the Department for Business, Energy and Industrial Strategy (BEIS).

This current consultation is non-statutory consultation. We are carrying this out before our statutory consultation because we want to gain valuable feedback that will allow us to develop a better scheme and to ensure that later consultation is appropriate and effective.

You can find out more about the DCO process at the Planning Inspectorate's website: https://infrastructure.planninginspectorate.gov.uk/

Timeline

This non-statutory consultation is the first round of public consultation on our proposals for Longfield Solar Farm. We will conduct a further, statutory, round of public consultation before we submit our DCO application. Our indicative project timescales are outlined on the timeline on this page.



Responding to the consultation

We want as many people as possible to share their views on our proposals as part of this consultation. We are consulting at a time when it is not possible to meet in person, due to the COVID-19 pandemic. We are putting in place a detailed package of measures to ensure we can continue with the consultation.

We are very aware of how important it is to make sure that anyone in the community who wants to find out more or share their views on the proposals, is able to do so. We're providing a range of ways to do this.

Find out more

You can find out more about our proposals by:

- Viewing a virtual public exhibition on our website: longfieldsolarfarm.co.uk
- Viewing a series of online presentations we will give about our proposals. These will also offer the opportunity to ask questions. The details of the times and dates for the webinars are on our website: longfieldsolarfarm.co.uk
- Booking an appointment to talk to us individually about the proposals by Freephone using the contact details on the following page;
- Contacting us directly using the details in this booklet.

Share your views

The consultation will take place between 2 November 2020 and 14 December 2020.

- Fill in a consultation questionnaire on our website: longfieldsolarfarm.co.uk
- Complete a questionnaire and return it to info@longfieldsolarfarm.co.uk or Longfield Solar Farm consultation, FREEPOST reference RTRB-LUUJ-AGBY, Sky Light City Tower, 50 Basinghall Street, London, EC2V 5DE
- Write to us at info@longfieldsolarfarm.co.uk or Longfield Solar Farm consultation, FREEPOST reference RTRB-LUUJ-AGBY, Sky Light City Tower, 50 Basinghall Street, London, EC2V 5DE

We will consider all written responses that we receive by the consultation deadline of 14 December 2020.

Following this non-statutory consultation, we will consider all the views that we receive and continue to develop our proposals for Longfield Solar Farm ahead of the statutory consultation which we anticipate holding in 2021.

Our final DCO application will include a Consultation Report setting out how we have had regard to the responses received during this non-statutory consultation and all the responses received during the statutory consultation.

Any comments received will be analysed by Longfield Solar Energy Farm Ltd and any of its appointed agents. Copies may be made available in due course to the Secretary of State, the Planning Inspectorate and other relevant statutory authorities so that feedback can be considered as part of the DCO process. We will request that any personal details are not placed on public record and will be held securely by Longfield Solar Energy Farm Ltd and its agents in accordance with the data protection law and will be used solely in connection with the consultation process and subsequent DCO application and, except as noted above, will not be passed to third parties.

Longfield
Solar Farm

Contact us

For further information, please contact us by:

- Visiting our website: longfieldsolarfarm.co.uk
- Calling 08000194576 (9:00am to 5:00pm, Monday to Friday)
- Emailing info@longfieldsolarfarm.co.uk
- Writing to us at Longfield Solar Farm consultation, FREEPOST reference RTRB-LUUJ-AGBY, Sky Light City Tower, 50 Basinghall Street, London, EC2V 5DE

From:	Mannion, Lucy
To:	Longfield Solar Farm
Subject:	Your ref: EN010118-LSF
Date:	02 December 2020 14:43:33

Hello

I confirm that Thurrock Council has no comments on this application.

Kind regards

Lucy Mannion I Senior Planning Officer I Development Management
Thurrock Council, Civic Offices, New Road, Grays, Essex RM17 6SL
www.thurrock.gov.uk

Thurrock: an ambitious and collaborative community which is proud of its heritage and excited by its diverse opportunities and future

thurrock.gov.uk