The Planning Inspectorate
Yr Arolygiaeth Gynllunio

SCOPING OPINION:

Proposed Thurrock Flexible Generation Plant

Case Reference: EN010092

Adopted by the Planning Inspectorate (on behalf of the Secretary of State for Housing, Communities and Local Government) pursuant to Regulation 10 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

September 2018

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CONTENTS

APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

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1. INTRODUCTION

1.0 Background

1.0.1 On 09 August 2018, the Planning Inspectorate (the Inspectorate) on behalf of the Secretary of State (SoS) received a scoping request from Thurrock Power Ltd (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed Thurrock Flexible Generation Plant (the Proposed Development).

1.0.2 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'.*

1.0.3 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 *'EIA Scoping Report – Thurrock Flexible Generation Plant'* (the Scoping Report). This Opinion can only reflect the proposals as currently described by the Applicant. The Scoping Opinion should be read in conjunction with the Applicant's Scoping Report.

1.0.4 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.

1.0.5 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.

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

1.0.7 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).

1.0.8 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).

1.0.9 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 (e.g. 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.

1.0.10 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.

1.0.11 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.

1.0.12 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)*'.

1.0.13 The Inspectorate notes the potential need to carry out an assessment under The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations). 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.

1.1 The Planning Inspectorate's Consultation

1.1.1 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.

1.1.2 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.

1.1.3 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.

1.1.4 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.

1.2 Article 50 of the Treaty on European Union

1.2.1 On 23 June 2016, the United Kingdom (UK) held a referendum and voted to leave the European Union (EU). On 29 March 2017 the Prime Minister triggered Article 50 of the Treaty on European Union, which commenced a two year period of negotiations regarding the UK's exit from the EU. On 26 June 2018 The European Union (Withdrawal) Act 2018 received Royal Assent and work to prepare the UK statute book for Brexit has begun. The European Union (Withdrawal) Act 2018 will make sure that UK laws continue to operate following the UK's exit. There is no immediate change to legislation or policy affecting national infrastructure. Relevant EU Directives have been transposed into UK law and those are unchanged until amended by Parliament.

2. THE PROPOSED DEVELOPMENT

2.0 Introduction

2.0.1 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.

2.1 Description of the Proposed Development

2.1.1 The Applicant's description of the Proposed Development, its location and technical capacity (where relevant) is provided in Sections 2 and 3 of the Scoping Report.

2.1.2 The Proposed Development broadly comprises the construction and operation of what the Applicant describes as a *'flexible generation plant'*, on land immediately to the north of the former Tilbury B power station, within the borough of Thurrock, Essex. The Proposed Development would provide up to 600 megawatts (MW) of gas powered electrical generation capacity on a fast response basis when called by the National Grid, together with up to 150 MW of battery storage capacity. The main components of the Proposed Development are as follows:

- Up to 60 reciprocating gas engines with a total generation capacity of 600 MW;
- Batteries with output of 150 MW and storage capacity up to 600 MWh[1];
- Gas pipeline approximately 2.5km in length and above ground installation (AGI) connecting to Feeder 18 of the National Grid Transmission gas network;
- Connection to existing National Grid electricity substation, via underground cables;
- Potential cooling water pipeline to the River Thames, around 2.5km in length;
- Private access roads(s) and some widening of the public highway to facilitate delivery of large loads;

[1] i.e storing up to four hours power at maximum discharge capacity

- Designation of replacement common land and possible creation of habitat for protected species translocation; and

- Possible transfer of land to Thurrock Council for planning gain.

2.1.3 The zones within which the various development components would be located are illustrated on Figure 2 of the Scoping Report; land parcel 'A' is described as the *'main development site'*. The potential layout of the main development site (within which the gas engines, batteries and associated electrical and control infrastructure would be located) is illustrated on Figure 3 of the Scoping Report.

2.1.4 The application site is located in the south east of Thurrock, on the north side of the River Thames. The site location is illustrated on Figure 1 of the Scoping Report. The site is irregular in shape, with the main development site being comprised of predominantly flat agricultural fields, separated by drainage ditches and some man-made ponds. Overhead powerlines and a railway line cross through the application site. The application site includes an access route to the A13, extending to the north along existing roads. Part of the main development site is common land and the entire application site is located within the Thurrock Green Belt.

2.1.5 Land use to the south is generally industrial and includes the site of the former Tilbury B power station, Tilbury port and docks and a waste water recycling centre. The town of Gravesend lies to the south of the River Thames. The residential area of Tilbury lies to the west of the application site, with active and historic landfill sites located to the east. There are a number of heritage features including historic military forts and installations located in proximity to the application site including Tilbury Fort to the west, Coalhouse Fort to the east and New Tavern Fort on the south side of the Thames. The application site includes a parcel of land to the north of Tilbury Fort, which would possibly be utilised as section 106 planning gain land.

2.1.6 The proposed gas pipeline connection would cross through agricultural land to Feeder 18, located to the north east of the main development site. The application site currently includes two route options for the gas pipeline after Station Road (see Figure 2 of the Scoping Report).

2.1.7 The Proposed Development includes a potential cooling water pipeline into the River Thames, which flows out into the Thames Estuary. The Thames Estuary and surrounding areas are covered by numerous ecological designations including the South Thames Estuary and Marshes Site of Special Scientific Interest (SSSI) and the Thames Estuary and Marshes Special Protection Area (SPA) and Ramsar site. The application site is located within Flood Zone 3.

2.2 The Planning Inspectorate's Comments

Description of the Proposed Development

2.2.1 The ES should include the following:

- a description of the Proposed Development comprising at least the information on the site, design, size and other relevant features of the development; and
- a description of the location of the development and description of the physical characteristics of the whole development, including any requisite demolition works and the land-use requirements during construction and operation phases.

2.2.2 Table 3.2 of the Scoping Report sets out an *'outline development envelope'* for the purposes of seeking a Scoping Opinion, but it is indicated that this would be refined where possible. The Inspectorate understands that at this point in the evolution of the Proposed Development, a final description of the development is not yet confirmed. 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.

2.2.3 The Scoping Report identifies available options for the principal components of the Proposed Development. The options include those in relation to the gas pipeline route, access to the site via road/water and gas engine cooling (which may be via air cooling or a cooling water pipeline to the River Thames). The Scoping Report suggests a number of different approaches relevant to the cooling water pipeline (if this option is pursued) including whether this would form part of the DCO application or be subject to a separate application under the Town and Country Planning Act 1990. There is also some uncertainty as to the precise locations of the intake and outfall pipes. The Inspectorate notes 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 description of the Proposed Development 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.

2.2.4 Construction of the Proposed Development is anticipated to take around 12 months, with a high level overview of the construction programme provided in paragraph 3.40 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.

2.2.5 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).

2.2.6 Paragraph 1.7 of the Scoping Report explains that the placement of construction compounds within the application site has not been identified at this stage. To ensure a robust assessment of likely significant effects, the Inspectorate advises that the location and size of the construction compounds is confirmed in the ES.

2.2.7 The Scoping Report identifies a number of existing infrastructure assets within in or in proximity to the application site, including overhead lines and a railway line. The Scoping Report explains the Applicant's intent to avoid direct impacts to these assets where possible but acknowledges that there may well be occasions (particularly during construction) where interactions occur e.g. the need to lift equipment across the railway (paragraph 3.34 of the Scoping Report). 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 response from National Grid Electricity Transmission Plc (Appendix 2 of this Opinion), which highlights electricity transmission infrastructure that could be affected by the Proposed Development (the overhead line which crosses the site).

2.2.8 For the purposes of the Scoping Report, the Proposed Development is described as including '*up to 60* [gas engine] *stacks, each up to 40m high'* (Table 3.2 of the Scoping Report). Paragraph 3.16 of the Scoping Report further explains that there '*….may be individual stacks for each engine or aggregated into fewer stacks'*. To ensure a robust assessment of likely significant effects, the ES should confirm the maximum number, height and diameter of the stacks. It should be clear what assumptions have been made in relevant ES assessments regarding the placement of stacks particularly with regards to air quality modelling and the Landscape and Visual Impact Assessment.

2.2.9 Paragraph 9.19 of the Scoping Report states that *'Security lighting for the main development site may be required'.* This position should be confirmed as part of the description of the Proposed Development in the ES. 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.

2.2.10 The Scoping Report presents little information in relation to proposed works in the marine environment. If the cooling water pipeline option is pursued, the ES should describe in detail all proposed works in the

marine environment. If construction and maintenance dredging is required, the ES should identify the areas that would be dredged and the likely quantities of material that would be dredged, along with the methods and frequencies of these activities. Any likely significant effects should be assessed.

2.2.11 The ES should describe the location and methods applied for piling activities, including any piling in the marine area. Any likely significant effects should be assessed and any proposed mitigation measures described.

2.2.12 Paragraph 3.17 of the Scoping Report states that *'The maximum operating time of the gas engines per year could be up to 2,750 hours, subject to agreement with the Environment Agency'.* The ES should clearly state the maximum operating time of the gas engines which has been assumed for the purposes of the assessment. If this cannot be confirmed until a later stage, a worst case should be identified and assessed.

2.2.13 Information regarding anticipated maintenance activities should be provided in the ES (including duration, frequency, anticipated numbers of workers and traffic movements) and any likely significant effects assessed. If the cooling water pipeline is pursued, this should include the need for (and impacts from) access and maintenance works during operation of the pipeline.

2.2.14 The process and methods of decommissioning should be considered and options presented in the ES. Where significant effects are likely to occur as a result of decommissioning the Proposed Development, these should be described and assessed in the ES. Paragraph 3.45 of the Scoping Report states: *'The decision on how much of the below ground infrastructure would be retained would be agreed with the landowner and any other interested parties, accounting for decommissioning methods and timescales at the time'.* The ES should explain how these uncertainties have been taken into account in the assessment of impacts from decommissioning the Proposed Development.

2.2.15 In addition to the above, the ES should also include a description of the anticipated:

- numbers of construction workers;
- types of construction plant and machinery;
- number, type, movements and parking of construction vehicles;
- number, type and movement of any construction materials/loads via barge; and
- nature and quantity of materials and natural resources used.

Alternatives

2.2.16 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'.*

2.2.17 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 any reasonable transport options which have been considered (such as delivery of abnormal loads and construction materials via nearby ports/ jetties and rail).

2.2.18 The Scoping Report explains that sequential site search, need for development of this type (supported by national policy) and assessment of Best Available Technology have shown that the proposed site and technology are the best option. The Scoping Report proposes to scope out alternative sites and technologies from consideration in the ES (Table 7.2 of the Scoping Report). However, paragraph 5.24 of the Scoping Report presents a commitment to provide a more detailed description of other site locations considered in the ES. The Planning Inspectorate agrees that a more detailed description of the alternative sites considered in the sequential site search exercise should be included in the ES, as well as a description of the reasonable alternative technologies considered.

Flexibility

2.2.19 The Inspectorate notes the Applicant's desire to address uncertainty by incorporating flexibility into the dDCO and its intention to apply a Rochdale Envelope approach for this purpose. As discussed above, Table 3.2 of the Scoping Report sets out an '*outline development envelope'* which would be refined where possible. 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 should apply a worst case scenario relative to each aspect chapter, as acknowledged in Table 3.3 of the Scoping Report.

2.2.20 The Applicant's attention is drawn to the Inspectorate's Advice Note Nine 'Using the 'Rochdale Envelope'[2], which provides details on the recommended approach to follow when incorporating flexibility into a dDCO.

2.2.21 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 will need to be clearly defined in the dDCO and in 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.

2.2.22 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.

[2] Advice Note Nine: Using the Rochdale Envelope. 2018. 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'[3] 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 consultees 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 Where relevant, the ES should provide reference to how the delivery of measures proposed to prevent/ minimise adverse effects is secured through DCO requirements (or other suitably robust methods) and whether relevant consultees agree on the adequacy of the measures proposed.

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] 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/

3.2.2 The Scoping Report states that the designated NPSs relevant to the Proposed Development are the:

- Overarching NPS for Energy (NPS EN-1);
- NPS for Fossil Fuel Electricity Generating Infrastructure (NPS EN-2);
- NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (NPS EN-4); and
- NPS for Electricity Networks Infrastructure (NPS EN-5).

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 description of the sensitive receptors and the potential impacts in the Scoping Report is generally focused on the main development site. The ES should identify sensitive receptors and assess impacts which are likely to result in significant effects in relation to the entirety of the Proposed Development including elements beyond the main development site.

3.3.4 The ES should justify the choice of receptor locations with reference to the extent of the likely impacts and seek to agree these with the relevant consultation bodies. The aspect chapters should explain how the sensitivity of receptors and the magnitude of the impact have been determined.

3.3.5 The scale of development proposed in the Tilbury area requires detailed consideration of both temporary and permanent cumulative effects. As such, the Inspectorate recommends that the cumulative effects assessment is presented in a standalone aspect chapter. The Inspectorate has provided further comments regarding the proposed approach to assessing cumulative effects in Table 4.21 of this Opinion.

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 The description of the baseline conditions in the Scoping Report is generally focused on the main development site. The ES should describe the baseline conditions across the entirety of the application site.

3.3.8 In light of the number of ongoing developments within the vicinity of the Proposed Development application site, the ES should clearly state which developments will be assumed to be under construction or operational as part of the future baseline. The ES should set out what assumptions have been made regarding the likely stages of construction/ operation applicable to Tilbury2, the Lower Thames Crossing, Tilbury Energy Centre and the other developments identified.

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

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 DCO requirements or other legally binding agreements.

3.3.14 The Inspectorate notes that various management plans/ strategies are to be produced, including a Code of Construction Practice (CoCP) and a Construction Environmental Management Plan (CEMP). The Applicant should append a draft copy/ outline 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.

Risks of Major Accidents and/ or Disasters

3.3.15 The ES should include a description and assessment (where relevant) of the likely significant effects resulting from major 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 Executive's (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.

3.3.16 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 and disasters in Table 4.12 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 impacts on and due to climate change in Table 4.11 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 that the Proposed Development is not likely to have significant effects on another European Economic Area (EEA) State and proposes that transboundary effects do not need to be considered within the ES. The Inspectorate notes the Applicant's conclusion in the Scoping Report; however recommends that, for the avoidance of doubt, the ES details and justifies this conclusion.

A Reference List

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

3.4 Confidential Information

3.4.1 In some circumstances it will be appropriate for information to be kept confidential. In particular, this may relate to information about 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. Where documents are intended to remain confidential the Applicant should provide these as separate paper and electronic 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 2014.

4. ASPECT BASED SCOPING TABLES

4.1 Landscape and Visual Resources

(Scoping Report paragraphs 8.2 – 8.22)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.1.1	n/a	n/a	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.1.2	Table 3.2	Assessment	The ES should clearly explain any assumptions made in the landscape and visual assessment regarding the number, height, diameter and placement of the stacks.
4.1.3	Paragraphs 8.13 and 3.23	Mitigation	The Scoping Report indicates that screen planting may be provided as a means of mitigating the impacts on landscape and visual receptors (paragraph 3.23). The ES should clearly describe the proposed landscaping, and demonstrate how this relates to other nearby landscaping proposals (e.g. Tilbury2, Tilbury Energy Centre and the Lower Thames Crossing) where such detail is known. It should be clear how the landscape and effects are expected to alter as proposed planting matures. Any interactions with other ES aspects, for example impacts on local ecology, should be explained. The Applicant should discuss and make effort to agree the planting specification/ species mix with relevant consultation bodies.
4.1.4	Paragraphs 8.15 to 8.17	Receptors	The ES should assess impacts to residential receptors where significant effects are likely to occur. The ES should identify any guidance documents used to inform the assessment of impacts to residential amenity.

ID	Ref	Other points	Inspectorate's comments
4.1.5	Paragraph 8.16	Night time impacts	The Scoping Report explains that an assessment of night time effects on landscape and visual receptors will be undertaken; the Inspectorate advises that this should include impacts from lighting. The Applicant's attention is drawn to the Inspectorate's comments in Table 4.17, ID 4.17.22 of this Opinion.
4.1.6	Paragraph 8.17	Cumulative impacts	The ES should clearly explain the baseline year used to inform the cumulative landscape and visual assessment. The ES should set out any assumptions made regarding the likely stages of construction/ operation applicable to Tilbury2, the Lower Thames Crossing, Tilbury Energy Centre and the other developments identified.
4.1.7	Paragraphs 8.18 to 18.20; Figure 9	Viewpoints and photomontages	Twenty potential viewpoints are identified (paragraph 8.19 and Figure 9 of the Scoping Report). It is proposed that the exact location of viewpoints and photomontages are agreed with Thurrock District Council (and Natural England in respect of the Kent Downs AONB). For the assessment of cumulative impacts, the Applicant should consider the viewpoints selected for other developments in the area including Tilbury2, Tilbury Energy Centre and Lower Thames Crossing. Having regard to the characteristics of the Proposed Development and the range of likely effects, the Inspectorate advises that neighbouring planning authorities including Gravesham Council are also consulted and effort is made to agree representative viewpoints/ photomontages. Both summer and winter views should be included.
4.1.8	n/a	Receptors	Impacts (including cumulative impacts with other developments) likely to result in significant effects on the visual amenity of users of the River Thames should be assessed in the ES. This is likely to be of most relevance if the cooling water option is pursued.
4.1.9	n/a	Impacts - construction	The ES should assess impacts with the potential to result in likely significant effects on landscape and visual receptors resulting from use

ID	Ref	Other points	Inspectorate's comments
			of the construction compounds and use of any temporary structures/ features required for construction (such as material/ soil stockpiles and cranes).
4.1.10	n/a	Design	The ES should explain how the siting and design of the proposed structures (and the materials to be used) have been selected with the aim of minimising impacts to landscape and visual receptors.

4.2 Archaeology and Cultural Heritage

(Scoping Report paragraphs 8.23 – 8.40)

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	Paragraph 8.23	Receptors	Paragraph 8.23 of the Scoping Report identifies the principal heritage assets which may be impacted by the Proposed Development. In addition to these, the Inspectorate considers that the ES should assess any likely significant effects on the settings of heritage assets on the southern side of the Thames, including Cliffe, Shornemead and New Tavern Forts. The assessment should consider the potential for cumulative impacts on cultural heritage assets, particularly in terms of the impacts to the settings of the military forts and the loss of archaeological resource. The cumulative assessment should include Tilbury2, Tilbury Energy Centre and the Lower Thames Crossing. Other projects to be considered in the cumulative assessment should be discussed and agreed with the relevant consultation bodies.
4.2.3	Paragraph 8.24	Impacts	Whilst no Conservation Areas have been identified within the application site boundary, the Inspectorate notes that the proposed access route is located immediately adjacent to the West Tilbury Conservation Area. Any likely significant effects on the setting of the Conservation Area (particularly in terms of impacts from noise and traffic) should be assessed in the ES.
4.2.4	Paragraphs	Geophysical survey; intrusive	The Inspectorate notes that that the geophysical survey undertaken in

ID	Ref	Other points	Inspectorate's comments
	8.25 and 8.26	investigations	2017 and provided in Appendix B of the Scoping Report does not extend to the entirety of the Proposed Development area. The Applicant should ensure that the information used to inform the assessment is robust and allows 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 8.26 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. The Applicant should ensure that their approach to defining the archaeological baseline is sufficient to identify potential archaeological remains within alluvial deposits.
4.2.5	Paragraphs 8.28 and 8.30	Impacts to terrestrial and marine archaeology	The Inspectorate notes the potential for impacts to buried archaeology, as well as impacts to marine archaeological remains if the water cooling pipeline option is pursued. Cumulative impacts with other developments should also be assessed. The ES should set out the proposals for the recording of archaeology which would be permanently lost as a result of the Proposed Development and make effort to agree the approach with relevant consultation bodies. The ES assessment of impacts to buried archaeology should take into account the guidance contained in Historic England's guidance document 'Preserving Archaeological Remains'[4].

[4] Preserving Archaeological Remains: Decision taking for sites under development (Historic England, 2016)

ID	Ref	Other points	Inspectorate's comments
4.2.6	Paragraphs 8.29 to 8.31	Impacts to setting	The Inspectorate notes (paragraph 8.31 of the Scoping Report) that the assessment of impacts to setting will follow the staged approach set out in Historic England's 'The Setting of Heritage Assets: Good Practice Advice in Planning Note 3'[5]. Appropriate viewpoints and photomontages should be used to illustrate how the Proposed Development would be seen in views from key heritage assets, both alone and together with other developments including Tilbury2, Tilbury Energy Centre and the Lower Thames Crossing. The Applicant should make effort to discuss and agree the location of viewpoints and the need for photomontages with relevant consultation bodies including Historic England.
4.2.7	Paragraph 8.34	Methodology	Paragraph 8.34 of the Scoping Report describes how it is proposed to determine significance of effect, using a matrix-based approach. The ES should ensure that the methodology used is applicable to address the context of the receiving environment and issues relevant to the Proposed Development. Where professional judgement is used to reach conclusions on levels of harm and significance of effect this should be explained. The Inspectorate notes Historic England's comments in this regard (see section 3.4 of their scoping consultation response, Appendix 2 of this Opinion) and advises the Applicant to make effort to agree a specific methodology with relevant consultation bodies.

[5] The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition) (Historic England, 2017)

4.3 Traffic and Transport

(Scoping Report paragraphs 8.41 – 8.53)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.3.1	Paragraphs 8.47 and 8.53	Assessment of operational traffic generation	The Scoping Report explains (paragraph 8.47) that the operational phase of the Proposed Development would require occasional staff and maintenance visits. Paragraph 9.10 of the Scoping Report further explains that the Proposed Development would largely be operated remotely and there would be no permanent staff present on a day-to-day basis. The Inspectorate has had regard to the characteristics of the Proposed Development and considers that significant effects from operational traffic from the Proposed Development alone are unlikely to occur. The Inspectorate therefore agrees that this matter can be scoped out of the ES. However the ES should address cumulative impacts from traffic during operation of the Proposed Development together with traffic from other developments (including Tilbury2, Tilbury Energy Centre and the Lower Thames Crossing) where significant effects are likely.

ID	Ref	Other points	Inspectorate's comments
4.3.2	n/a	Study area	The Scoping Report does not define the proposed study area; however, paragraph 8.50 explains the intent to agree the study area with the local planning authorities and Highways England. The ES should clearly define the study area used for the assessment and explain the approach taken to do so which should be influenced by the extent of likely impacts. The ES should include a plan to depict the study area.

ID	Ref	Other points	Inspectorate's comments
4.3.3	Paragraphs 2.12 and 8.43	Impacts to users of Public Rights of Way (PRoW)	Paragraph 2.12 of the Scoping Report confirms that there are no PRoW within the main development site, but it is not clear whether any other parts of the Proposed Development would interfere with PRoW. This should be confirmed in the ES, including whether any temporary diversions of PRoW are required. The ES should assess impacts to users of PRoW where likely significant effects may occur. The assessment of impacts on PRoW users should consider potential interactions with other aspect assessments as relevant (for example noise, dust, recreation and visual impact).
4.3.4	Paragraph 8.44	Impacts	The ES should assess impacts that may result in likely significant effects on the safety, reliability and operation of the Strategic Road Network, including the M25 (particularly Junction 30), the A13 and the A1039.The assessment methodology and any necessary mitigation measures should be discussed and effort made to agree the approach with relevant consultation bodies including Highways England.
4.3.5	Paragraph 8.48	Transport Assessment (TA)	The Applicant proposes to undertake a TA in respect to construction traffic impacts. The Applicant should have regard to the comments above regarding the need to address cumulative impacts during operation when determining the scope of the TA. 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 Traffic and Transport and Cumulative Effects aspect chapters should clearly explain the approach adopted to

ID	Ref	Other points	Inspectorate's comments
			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[6] software. This should be kept under review should any other development come forward which may trigger the need to update the previous traffic modelling work. The Applicant should make effort to agree the scope of the TA with relevant consultation bodies including highway authorities and Highways England.
4.3.6	Paragraphs 8.49 and 8.50	Sensitive receptors	The Scoping Report does not identify specific sensitive receptors for the purposes of the assessment, although paragraph 8.50 does confirm that users of PRoW will be considered. The Scoping Report states that the ES assessment will utilise criteria within the *Guidelines for the Environmental Assessment of Road Traffic*'[7] (IEMA, 1993) to determine magnitude of impact and significance of effect. The Applicant is advised to consider section 2.5 of these guidelines when identifying receptors which are sensitive to changes in traffic conditions. The Inspectorate advises that these should include nature conservation sites, residential receptors and non-motorised road users where significant effects are likely to occur.
4.3.7	Paragraph 8.50	Mitigation	Paragraph 8.50 of the Scoping Report indicates that a Construction Worker Travel Plan and Construction Traffic Management Plan are to be provided. Draft/ outline versions of these documents can be appended to the ES and the ES should demonstrate how adherence with the measures in these documents will be secured.

[6] Trip End Model Presentation Program (TEMPRO)

[7] Guidelines for the Environmental Assessment of Road Traffic: Institute of Environmental Management (IEMA) (1993)

ID	Ref	Other points	Inspectorate's comments
4.3.8	Paragraph 8.50	Abnormal loads	The ES should confirm the anticipated number of abnormal loads (including any to be delivered via ship/ barge) and the types of vehicles required. Any mitigation measures required to facilitate the delivery of abnormal loads should be detailed in the ES and any resultant likely significant effects assessed.
4.3.9	Paragraph 8.52	Traffic count surveys	The ES should explain and justify the locations for the traffic count surveys. The locations should be shown on a supporting plan included within the ES or supporting appendices.
4.3.10	Paragraph 8.123; Figure 2	Access routes	Proposed access routes are shown on Figure 2, however these are not clearly marked and this prevents the reader from precisely identifying where access routes will be, including access for HGVs. The ES should clearly describe the routes to be used for all vehicular access during construction and operation of the Proposed Development and this information should be clearly on supporting plans contained within the ES. For the assessment of impacts during construction the ES should explain how the proposed access route(s) relate to sensitive receptors (see above).
4.3.11	n/a	Impacts	The Traffic and Transport chapter of the ES should include an assessment of impacts resulting from transportation of construction materials/ abnormal loads to the site via water, if this option is pursued. This should include an assessment of any impacts to navigation (e.g. lighting) which are likely to result in significant effects. Impacts from the Proposed Development alone and cumulatively with other developments should be considered. The assessment methodology and any necessary mitigation measures should be discussed and effort made to agree them with relevant consultation bodies.
4.3.12	n/a	Impacts	The ES should clearly explain the relationship between the traffic modelling and the assessment of other relevant aspects, in particular

ID	Ref	Other points	Inspectorate's comments
			the air quality, noise and vibration assessments. The Applicant should ensure appropriate cross referencing between the relevant ES aspect chapters.
4.3.13	n/a	Decommissioning	It is unclear whether an assessment of impacts during decommissioning is proposed. The ES should set out the likely impacts on Traffic and Transport resulting from decommissioning of the Proposed Development in respect to Traffic and Transport. Any likely significant effects should be assessed.

4.4 Land Use, Agriculture and Socio Economics

(Scoping Report paragraphs 8.54 – 8.63)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.4.1	Paragraph 8.63	A detailed assessment of socio economic impacts of employment generation	The Scoping Report suggests that the characteristics of the Proposed Development are such that a detailed assessment relating to socio economic impacts of employment generation should be scoped out from consideration in the ES. The Scoping Report states that the impacts would most likely be temporary and connected to the construction workforce. The Inspectorate has had regard to the characteristics of the development and the extent of likely impacts. The Inspectorate agrees that on the basis of the information contained in the Scoping Report, the impacts from the Proposed Development are likely to be temporary. The Applicant should ensure that the assessment in the ES is sufficient to identify any likely significant effects but the Inspectorate considers that a 'proportionate' assessment using qualitative methods and professional judgement can be appropriate in this regard. The Inspectorate is also aware of a number of other proposed developments in proximity to the Proposed Development which have potential to be constructed over a similar timescale. There is potential for significant cumulative socio economic effects from multiple large scale construction activities taking place within a relatively small area. The Inspectorate considers that the cumulative assessment of socio economic impacts should be appropriately focussed towards the construction phases of the Proposed Development and other relevant developments.

ID	Ref	Other points	Inspectorate's comments
4.4.2	Paragraph 8.57	Employment generation	The assessment should provide a breakdown of the likely jobs and roles created during each phase of the Proposed Development. Any proposed measures such as skills and training programmes or apprenticeships that would promote local employment should be discussed and effort made to agree them with relevant consultation bodies.
4.4.3	Paragraph 8.57	Impacts	The Inspectorate notes the intention to assess impacts resulting from the permanent loss of agricultural land. The ES should quantify the agricultural land which would be temporarily and permanently lost as a result of construction and operation of the Proposed Development (by Agricultural Land Classification (ALC) grade) and assess any impacts that may result in likely significant effects. Any impacts likely to result in significant effects on soil quality should also be described and assessed. The ES assessment of impacts to agricultural land should be undertaken with reference to appropriate guidance such as the Ministry of Agriculture, Fisheries and Food (MAFF) guidelines[8] and Natural England's TIN049[9].
4.4.4	Paragraphs 8.57 and 3.37	Impacts	The Scoping Report explains that the Proposed Development (as envisaged) will result in the loss of Common Land and replacement land will be necessary. The Applicant should make effort to agree the replacement land provision with relevant consultation bodies notably Natural England. The ES should explain the extent to which the replacement land is of equivalent value to that being lost. The ES

[88] Agricultural Land Classification of England and Wales: revised guidelines and criteria for grading the quality of agricultural land (MAFF, 1988)

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

ID	Ref	Other points	Inspectorate's comments
			should provide details of how the replacement land would be managed and assess inter-related impacts (such as impacts on landscape and ecological receptors). Cross-reference should be made to the relevant ES aspect chapters.
4.4.5	n/a	Potential for impacts on tourism and recreation	It is not clear whether potential impacts on tourism and recreation would be assessed in the ES. Along with users of PRoW, any impacts likely to result in significant effects on the users of other types of recreational and tourism receptors in the surrounding area should be assessed including for example, nature reserves and visitors to the Tilbury and Coalhouse Forts. Cumulative impacts with other developments should be assessed where significant effects are likely to occur.
4.4.6	n/a	Study areas	The ES should clearly describe the study areas relevant to the anticipated impacts to land use, agriculture and socio economic receptors. The ES should include a clear justification in support of the study areas and ensure they are depicted on corresponding figures to aid understanding. It should be clear how the selected study areas relate to the extent of the likely impacts.
4.4.7	Paragraph 8.57	Potential impacts	Any potential impacts on local businesses/ commercial operations (for example, any impacts arising from road or footpath closures) should be described and assessed within the ES where significant effects are likely to occur. This should include the Port of Tilbury and if the water cooling pipeline option is taken forward, other commercial users of the river. Any cumulative impacts on local businesses/ commercial operations which are likely to result in significant effects should also be assessed.

4.5 Air Quality

(Scoping Report paragraphs 8.64 – 8.84)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.5.1	Paragraph 8.84	Air pollutant emissions from operational traffic	The Scoping Report proposes to scope out an assessment of emissions to air from operational traffic, describing traffic generated during operation of the Proposed Development as *'negligible'.* The Inspectorate is content that due to the nature and characteristics of the Proposed Development, significant effects from operational traffic are unlikely to occur. The Inspectorate is content that an assessment of air pollutant emissions from operational traffic from the Proposed Development alone can be scoped out of the ES. However the ES should address cumulative impacts from operational traffic emissions from the Proposed Development together with other developments (including Tilbury2, Tilbury Energy Centre and the Lower Thames Crossing).
4.5.2	Paragraph 8.84	Air pollutant emissions from construction traffic (if predicted construction traffic is below assessment thresholds)	The Applicant considers that an assessment of air pollution emissions from construction traffic can be scoped out, providing traffic flows are predicted to be below the indicative thresholds for assessment set out in Environmental Protection UK (EPUK)/ Institute of Air Quality Management (IAQM) guidance[10]. At this stage, the Applicant expects that construction traffic flows are likely to be below the indicative thresholds in the EPUK/ IAQM guidance, but does not provide specific details of the likely traffic flows.

[10] EPUK/IAQM (2017) Land Use Planning and Development Control: Planning for Air Quality

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			In the absence of specific information regarding the anticipated numbers of construction traffic movements and noting the potential for cumulative impacts with other proposed developments (including potential impacts to Air Quality Management Areas (AQMAs)), the Inspectorate is not in a position to agree to scope out this matter from consideration in the ES. The ES should therefore assess any likely significant effects resulting from air pollutant emissions from construction traffic, both alone and cumulatively with other proposed developments. It should be clear how the outcomes of the traffic modelling have informed this assessment. If the option to transport construction materials/ abnormal loads via water is pursued, the ES should assess the associated impacts where significant effects are likely.

ID	Ref	Other points	Inspectorate's comments
4.5.3	Paragraph 8.64	Assessment –AQMAs	A number of AQMAs are identified in proximity to the Proposed Development, the extent of which should be illustrated on plans within the ES. If there is any potential to affect air quality within the AQMAs and the delivery of their action plans then this should be assessed.
4.5.4	Paragraph 8.67	Baseline	The Scoping Report explains that baseline nitrogen dioxide (NO_2) concentrations have been measured at five locations around the application site, using passive diffusion tubes (as detailed in Appendix G of the Scoping Report). The Applicant should discuss and agree with relevant consultation bodies whether diffusion tube monitoring (supplemented by local authority NO_2 monitoring data and Defra mapped NO_2 concentrations) is sufficient to inform a robust assessment. The ES should fully justify the approach taken.

ID	Ref	Other points	Inspectorate's comments
			The ES should include details of the monitoring locations, the monitoring method, sampling period, data capture and any adjustments applied to the data, such as diffusion tube bias adjustment factors.
4.5.5	Paragraph 8.71	Assessment – construction (dust)	The Applicant proposes to undertaken an assessment of impacts from construction dust. The ES should explain which construction activities are likely to generate dust and assess the impacts which are likely to result in significant effects on sensitive human and ecological receptors. This should include consideration of any cumulative impacts with other proposed developments. The study area relevant to the construction dust assessment should be defined and justified in the ES, with reference to the IAQM guidance[11] and the extent of the likely impacts.
4.5.6	Paragraph 8.74	Impacts	Paragraph 8.74 of the Scoping Report explains that the main pollutant emitted during operation of the Proposed Development (via the exhaust stacks) would be nitrogen oxides (NO_X). In addition to NO_x, the ES should model and assess any likely significant effects resulting from increased deposition of nitrogen, acid and ammonia.
4.5.7	Paragraph 8.76	Assessment – stacks	Paragraph 8.76 of the Scoping Report explains that a stack height assessment will be undertaken to establish an *'appropriate height'* for the stacks. The Inspectorate advises that a similar assessment is undertaken in relation to stack diameter. A description of the methods used for determining the stack height and diameter should be included

[11] IAQM (2016) Guidance on the assessment of dust from demolition and construction

ID	Ref	Other points	Inspectorate's comments
			within the ES, including any sensitivity testing which has been undertaken. The ES should clearly explain the assumptions that have been made in the air quality assessment regarding the number, placement, height and diameter of the stacks and the Applicant should ensure these parameters are reflected in the dDCO.
4.5.8	Paragraphs 8.77 and 8.78	Sensitive receptors	Receptors for the purposes of the air quality assessment are described as '*selected sensitive human-health receptors'* and *'statutorily designated habitat sites',* but no specific locations are proposed. The ES should describe and clearly identify the selected receptors, which should include ecological sites, locations on the south side of the river and locations in other neighbouring local authorities. The air quality modelling should assess the impacts to these receptors. The Applicant should justify the choice of receptor locations with reference to the extent of the likely impacts and seek to agree these with the relevant consultation bodies.
4.5.9	Paragraph 8.78	Study area	The Applicant proposes to model concentrations of nitrogen oxides for sensitive receptors (including statutory designated habitat sites) within a 10km study area. The Applicant explains that this approach is in accordance with the Environment Agency's guidance on 'Air Emissions Risk Assessment for your Environmental Permit'[12]. The Inspectorate notes this guidance states that some larger (greater than 50 MW) emitters may be required to screen out to 15km for European sites and between 10 to 15kms for SSSIs. In addition to the

[12] Environment Agency (2016) 'Air Emissions Risk Assessment for your Environmental Permit' [online]: https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit

ID	Ref	Other points	Inspectorate's comments
			European sites identified in the Scoping Report, the ES should also assess any likely significant effects on the North Downs Woodlands Special Area of Conservation (SAC). The Inspectorate recommends that the ES contains a robust justification to support the selected study area/ s relevant to impacts from emissions to air on designated ecological sites, with reference to the extent of the likely impacts and agreement with relevant consultation bodies.
4.5.10	Paragraph 8.79	Cumulative impacts	Paragraph 8.79 of the Scoping Report explains that cumulative impacts from emissions to air would be assessed '*semi-quantitatively'.* What this would mean in practice is not explained. To demonstrate the impact of incremental changes of pollutant deposition from the operational Proposed Development together with other proposed developments, the Inspectorate recommends use of a quantitative assessment methodology, particularly in respect of other point-source emitters.
4.5.11	n/a	Impacts – construction and decommissioning	The Scoping Report does not confirm whether the air quality assessment would consider emissions to air arising from plant required for construction/ decommissioning. However, the Inspectorate notes from the Climate Change section of the Scoping Report (paragraph 8.185) that direct greenhouse gas emissions from construction plant are described as minimal. The ES should describe the plant which is likely to be required for construction/ decommissioning, the likely location and duration of their use and any mitigation measures to be implemented. The ES should assess any impacts which may result in likely significant effects on sensitive receptors as a result of emissions to air from plant required for construction/ decommissioning.

4.6 Onshore Ecology

(Scoping Report section 8.85 – 8.103)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.6.1	Table 8.5	Surveys on wintering and passage birds – other areas of development	Wintering and passage bird surveys are proposed in respect to the area affected by construction of the cooling water pipeline (if this option is taken forward). The Applicant proposes to scope out wintering and passage bird surveys in respect of the arable farmland crossed by the gas connection and access road route corridors. The Applicant considers that there is negligible potential for these areas to support important assemblages of wintering and passage birds. The Inspectorate does not agree there is sufficient evidence to support scoping out surveys for wintering and passage birds on the arable farmland crossed by the gas connection and access road route corridors. The Inspectorate notes the scoping consultation response from Natural England (see Appendix 2), which states that habitats within the application site (other than the area for the cooling water pipeline) may provide a functional linkage to the Thames Estuary and Marshes SPA and Ramsar site. The Inspectorate considers there is potential for impacts from disturbance/ displacement to birds, from the Proposed Development alone and particularly cumulatively with other developments (including from use of the existing or new jetty[13], as detailed in Table 4.7, ID 4.7.4 of this Opinion). The ES should be informed through relevant surveys of these areas and the findings reported in the ES. The Applicant should undertake further consultation with Natural England

[13] Thurrock Council planning reference 17/00224/FUL

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			in effort to agree the approach and timing of specific surveys for wintering and passage birds. The ES must fully assess impacts on the designated sites and on functionally linked land utilised by qualifying features of these sites, both alone and cumulatively with other developments.
4.6.2	Table 8.5	White clawed crayfish surveys	The Applicant proposes to scope out surveys for white clawed crayfish. Table 8.5 of the Scoping Report states *'There are no known records of this species in the area, and it is reasonable to assume that the species is absent given its proximity to the tidal influence and salinity of the Thames Estuary'.* There is no further justification of why this species should not be assessed and there is no mention of their consideration in the Preliminary Ecological Appraisal (Appendix C of the Scoping Report). The Inspectorate notes that the Phase 1 habitat survey and preliminary species surveys presented in Appendix D of the Scoping Report do not appear to have considered the area required for the potential cooling water pipeline. In the absence of this information (or confirmation that the cooling water option will not be pursued), the Inspectorate does not agree to scope out white clawed crayfish surveys. The Applicant should seek to agree the need for white clawed crayfish surveys with relevant consultation bodies. If there is potential for significant effects on white clawed crayfish, this should be assessed in the ES.
4.6.3	Table 8.5	Bat surveys	The Applicant proposes to scope out surveys for bats. Table 8.5 of the Scoping Report states that there are no potential bat roost sites in the *'main development site'* and that the development is considered highly unlikely to result in fragmentation of foraging or commuting routes given the habitats present on site. This appears to contradict

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			paragraph 8.89 of the Scoping Report, which states that these habitats may be of value to foraging and commuting bats. The Inspectorate also notes that the Phase 1 habitat survey and preliminary species surveys presented in Appendix D do not appear to have considered the area required for the potential cooling water pipeline. In the absence of this information (or confirmation that the cooling water option will not be pursued) and noting the potential suitability of habitats on the main development site for foraging and commuting bats, the Inspectorate does not agree to scope out the need for bat surveys. The Applicant should seek to agree the approach to and the need for bat surveys with relevant consultation bodies. If there is potential for significant effects on bats, this should be assessed in the ES.
4.6.4	Table 8.5	Otter surveys	The Applicant proposes to scope out surveys for otter. Table 8.5 of the Scoping Report explains no otters are recorded within 2km of the *'main development site'* and the loss of any ditches on site is not considered to have a detrimental impact on foraging otters. The Inspectorate also notes that the Phase 1 habitat survey and preliminary species surveys presented in Appendix D do not appear to have considered the area required for the potential cooling water pipeline. In the absence of this information (or confirmation that the cooling water option will not be pursued), the Inspectorate does not agree to scope out the need for otter surveys. The Applicant should seek to agree the need for otter surveys with relevant consultation bodies. If there is potential for significant effects on otters, this should be assessed in the ES.

ID	Ref	Other points	Inspectorate's comments

ID	Ref	Other points	Inspectorate's comments
4.6.5	Table 8.4	Study area	The study areas relevant to the onshore ecological assessment should be clearly defined in the ES.
4.6.6	Paragraph 8.85	Nationally designated sites in proximity to the Proposed Development	The Inspectorate notes that Natural England's consultation response (see Appendix 2 of this Opinion) explains that the nationally significant invertebrate assemblage on the adjacent Tilbury2 site could be considered to be of sufficient quality to meet the designation requirements of a SSSI and that the site is being considered for notification. The ES should assess impacts on invertebrate assemblages both alone and cumulatively with other developments where significant effects are likely.
4.6.7	Paragraph 8.86	Local Wildlife Sites (LWS)	Paragraph 8.86 of the Scoping Report states that there are two LWSs within 1km of the *'main development site'.* However Figure 2.1 (in Appendix D of the Scoping Report) identifies a number of other LWSs, including two within the application site. It also appears that the area required for the cooling water pipeline (not shown on Figure 2.1) would fall within a LWS. The ES should identify LWSs within a study area relative to the full extent of the Proposed Development and assess the likely significant effects alone and cumulatively with other developments. The Inspectorate is aware that a LWS review has been undertaken by Thurrock Council, which has resulted in amendments to LWS boundaries. The Applicant should take these amendments into account in the ES.
4.6.8	Paragraph 8.88; Appendix D	Ecological surveys	The Applicant should ensure a robust assessment of likely significant effects resulting from the Proposed Development. Ecological surveys used to inform the assessment must include the area required for the water cooling pipeline, if this option is pursued.
4.6.9	Paragraph	Potential impacts	The ES should identify and quantify all temporary or permanent

ID	Ref	Other points	Inspectorate's comments
	8.94, bullet point 1		habitat losses by type (including loss of any functionally-linked land). This should cover the entirety of the application site; including the cooling water pipeline and gas pipeline corridors as well as the main development site.
4.6.10	Paragraphs 8.94 and 8.101	Operational air quality impacts	The Inspectorate notes the intention to assess impacts from operational air quality emissions on ecological receptors. The ES should include clear cross-reference between the Onshore Ecology aspect chapter and other relevant aspect chapters e.g. air quality. The ES should assess impacts from modelled pollutant deposition levels against relevant critical loads provided in the UK Air Pollution Information System (APIS). Any likely significant effects to habitats and protected species should be assessed.
4.6.11	Paragraph 8.94, bullet point 2	Lighting	The Inspectorate considers that impacts from lighting on ecological receptors (including aquatic ecology, if the cooling water pipeline option is pursued) should be assessed where significant effects are likely.
4.6.12	n/a	Thames Estuary and Marshes Important Bird Area (IBA)	The Inspectorate notes the proximity of the Proposed Development to the Thames Estuary and Marshes IBA, which is not identified as a receptor in the Scoping Report. The ES should assess any likely significant effects to the IBA.
4.6.13	n/a	Drainage ditches	There are a number of ditches present on and around the application site. The Applicant should ensure there is suitable effort to confirm whether these ditches contain ecological receptors e.g. fish and/ or eel populations. Any likely significant effects should be assessed in the ES.
4.6.14	n/a	Invasive species	The Preliminary Ecological Appraisal (Appendix C of the Scoping Report) states that no invasive species have been found on the main development site. Surveys to identify the presence of invasive species should be undertaken for the whole application site and any necessary

ID	Ref	Other points	Inspectorate's comments
			eradication/ control measures detailed in the ES.
4.6.15	n/a	Impacts to trees	The ES should provide details of any trees which would be removed or affected by the Proposed Development and describe any mitigation measures proposed. Any likely significant effects should be assessed.

4.7 Aquatic Ecology

(Scoping Report paragraphs 8.104 – 8.120)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.7.1	Table 8.7; paragraph 8.119	Assessment of impacts from biocide	The Scoping Report explains that the use of chemical treatment/ biocide has not historically been required in respect to the once-through water cooling system at the former Tilbury Power Station. Accordingly, the Applicant does not expect that chemical treatment/ biocide will be required for the Proposed Development and as such, impacts to the aquatic environment are avoided. On the basis that the use of biocide is not required for the Proposed Development; the Inspectorate agrees that this matter can be scoped out of the assessment. The need for an assessment of biocide is directly applicable to the requirement for its use. If for any reason these proposals change and biocide or other chemicals would be discharged, an assessment of any likely significant effects (including effects on WFD water bodies) should be provided in the ES.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.7.2	Table 8.7; paragraph 8.120	Assessment of fish impingement risk	The Scoping Report proposes a passive wedge wire cylinder screening design in order to prevent fish from entering the intake cooling pipe. As such, the Applicant considers that there is no potential for impingement of fish and an assessment is not required. The Inspectorate does not consider that sufficient detail is provided in the Scoping Report in order to agree to scope this matter out of the ES. The Applicant should assess impacts resulting from fish impingement and entrainment of fish, fish eggs, larvae and other plankton where significant effects are likely. The Applicant should make effort to engage relevant consultation bodies including the Environment Agency and the Marine Management Organisation (MMO) with regards to the detailed screen design proposals. The screen design should be made with consideration to best practice protection for relevant species e.g. eels. The Inspectorate also notes that new information regarding the protection of biota from cooling water intakes has recently been published by the Environment Agency[14] and advises the Applicant to take into account its applicability. Details of the proposed screening method should be provided within the ES and the Applicant should ensure that where specific design elements are relied upon in the ES they are suitably secured.

[14] Environment Agency (2018) Protecting biota from cooling water intakes at nuclear power stations [online] Available at: https://www.gov.uk/government/publications/protecting-biota-from-cooling-water-intakes-at-nuclear-power-stations

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.7.3	Table 8.7	Impacts to saltmarsh	The Applicant considers that there is no potential for impacts to saltmarsh, however no specific justification is provided in this regard. The Inspectorate does not agree that sufficient information has been provided in order to scope this matter out. In particular, the Inspectorate notes the potential for construction and operation of the cooling water pipeline to result in changes to coastal processes and sedimentation patterns, which could impact on the saltmarsh habitats. The ES should describe the potential impacts to saltmarsh and any likely significant effects on this habitat should be assessed. This should include consideration of any cumulative effects, including with the consented new jetty[13], Tilbury2 and Tilbury Energy Centre.
4.7.4	Table 8.7; paragraph 3.35	Use of existing/ consented new jetty	The Scoping Report explains that the existing jetty or consented new jetty[13] (if constructed) for the Goshems Farm land raising operation will be used, if construction materials are to be delivered by barge. No dredging of the seabed or refurbishment of the jetty would be required. The Applicant considers that the *'limited and temporary intensification of jetty use'* (relative to the existing use) would not result in any significant effects on the aquatic environment. The Inspectorate considers that additional justification should be provided to support this statement, particularly in terms of the anticipated number and frequency of deliveries and the cumulative impact with other proposed developments. In addition to aquatic receptors, the Inspectorate considers that there may be impacts from use of the jetty in terms of increased disturbance to birds (as referenced in Table 4.6, ID 4.6.1 above). The Inspectorate does not agree to scope out this matter out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.7.5	Paragraph 8.108 and Table 8.6	Baseline information	Table 8.6 of the Scoping Report summarises the proposed approach to aquatic surveys that will inform the assessment. Details including sampling locations, equipment, methodology and level of sample replication should be provided in the ES. Table 8.6 shows that several surveys are not programmed in until Winter 2018; Spring/ Summer 2019. The Applicant should ensure that the ES is informed by relevant and up to date survey information; the Applicant should also make effort to agree the sufficiency of surveys with relevant consultation bodies.
4.7.6	Paragraph 8.109	Construction of cooling water pipeline	If the construction of the cooling water pipeline would occur outside of the wintering period, then surveys should be taken of any species which may use the area affected and not solely for survey for usage by intertidal bird species (as detailed in the Onshore Ecology chapter of the Scoping Report).
4.7.7	Paragraph 8.110	Impacts from underwater noise	The potential impacts from underwater noise to sensitive aquatic receptors should be assessed using species-specific methodologies, supported by recent scientific literature. For example Popper *et al* (2014) in relation to fish and National Marine Fisheries Service (NMFS) (2016) in relation to marine mammals. Any measures to mitigate impacts from underwater noise should be described in the ES.
4.7.8	Paragraph 8.110	Impacts from operational water cooling pipeline	The assessment of potential impacts from the operational water cooling pipeline should include impacts resulting from scour (and any associated habitat loss), as well as from access and maintenance of the pipeline. The likely timings of maintenance works should be explained, with a focus on avoidance of sensitive periods for birds. Any proposals for mitigating and/ or monitoring the impacts from the cooling water system should be described in the ES.

ID	Ref	Other points	Inspectorate's comments
4.7.9	Paragraph 8.110	Impacts from sedimentation and changes in coastal processes	Paragraph 8.110 of the Scoping Report explains that construction of the cooling water pipeline may result in disturbance/ suspension of sediments. The Inspectorate advises that these impacts should also be considered in relation to operation of the water cooling pipeline. The ES should explain how much sediment may be re-suspended, over what timeframe and whether contaminants are likely to be present. The Applicant should discuss and agree the assessment approach (including the need for chemical analysis) with relevant consultation bodies including the Environment Agency. Any other impacts to coastal processes should be described in the ES and assessed where significant effects are likely.
4.7.10	Paragraph 8.118	Thermal plume and fish entrainment modelling.	Where relevant, the ES should explain the extent of the Zone of Influence which has been identified for the thermal plume modelling and fish entrainment modelling. The ES should provide details of the modelling undertaken to determine the extent of thermal influence and to predict changes in the flow field, including the cooling water discharge rate. The thermal plume modelling should consider the impact on marine ecology including fish and benthos, both alone and cumulatively with other developments. The Inspectorate considers that the Applicant should have regard to the technical appendix provided in the Environment Agency's scoping consultation response (see Appendix 2 of this Opinion), which provides specific advice in relation to thermal modelling. The Applicant should make effort to agree the approach to the assessment with relevant consultation bodies.

ID	Ref	Other points	Inspectorate's comments
4.7.11	Paragraph 8.136	Impacts from piling	Paragraph 8.136 of the Scoping Report explains that construction noise from piling has the potential to adversely affect wildlife and bird species, but it is not clear whether any of the proposed structures in the marine environment would require piling. If piling is required within the marine area, the Applicant should model the predicted noise levels and assess any likely significant effects to aquatic receptors.
4.7.12	n/a	Impacts from dredging	If the cooling water pipeline option is pursued, the Inspectorate assumes that construction and maintenance dredging may be required. The assessment in the ES should take into account the areas to be dredged and the dredging techniques to be employed; the anticipated quantity of material to be removed and the maximum dredging depth; the frequency of maintenance dredging; and the final disposal location of dredged material. The ES should assess the impacts associated with any dredging of the River Thames, taking into account its status as a Water Framework Directive (WFD) water body (see also the Inspectorate's comments regarding the WFD in Table 4.9, ID 4.9.7 of this Opinion). Any cumulative impacts from dredging (e.g. with Tilbury2 and Tilbury Energy Centre) which are likely to result in significant effects should also be assessed.
4.7.13	n/a	Marine Conservation Zone (MCZ)	The Inspectorate is aware that the consultation for the MCZ has now closed and this affects its status. The ES should appropriately assess impacts to the MCZ.
4.7.14	n/a	Cumulative impacts	The Applicant should identify other developments with the potential to impact on the marine environment in the Thames Estuary and assess the potential for cumulative impacts together with the Proposed Development.

4.8 Noise and Vibration

(Scoping Report paragraphs 8.121 – 8.142)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.8.1	Paragraph 8.142	Impacts from operational traffic noise	Paragraph 8.142 of the Scoping Report proposes to scope this matter out of the ES, explaining that *'traffic generation in operation would be negligible'.* Paragraph 9.10 of the Scoping Report further explains that the Proposed Development would largely be operated remotely and there would be no permanent staff present on a day-to-day basis. Impacts from operational traffic vibration are not mentioned, but the Inspectorate assumes that the same justification would apply. The Inspectorate considers that significant effects from operational traffic noise and vibration from the Proposed Development alone are unlikely to occur and agrees that this matter can be scoped out of the ES. However, the ES should address cumulative impacts from operational traffic noise from the Proposed Development together with other developments (including Tilbury2, Tilbury Energy Centre and the Lower Thames Crossing).
4.8.2	Paragraphs 8.135 and 8.142	Quantitative assessment of operational vibration	Paragraph 8.135 of the Scoping Report explains that the main source of operational vibration will be from the gas engines. Due to rapid attenuation of vibration levels and the distances to receptors sensitive to vibration, the Applicant considers significant effects from operational vibration area unlikely to occur. The Scoping Report does not explain whether vibration could occur from operation of other development components, such as the gas pipeline and AGI. Having regard to the characteristics of the Proposed Development and the distance to sensitive receptors, the Inspectorate considers that significant vibration effects from operation of the Proposed

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			Development are not likely to occur. A quantitative assessment of operational vibration is not necessary and can be scoped out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.8.3	Paragraphs 8.122 to 8.127	Sensitive receptors	Paragraphs 8.122-127 of the Scoping Report describe the noise sensitive receptors relative to the main development site only. Specific vibration sensitive receptors have not been defined. The ES should contain a comprehensive list and figure illustrating the locations of receptors sensitive to noise and vibration impacts, relative to the entirety of the Proposed Development including elements beyond the main development site. Residential, recreational and ecological receptors should be selected, including locations on the south side of the River Thames. It should be clear how other aspects (for example, construction traffic routes to the different parts of the application site) relate to the choice of sensitive receptors. The assessment of noise and vibration impacts on sensitive ecological receptors e.g. birds and fish should take into account the seasonality of potentially affected species. Cross reference should be made to the ecological impact assessment in the ES. For the assessment of cumulative impacts, the Applicant should consider the noise and vibration sensitive receptors selected for other developments in the area including Tilbury2, Tilbury Energy Centre and Lower Thames Crossing.
4.8.4	Paragraph 8.130	Construction impacts	The Scoping Report explains that impact piling may be required. The ES should detail the modelling undertaken, including the input parameters such as the number, location and size of piles. Any cumulative impacts from piling (e.g. with Tilbury2 and Tilbury Energy

			Centre) which are likely to result in significant effects should also be assessed. Aside from piling, the ES should identify all sources of noise and vibration which may result from the Proposed Development, including those which cross other developments and those which extend into the marine area. Where uncertainty exists and flexibility is required the assessment should be based on a worst case scenario.
4.8.5	Paragraph 8.131	Construction impacts	If the option to transport construction materials/ abnormal loads via water is pursued, noise impacts from ships/ barges should be assessed where significant effects are likely.
4.8.6	Paragraph 8.138	Construction impacts	The ES should provide details of the anticipated working hours (including any night time working required) and incorporate this into the noise level predictions and assessment of likely significant effects. This should be consistent with the working hours specified in the dDCO.
4.8.7	Paragraph 8.138	Noise level predictions	It should be clear what assumptions have been made to develop and inform noise modelling. This would include the placement of construction activities/ plant within the application site; and how the likely noise levels generated by the necessary construction activities/ plant have been estimated. If uncertainty exists and flexibility is sought, the noise impact assessment should be undertaken on the basis of a worst case scenario.
4.8.8	Paragraph 8.141	Vibration from Heavy Goods Vehicles (HGVs)	Paragraph 8.141 of the Scoping Report explains that impacts from traffic noise arising from construction and decommissioning of the Proposed Development will be assessed. However it is unclear whether the Applicant intends to assess the impact of ground-borne vibration from HGVs during construction and decommissioning. The ES should assess impacts from ground-borne vibration from HGV traffic during construction and decommissioning where significant effects are likely. This should include consideration of cumulative

			impacts with other developments. Any such assessment should be based on the traffic modelling and likely HGV movements. The vibration sensitive receptors should be identified and shown on a supporting plan within the ES.
4.8.9	Paragraph 8.141	Assessment method	The ES should fully explain how the predicted noise levels relate to the 'base year' and 'with development' traffic data predictions. Cross reference should be made to the Traffic and Transport aspect chapter where relevant.
4.8.10	n/a	Significant Observed Adverse Effect Level (SOAEL) and Lowest Observed Adverse Effect Level (LOAEL)	Consistent with the Noise Policy Statement for England, LOAEL and SOAEL should be defined for all of the noise and vibration matters assessed. Mitigation measures should be set out accordingly.
4.8.11	n/a	Noise limits and monitoring	The ES should define noise limit values and explain how they were determined. The ES should explain the need for monitoring of noise to ensure adherence to the specified noise limits and the appropriateness of mitigation. The need for and scope of monitoring during construction, operation and decommissioning of the Proposed Development should be agreed with relevant consultation bodies and presented in the ES, along with an explanation of how it is secured.

4.9 Water Resources and Flood Risk

(Scoping Report paragraphs 8.143 – 8.163)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.9.1	n/a	n/a	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.9.2	Paragraph 8.145	Thames Estuary 2100 (TE2100) plan	The Inspectorate has had regard to the consultation response from the Environment Agency regarding the TE2100 plan for maintaining or improving the current standards of flood protection on the estuary. The Applicant should make effort to consult with the Environment Agency regarding interactions between the Proposed Development and the TE2100. Where significant environmental effects are likely these should be assessed within the ES.
4.9.3	Paragraph 8.152	Data	If any additional site specific hydrological data is acquired from site reconnaissance or consultation with another body, this information should be included within the ES.
4.9.4	Paragraph 8.154	Scope of the assessment	The Inspectorate notes that only *'temporary changes'* to surface water flows within Flood Zone 3 during construction will be assessed. The Scoping Report does not define the term *'temporary changes'*. For the avoidance of doubt the ES should assess any likely significant effects resulting from changes to surface water flows within Flood Zone 2 during relevant stages of construction.
4.9.5	Paragraph 8.154	Scope of the assessment	As the Proposed Development is located within Flood Zone 3, an assessment of whether the Proposed Development can remain safe and operational during a worst case flood event should be undertaken,

ID	Ref	Other points	Inspectorate's comments
			and included within the ES.
4.9.6	Paragraph 8.154	Loss of floodplain storage	The Proposed Development is situated within a floodplain storage area, but the Scoping Report has not stated whether the Proposed Development will result in a net loss of floodplain storage. The ES should quantify and assess the impacts from the Proposed Development to floodplain storage.
4.9.7	Paragraph 8.154	Water Framework Directive (WFD)	Paragraph 8.154 of the Scoping Report confirms that the ES will consider potential impacts on WFD water bodies. The Applicant's attention is drawn to the Inspectorate's Advice Note Eighteen: The WFD in this regard. The Applicant should make effort to discuss and agree the approach to the assessment of water quality and the need for additional sampling (further to that set out in Table 8.6 of the Scoping Report) with the Environment Agency. The ES should explain the relationship between the Proposed Development and any relevant water bodies in relation to the current relevant River Basin Management Plan. If the decision regarding the cooling water infrastructure cannot be made prior to submission of the DCO application, the ES should describe and assess all possible scenarios likely to result in significant effects on relevant water bodies.
4.9.8	Paragraph 8.157	Methodology for: • probability of harm; and • magnitude of impact.	The Scoping Report does not define the term '*probability of harm'* or describe how a probability of harm will be assigned to receptors. The ES should provide a definition of this term and include a detailed description of the methodology used to determine the *'probability of harm'* to a receptor. Scoping Report paragraph 8.157 states that the significance of predicted effects will be determined in part by the magnitude of predicted impact. The methodology used to determine the magnitude

ID	Ref	Other points	Inspectorate's comments
			of the predicted impact should also be set out within the ES.
4.9.9	Paragraphs 8.157 to 8.162	Flood Risk Assessment (FRA)	All potential sources of flooding which could result in likely significant effects should be assessed in the ES. Consideration should be given to the potential for groundwater, surface water and sewer flooding (where relevant), as well as tidal and fluvial flooding. The assessment should take into account predicted impacts from climate change. A breach assessment should also be undertaken.
4.9.10	Paragraphs 8.159 and 3.11	Drainage	The Scoping Report indicates that a drainage strategy including new drainage features will be developed. The Applicant should make efforts to engage with relevant consultation bodies on the design of the new drainage system and any related outfalls. The assessment should take into account any resultant impacts on the integrity of the tidal flood defences protecting the site, which the Environment Agency's scoping consultation response (see Appendix 2 of this Opinion) explains are currently in poor condition. Any interactions with other aspect assessments (for example, the aquatic environment) should be considered, where relevant.
4.9.11	Paragraph 8.160	Climate change allowance	Any uncertainties or assumptions encountered when using the climate change model to assess impacts to water resources and flood risk should be stated within the ES.
4.9.12	Paragraph 8.161	Future baseline	The Scoping Report does not state the timeframe for the future baseline. The Inspectorate assumes that the timeframe for the future baseline will be the 12 month construction period from 2021-2022; however, this should be clearly stated within the ES.
4.9.13	Paragraph 8.161	Mitigation measures	The Scoping Report (paragraph 8.161) refers to the sufficiency of proposed mitigation. However, no mitigation measures have been described within the Water Resources and Flood Risk section of the Scoping Report. The ES should include a full description and efficacy

ID	Ref	Other points	Inspectorate's comments
			assessment of any proposed mitigation measures, as well as the residual effect. The Applicant should seek to discuss and agree the need for more detailed consideration of flood warning and evacuation plans with relevant consultation bodies. Paragraph 3.11 of the Scoping Report does state that Sustainable Drainage (SuDS) feature will be used as a mitigation measure to prevent surface water flooding. The location of SuDS and an assessment of their efficacy should be included within the ES.
4.9.14	n/a	Tidal flood risk	The Scoping Report does not address any potential changes in tidal flooding caused by the Proposed Development. The Inspectorate notes that the land required for the cooling water pipeline (development zone 'K' on Figure 2 of the Scoping Report) is partially located within the River Thames and has the potential to affect tidal flood patterns at a local level. The ES should take this into account and consider whether development in zone 'K' may impact tidal flooding events. The Applicant should make effort to agree the approach to the assessment of tidal flooding with relevant consultation bodies including the Environment Agency. The ES should include an assessment of impacts to tidal flooding from the Proposed Development where significant effects are likely.
4.9.15	n/a	Public highway adjustments	The Inspectorate notes that the public highway adjustments have not been referenced within the aspect chapter. The ES should include an assessment into how water resources and flood risk may be affected by the public highway adjustments taking into account relevant guidance. If any mitigation measures are required to prevent significant effects occurring to the water resources and flood risk arising from the public highway adjustments, a description and efficacy assessment of the proposed mitigation measures should be included within the ES.

4.10 Geology, Hydrogeology and Land Contamination

(Scoping Report paragraphs 8.164 – 8.177)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.10.1	n/a	n/a	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.10.2	Paragraphs 8.164 to 8.171	Baseline conditions	The Scoping Report describes the baseline conditions for the main development site. A description of baseline conditions for the entirety of the application site should be included within the ES. The baseline description should include reference to sites of geological importance, and state whether the Proposed Development has potential to effects sites of geological importance.
4.10.3	Paragraph 8.165	Landfills	The Scoping Report states that numerous landfills and historic landfills are located around the entirety of the Proposed Development's order limits. The landfill locations should be presented on a figure in the ES to aid understanding. An assessment of any likely significant effects arising from the migration of contaminants and ground gas should be included within the ES. Scoping Report paragraph 8.165 states that '*there has been no anthropogenic activities on the main development site',* but no information has been provided for the rest of the order limits. If anthropogenic activities have occurred within other sections of the application site, a description of these activities and the potential for likely significant effects should be provided within the ES.
4.10.4	Paragraph	Source Protection Zone (SPZ)	Scoping Report paragraph 8.171 states that the *'site is not indicated to be located within a Source Protection Zone'.* However, according to

ID	Ref	Other points	Inspectorate's comments
	8.171		the Department for Agriculture and Rural Affairs (Defra) MAGIC map, development sites 'D' and 'E' are situated within SPZ 3. An assessment into the potential effects that construction, operation and decommissioning activities within sites 'D' and 'E' may have on the SPZ should be included within the ES where significant effects are likely.
4.10.5	Paragraph 8.172	Scope of the assessment	The Scoping Report states that if piling is required, it has the potential to mobilise *'contaminants of concern'* within shallow soils, groundwater and deeper aquifers. The assessment should take into account all types of contaminants that could result in likely significant effects on shallow soils, groundwater and deeper aquifers.
4.10.6	Paragraph 8.173	Receptors	No receptors have been identified within the aspect chapter. A list of sensitive receptors and their locations should be included within the ES. The methodology used to determine the sensitivity of receptors should be agreed with relevant consultation bodies and included within the ES.
4.10.7	Paragraph 8.174	Further investigations	If the Applicant conducts intrusive investigations, the details of these investigations and an assessment of the results should be included within the ES.
4.10.8	Paragraph 8.176	Mitigation	The aspect chapter lacks any description of potential mitigation measures. The ES should include a full description of any potential mitigation measures, as well as an assessment of the efficacy of the proposed mitigation measures. The Applicant should consider implementing a Soil and Waste Management Plan (SWMP) to provide a detailed description outlining how soils will be handled and stored to prevent contamination of soils and the degradation of soil quality.
4.10.9	Paragraph	Remediation	The ES should include a full description of any remediation which may

ID	Ref	Other points	Inspectorate's comments
	8.176		be required and confirm how this is to be secured. The ES should assess any likely significant effects which could occur as a result of remediation. Any assumptions in this regard (for example, traffic movements, waste handling, and contaminated land) should be clearly stated in the ES.
4.10.10	n/a	Impacts	The ES should confirm whether any groundwater abstraction or dewatering would be required as part of the Proposed Development. Any likely significant effects, including those on WFD groundwater bodies, should be assessed.
4.10.11	n/a	Study area	The aspect chapter has not stated the assessment study area. The Applicant should make effort to agree the study area with relevant consultation bodies and ensure that it sufficiently encompasses the entirety of the impacts arising from the Proposed Development, where significant effects are likely.
4.10.12	n/a	Hydrogeological data	The Scoping Report provides very limited hydrogeological data although paragraph 8.152 states that site specific hydrogeological data will be obtained. If this data is relevant to the groundwater and potential contamination pathways, then the data should be clearly stated and addressed in the ES.
4.10.13	n/a	Cooling water pipeline and gas pipeline	The baseline conditions in respect to the land required for the cooling water pipeline and gas pipeline are not clearly defined in this section of the Scoping Report. The underlying geological and hydrogeological conditions that exist beneath the proposed cooling water and gas pipelines should be included within the baseline description. The Scoping Report should assess impacts that may arise as a result of construction of the new pipelines, including the potential for the pipelines to create new contamination pathways and alter groundwater flow and field drainage.

ID	Ref	Other points	Inspectorate's comments
4.10.14	n/a	Public highway adjustments	The Inspectorate notes that the public highway adjustments have not been referenced within this aspect chapter of the Scoping Report. The ES should include an assessment outlining how geology, hydrogeology and land contamination may be affected by any public highway adjustments taking into account relevant guidance. Any mitigation measures relied upon in the assessment should be clearly described and assessed in the ES. The ES should also explain how any such measures are secured with reference to the DCO or other suitably robust methods.

4.11 Climate Change

(Scoping Report paragraphs 8.178 – 8.197)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.11.1	Paragraph 8.183	Assessment of greenhouse gas (GHG) emissions generated by operational activities (other than natural gas combustion and through the gas fuel supply chain)	The Applicant proposes an assessment of operational GHG emissions arising from natural gas combustion, as well as GHG emissions generated through the gas fuel supply chain. The Applicant considers that GHG emissions from other operational activities (e.g. occasional maintenance staff traffic and non-fuel process consumables, such as lubricants) would be minimal and are not proposed to be assessed. The Inspectorate considers that GHG emissions from operational activities (other than natural gas combustion and through the gas fuel supply chain) are unlikely to result in significant effects and agrees that this matter can be scoped out of the assessment.
4.11.2	Paragraph 8.185	Assessment of direct GHG emissions from construction activities	The Scoping Report explains that the main impact in respect to construction-stage GHG emissions would be indirect emissions from the construction material supply chain, an assessment of which would be provided in the ES. Direct GHG emissions from construction activities (e.g. fuel consumption by construction plant) are considered to be minimal and are not proposed to be assessed. Considering the scale and duration of the construction phase, the Inspectorate is content that direct GHG emissions from construction activities are not likely to lead to significant effects and agrees that this matter can be scoped out of the ES. Notwithstanding this, the Applicant's attention is drawn to the Inspectorate's comments in Table 4.5, ID 4.5.11 regarding the need to assess any likely significant effects on sensitive receptors as a result of emissions to air from construction plant.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.11.3	Paragraph 8.186	Assessment of GHG emissions from decommissioning development components (where end-of-life information is not available)	The Scoping Report explains that GHG emissions during decommissioning of the Proposed Development would depend principally on the recycling/ reuse options for development components at that time. Where Environmental Performance Declarations (EPDs) for the development components include end-of-life within the lifecycle boundary, the Applicant proposes to include these impacts in the assessment. Where EPDs do not include this information, the Applicant considers that GHG impacts cannot be predicted with confidence and as such, are not proposed to be assessed. The Inspectorate agrees that this is a reasonable approach. The Scoping Report does not specifically state whether an assessment of direct GHG emissions from decommissioning activities (e.g. fuel consumption by plant) is proposed. Considering the likely scale and duration of the decommissioning phase, the Inspectorate is content that direct GHG emissions from decommissioning activities are not likely to lead to significant effects and that this matter can be scoped out of the ES. Notwithstanding this, the Applicant's attention is drawn to the Inspectorate's comments in Table 4.5, ID 4.5.11 regarding the need to assess any likely significant effects on sensitive receptors as a result of emissions to air from plant required for decommissioning.
4.11.4	Paragraphs 8.189 and 8.197	Climate change risks and adaptation relating to changes in temperature, humidity and wind speed	An assessment of climate change risks and adaptation is proposed in respect to changes in rainfall and flood risk. The Applicant has reviewed the Met Office UK Climate Projections 'UKCP09' dataset and considers that changes in temperature, humidity and wind speed (over the Proposed Development's operational lifetime of *'around 35 years'*) would be of low magnitude and proposes to scope out an assessment of these matters from the ES. The Inspectorate notes that UKCP18 will be available from November

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			2018 and the potential for the Proposed Development to operate beyond 35 years, as described in paragraph 3.2 of the Scoping Report: '*The Proposed Development will be designed to operate for at least 35 years, after which ongoing operation and market conditions will be reviewed'.* In view of these uncertainties, the Inspectorate is not in a position to scope out this matter. The ES should describe any potential impacts from changes in temperature, humidity and wind speed (including resilience to such impacts) with reference to the UKCP18 and the anticipated lifespan of the Proposed Development. If significant effects are likely, these should be assessed.
4.11.5	Paragraph 8.196	Assessment of cumulative GHG impacts with other proposed development	Cumulative impacts of GHG emissions from the Proposed Development, together with other specific developments, are not proposed to be assessed for *'atmospheric concentrations of GHGs'* as a receptor. The Inspectorate agrees that the assessment of GHG emissions on the atmosphere is by nature cumulative and that an assessment of cumulative GHG impacts with other proposed development can be scoped out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.11.6	Paragraphs 8.190 and 8.192	Calculation of GHGs	The ES should set out the calculation methods used to quantify the GHG emissions relating to the Proposed Development.
4.11.7	Paragraph 8.195	Assumptions and limitations	The ES should state any assumptions made in calculating the predicted GHG emissions, any limitations to the calculations and any uncertainties this presents for the assessment of GHG emissions.

4.12 Major Accidents and Disasters

(Scoping Report Section 9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.12.1	Paragraph 9.5	A separate ES chapter concerning environmental effects arising from the vulnerability of the Proposed Development to major accidents and disasters	The Applicant proposes to scope out a standalone aspect chapter concerning 'major accidents and disasters'. Instead, the Applicant proposes to consider major accidents and disasters from flooding in the Water Resources and Flood Risk aspect chapter; and major accidents and disasters from fire and explosion risks within the ES project description chapter. The Inspectorate is content that provision of the assessments within other relevant ES aspect chapters should not impede the ability of the ES to adhere with the EIA Regulations. The Applicant should ensure that the introductory sections of the ES contain clear cross referencing to where the assessment of major accidents or disasters is located.

ID	Ref	Other points	Inspectorate's comments
4.12.2	Paragraph 9.4	Vulnerability to major accidents and disasters from flooding	The assessment of major accidents and disasters from flooding should include consideration of extreme storm surge events and tidal flooding.
4.12.3	Paragraph 9.5	Vulnerability to major accidents or disasters from fire and explosion risks	The Inspectorate notes the intention to *'discuss'* principles/ measures to mitigate fire and explosion risks in the project description chapter of the ES. The Inspectorate also notes the potential for the proposed gas pipeline to interact with the Lower Thames Crossing and the gas pipeline for Tilbury Energy Centre. For the avoidance of doubt, the Inspectorate considers that an assessment of likely significant effects arising from the vulnerability of the Proposed Development to major accidents or disasters from fire

ID	Ref	Other points	Inspectorate's comments
			and explosion risks should be provided in the ES where significant effects are likely.

4.13 Human Health

(Scoping Report Section 9)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments
4.13.1	Paragraph 9.7	A separate ES chapter concerning Human Health	The Applicant proposes to scope out a standalone 'Human Health' aspect chapter and instead, to consider the potential impacts to human health within the relevant aspect chapters (described as air quality, noise, ground or water contamination). The Inspectorate is content that this approach should not impede the ability of the ES to adhere with the EIA Regulations. The Applicant should discuss with relevant consultation bodies appropriate ways of ensuring the relevant information is clearly presented and accessible (in absence of a standalone aspect chapter); for example through clear cross referencing to where the assessment of impacts to human health receptors is located.

ID	Ref	Other points	Inspectorate's comments
4.13.2	Paragraph 9.7	Assessment	The Inspectorate notes that impacts to human health from air quality are to be considered and advises that this includes consideration of impacts from construction dust. The Applicant's attention is drawn to Table 4.16, ID 4.16.1 of this Opinion in respect of impacts to human health from electric and magnetic fields (EMF). The assessment of impacts to human health should consider all phases of the Proposed Development, alone and cumulatively with other developments.

ID	Ref	Other points	Inspectorate's comments
4.13.3	Paragraph 9.7	Sensitive receptors	Specific sensitive receptors for the purposes of the human health assessment have not been proposed in the Scoping Report. The ES should identify the locations of the sensitive receptors (and their distances from the Proposed Development) and explain how these have been selected, with reference to the extent of the likely impacts. Consideration should be given to people living in residential premises, people at work/ school/ in healthcare facilities, people using recreational areas/ transport infrastructure routes/ publically accessible land, waterbodies and any drinking water supplies.

4.14 Waste Management

(Scoping Report Section 9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.14.1	Paragraphs 9.8 and 9.9	Assessment of impacts from waste produced during construction	The Applicant explains that the potential for construction waste generation would be minor (noting that no demolition works are required) and that mitigation and management measures would be implemented through the CEMP. As such, the Applicant proposes that an assessment of impacts from construction waste is scoped out of the ES. The Inspectorate has considered the potential impacts from the transport and disposal of construction waste, including those which could arise from encountering unexpected waste types or contaminants relating to the landfill sites on/ around the application site. The Inspectorate does not agree that an assessment of impacts from construction waste can be scoped out of the ES. The ES should assess any impacts from waste produced from construction which are likely to result in significant effects.
4.14.2	Paragraph 9.10	Assessment of impacts from waste produced during operation	The Applicant explains that operation of the Proposed Development would not involve any significant waste generating activities. The Inspectorate agrees that significant effects are not likely to occur and this matter can be scoped out of the ES.
4.14.3	Paragraph 9.11	Assessment of impacts from waste produced during decommissioning	With regards to decommissioning, the Scoping Report notes that the Proposed Development will be pre-engineered and modular in nature, which would facilitate removal of components from the site during decommissioning of the Proposed Development. As such, the Applicant considers that decommissioning of the Proposed Development would generate only limited amounts of waste and proposes to scope this matter out of the ES.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			Having regard to the characteristics of the Proposed Development, the Inspectorate agrees that significant effects are not likely to occur and an assessment of impacts from waste produced during decommissioning can be scoped out of the ES.

ID	Ref	Other points	Inspectorate's comments
4.14.4	n/a	Impacts from transport of waste produced during construction	The ES should identify the likely number of vehicular movements required to remove waste generated during construction of the Proposed Development. The ES should assess the impacts which may result in likely significant effects from the transport of waste generated during construction of the Proposed Development. Cross-reference should be made to the Traffic and Transport chapter of the ES, as appropriate. Any assumptions made (such as with regards to quantities of contaminated land) should be clearly set out and justified in the ES.
4.14.5	n/a	Anticipated quantities of waste	The ES should quantify the likely volumes of construction waste (including the potential hazardous waste arising) and explain how these figures have been determined. The Applicant should consult relevant consultation bodies including Thurrock Council (and other neighbouring councils, if required) to identify the locations of suitable waste disposal facilities for both hazardous and non-hazardous waste. These facilities should be identified in the ES and any likely significant effects on their capacity should be assessed.
4.14.6	n/a	Cumulative impacts	The ES should consider the potential for cumulative impacts with other developments, particularly in terms of the transport and disposal of construction waste.

4.15 Material Assets and Natural Resources

(Scoping Report Section 9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.15.1	Paragraphs 9.12 to 9.14	A separate ES chapter on material assets and natural resources	The Scoping Report explains that the Proposed Development would be located on undeveloped agricultural land and Common Land, impacts to which would be assessed in the relevant ES aspect chapters. The Applicant considers that no other material assets or infrastructure would be adversely affected by the Proposed Development. In terms of natural resources, the Applicant explains that gas fuel would be utilised during operation of the Proposed Development; it is proposed that the likely impacts are assessed in the Climate Change aspect chapter of the ES. As such, the Applicant proposes that a separate aspect chapter on 'Material Assets and Natural Resources' is not provided. The Inspectorate is content that these matters can be assessed within the relevant aspect chapters of the ES.

ID	Ref	Other points	Inspectorate's comments
4.15.2	n/a	Minerals Assessment	The Scoping Report does not confirm whether a minerals assessment will be undertaken. The ES should identify and assess any likely significant effects on mineral resources. The Applicant should make effort to agree the approach to the assessment with relevant consultation bodies.

4.16 Radiation

(Scoping Report Section 9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.16.1	Paragraph 9.15	An assessment of impacts from EMF	The Applicant considers that as the Proposed Development is located immediately adjacent to the existing Tilbury Substation with minimal distance for the grid connection, there is no potential for public exposure to EMF generated. The Inspectorate notes that the underground cable will exceed 132kV (as referenced in the DECC voluntary Code of Practice). The Applicant must provide sufficient evidence to demonstrate compliance with the ICNIRP restrictions[15], in accordance with the DECC voluntary Code of Practice[16]. If significant effects associated with increased EMF are likely, this should be assessed in the ES. The Applicant should take into account any in combination impacts from EMF associated with existing infrastructure (e.g. the existing substation and the 400kV and 275kV overhead lines crossing the application site). As such, the Inspectorate does not agree that this matter can be scoped out of the ES.
4.16.2	Paragraph 9.16	An assessment of impacts on electronic interference	The Applicant explains that the Proposed Development (including any temporary structures required for construction, such as cranes) will be

[15] Exposure guidelines published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP) in 1998

[16] Power Lines: Demonstrating compliance with EMF public exposure guidelines, a voluntary code of practice (DECC, 2012)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			no higher than existing or previous structures in the surrounding area. The Applicant considers that an assessment of impacts from the Proposed Development on electronic interference is not required. The Inspectorate agrees that significant effects are unlikely to occur and an assessment of impacts to electronic interference can be scoped out of the ES.

4.17 Heat and Light

(Scoping Report Section 9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.17.1	Paragraphs 9.17 to 9.20	An assessment of impacts from heat, with the exception of the potential impacts from heat on marine ecology (if the water cooling option is selected)	The Scoping Report states that impacts from heat on aquatic receptors (if the water cooling option is selected) will be assessed in the Aquatic Ecology chapter of the ES. The Inspectorate agrees that this is appropriate. If the air cooling option is selected, the Applicant does not anticipate any likely significant effects resulting from heat. With the exception of impacts from heat on aquatic receptors (if the water cooling option is selected), the Inspectorate is content that significant effects resulting from heat are not likely to occur and that this matter can be scoped out of the ES.
4.17.2	Paragraphs 9.19 and 9.20	An assessment of impacts from lighting, with the exception of potential impacts from light on ecological receptors	The Scoping Report explains that security lighting '*may be required*' for the main development site, with any resultant impacts to ecological receptors to be considered in the ecology chapter of the ES. Considering the distances to residential receptors, no significant effects from lighting (in terms of visual amenity) are anticipated by the Applicant and paragraph 9.20 proposes that this matter is scoped out. This appears to be contradicted by paragraph 8.16 of the Scoping Report, which indicates that night time effects on visual receptors will be assessed. The Inspectorate agrees that impacts from lighting on ecological receptors (including aquatic ecology, if the water cooling option is pursued) should be assessed and advises that this should include all phases of the Proposed Development. The Inspectorate also notes the relatively undeveloped, rural nature of the application site. Whilst specific details of the lighting requirements are not provided, the Inspectorate assumes that during operation,

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			permanent night-time lighting would be required for the main development site. There is also potential for cumulative visual effects from lighting associated with other proposed developments. As such, the Inspectorate considers that any likely significant effects on the visual amenity of residents arising from night -time construction and operational lighting should be assessed. Any impacts from lighting on navigation should also be assessed where significant effects are likely.

4.18 Aviation

(Scoping Report Section 9)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments
4.18.1	Paragraphs 9.21 to 9.23	Assessment of impacts on aviation	The Scoping Report explains that the nearest airfield (Thurrock Airfield) is approximately 8.5km from the application site and the tallest permanent structures (the stacks) would be up to 40m in height. The Applicant therefore considers that significant impacts to aviation are not likely to occur and proposes that an assessment is scoped out of the ES. Notwithstanding this, the Applicant intends to consult with the Civil Aviation Authority regarding aviation lighting and charting. The Inspectorate agrees that significant effects are unlikely to occur and an assessment of impacts to aviation can be scoped out of the ES.

4.19 Combined Heat and Power (CHP)

(Scoping Report Section 9)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments
4.19.1	Paragraphs 9.24 to 9.27	Assessment of CHP opportunities and environmental impacts from CHP infrastructure	The Applicant notes the requirement in NPS EN-1 for developers of new thermal generating stations to consider opportunities for CHP. The Applicant explains that as a peaking plant, the Proposed Development is poorly suited to CHP generation. An assessment of CHP opportunities and environmental impacts from CHP infrastructure is therefore proposed to be scoped out of the ES. The Inspectorate is content that if CHP does not form part of the DCO application, this matter can be scoped out of consideration in the ES.

4.20 Carbon Capture Readiness

(Scoping Report Section 9)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments
4.20.1	Paragraphs 9.28 to 9.31	Assessment of impacts from any future application for carbon capture and storage (CCS)	The Applicant explains that whilst land will be set aside within the application site for future CCS, consent for a CCS development will not be sought as part of the DCO application. Should a CCS development be pursued in the future, this would be subject to a separate planning application. As such, the Applicant proposes that an assessment of impacts from any future CCS development is scoped out of the ES and the Inspectorate agrees that this is acceptable. The Applicant does however intend to consider the impacts of the land-take for Carbon Capture Readiness within the ES. The Inspectorate agrees with this approach.

4.21 Cumulative Effects

(Scoping Report paragraphs 6.45 to 6.61)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
4.21.1	n/a	n/a	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Other points	Inspectorate's comments
4.21.2	Paragraph 6.58	Impacts	The Scoping Report does not explain whether there is potential for cumulative impacts with the proposed London Resort (located on the south bank of the River Thames). This should be confirmed in the ES.
4.21.3	Paragraph 6.58	Impacts	The potential for cumulative effects with the consented new jetty for the Goshems Farm land raising operation should be considered in the assessment.
4.21.4	Paragraph 6.58	Impacts	The scale of development proposed in the Tilbury area requires detailed consideration of both temporary and permanent cumulative effects; as such the Inspectorate recommends that the cumulative assessment is presented in a standalone aspect chapter. In particular the Inspectorate notes the shared land interests that exist within the Proposed Development site boundary, i.e with the proposed Lower Thames Crossing, Tilbury2 and Tilbury Energy Centre NSIPs (as illustrated on Figure 16 of the Scoping Report). The cumulative assessment should include all phases and elements of the Proposed Development and the other developments; and all relevant aspect assessment chapters. Particular consideration should be given to the cumulative impacts resulting from disturbance (including noise, traffic and light) to bird species associated with the South Thames Estuary and Marshes SSSI

ID	Ref	Other points	Inspectorate's comments
			and the Thames Estuary and Marsh SPA and Ramsar site. The relationship between the baseline year for the purposes of the cumulative assessment and the other developments that will be assessed should be clearly stated.
4.21.5	Paragraph 6.58	Zones of Influence (ZoI) for cumulative assessment	Paragraph 6.58 of the Scoping Report refers to developments '*in the immediate area of the Proposed Development'*, although a precise search/ study area is not defined. The ZoI for the Proposed Development should be clearly set out in the ES (a table format is recommended as per the Inspectorate's Advice Note Seventeen) in relation to each ES aspect topic.
4.21.6	Paragraph 6.61	Mitigation	The Inspectorate welcomes the Applicant's intention to work with the applicants of other developments to consider mitigation requirements or opportunities provided by some or all of these developments in conjunction. The ES should consider the interaction between mitigation measures proposed in respect of the different projects. Any efforts to co-ordinate mitigation strategies (across the adjacent development sites) should be described in the ES; but it must be clear who is responsible for delivery of any such strategy and how this would be secured.

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[17]
- Planning Inspectorate advice notes[18]:
  - 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: Habitat 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.

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

[18] 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[19]

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Health and Safety Executive	The Health and Safety Executive
The National Health Service Commissioning Board	NHS England
The relevant Clinical Commissioning Group	Thurrock 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	Essex Police and Crime Commissioner
The Environment Agency	The Environment Agency
The Maritime and Coastguard Agency	The Maritime and Coastguard Agency
The Marine Management Organisation	Marine Management Organisation
The Civil Aviation Authority	The Civil Aviation Authority
The Relevant Highways Authority	Thurrock Council
The relevant strategic highways company	Highways England
Transport for London	Transport for London
Trinity House	Trinity House

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

SCHEDULE 1 DESCRIPTION	ORGANISATION
Public Health England, an executive agency of the Department of Health	Public Health England
Relevant statutory undertakers	See Table 2 below
The Crown Estate Commissioners	The Crown Estate
The Forestry Commission	Forestry Commission
The Secretary of State for Defence	Ministry of Defence

TABLE A2: RELEVANT STATUTORY UNDERTAKERS[20]

STATUTORY UNDERTAKER	ORGANISATION
The relevant Clinical Commissioning Group	Thurrock Clinical Commissioning Group
The National Health Service Commissioning Board	NHS England
The relevant NHS Trust	East of England Ambulance Service NHS Trust
Railways	Network Rail Infrastructure Ltd
	Highways England Historical Railways Estate
Road Transport	Transport for London
Dock and Harbour authority	Port of London Authority
	Forth Ports (Port of Tilbury)
Lighthouse	Trinity House
Civil Aviation Authority	Civil Aviation Authority
Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000)	NATS En-Route Safeguarding
Universal Service Provider	Royal Mail Group
Homes and Communities Agency	Homes England
The Environment Agency	Environment Agency
The relevant water and sewage undertaker	Affinity Water
	Anglian Water
	Essex and Suffolk Water

[20] '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
The relevant public gas transporter	Cadent Gas Limited
	Energetics Gas Limited
	Energy Assets Pipelines Limited
	ES Pipelines Ltd
	ESP Connections Ltd
	ESP Networks Ltd
	ESP Pipelines Ltd
	Fulcrum Pipelines Limited
	GTC Pipelines Limited
	Independent Pipelines Limited
	Indigo Pipelines Limited
	Quadrant Pipelines Limited
	National Grid Gas Plc
	Scotland Gas Networks Plc
	Southern Gas Networks Plc
The relevant electricity generator with CPO Powers	RWE Generation UK Plc
The relevant electricity distributor with CPO Powers	Energetics Electricity Limited
	Energy Assets Networks Limited
	Energy Assets Power Networks Limited
	ESP Electricity Limited
	Fulcrum Electricity Assets Limited
	G2 Energy IDNO Limited
	Harlaxton Energy Networks Limited
	Independent Power Networks Limited

STATUTORY UNDERTAKER	ORGANISATION
	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 CONSULTEES (FOR THE PURPOSES OF SECTION 42(1)(B))[21]

LOCAL AUTHORITY[22]
Thurrock Council
Brentwood Borough Council
Basildon Council
Gravesham Borough Council
Dartford Borough Council
Castle Point Borough Council
London Borough of Havering
London Borough of Bexley
Medway Council
Essex County Council
Kent County Council

THE GREATER LONDON AUTHORITY

ORGANISATION
The Greater London Authority

TABLE A4: NON-PRESCRIBED CONSULTATION BODIES

ORGANISATION
Royal National Lifeboat Institution

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

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

APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

Consultation bodies who replied by the statutory deadline:

Castle Point Borough Council
Civil Aviation Authority
Environment Agency
ESP Utilities Group
Essex County Council
Essex Fire and Rescue
Forestry Commission
Gravesham Borough Council
Health and Safety Executive
Highways England
Historic England
Marine Management Organisation
Maritime and Coastguard Agency
NATS En-Route Safeguarding
Natural England
National Grid Electricity Transmission
Port of London Authority
Port of Tilbury
Public Health England
Royal Mail
Thurrock Council
Trinity House

Head of Regeneration and Neighbourhoods
Castle Point Borough Council
Council Offices, Kiln Road,
Thundersley, Benfleet,
Essex SS7 1TF
Tel: 01268 882200
Fax: 01268 882455

Date: 23.08.2018
Your Reference: EN010092-000018
Our Reference: 18/0728/CON

Ms E. Cottam
Major Casework Directorate
Temple Quay House
2 The Square
Bristol
BS1 6PN

Email: ThurrockFPG@pins.gsi.gov.uk

Dear Ms Cottam

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

Application by Thurrock Power Ltd (the Applicant) for an Order granting Development Consent for the Thurrock Flexible Generation Plant (the Proposed Development)

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

I refer to your consultation on, and notification of, the above proposal.

I would advise that this Authority has no comment at this time.

Yours sincerely

[redacted]

Kim Fisher-Bright
Strategic Development Officer

From: Jiggins Craig [mailto:Craig.Jiggins@caa.co.uk]
Sent: 28 August 2018 11:24
To: Cottam, Emma
Subject: EN010092 - Thurrock Flexible Generation Plant - EIA Scoping Notification and Consultation
Importance: High

Dear Emma

Thank you for sight of the EIA Scoping Notification and Consultation for the proposed Thurrock Flexible Generation Plant.

Whilst I agree with the report on aviation that there is no perceived significant effects to aviation given the distance from the closest airports and also with the presence of taller structures in the close vicinity, I do offer the following guidance:

- I would recommend that London City airport is advised of this proposal: London City Airport Ltd, Royal Docks, Silvertown, London, E16 2PX 020-7646 0000

- I would recommend that London Westland Heliport is advised of this proposal: London Heliport, Lombard Road, Battersea, London, SW11 3BE 020-7228 0181

- Please note the following guidance in relation to cranes: Crane Operations Cranes, whether in situ temporarily or long term are captured by the points heighted above. Note that if a crane is located on top of another structure, it is the overall hgt (structure + crane) than is relevant. Temporary structures such as cranes can be notified through the means of a Notice to Airmen (NOTAM). If above a hgt of 300ft (91.4m) above ground level, the developer must ensure that the crane operator contacts the CAA's Airspace Regulation (AR) section on ARops@caa.co.uk or 02074536599.
- If the crane is to be in place for in excess of 90 days it should be considered a permanent structure and will need to be notified as such: to that end the developer should also contact the DGC (see above). Additionally, any crane of a hgt of 60m or more will need to be equipped with aviation warning lighting in line with CAA guidance concerning crane operations which is again available at http://publicapps.caa.co.uk/docs/33/CAP%201096%20In%20Focus%20-%20Crane%20Ops.pdf

- Due to the unique nature of operations in respect of altitudes and potentially unusual landing sites, it would be sensible for you to establish the related viewpoints of local emergency services Air Support Units through the National Police Air Service (NPAS) organisation via email npas.obstructions@npas.pnn.police.uk;

- Due to the unique nature of operations in respect of altitudes and potentially unusual landing sites, it would be sensible for you to establish the related viewpoints of local emergency services Air Support Units through the relevant Air Ambulance Units - https://associationofairambulances.co.uk/member/london-ambulance-service-nhs-trust/

Should you have any further planning applications that you feel the CAA should be aware of, could I ask that they are sent to:

Airspace.policy@caa.co.uk

Regards

Craig
Craig Jiggins
ATM Technical Specialist
Safety and Airspace Regulation Group (SARG) - Airspace Regulation
Civil Aviation Authority

020-7453 6559

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Ms. Emma Cottam
National Planning Inspectorate
Temple Quay House 2 (The Square)
Temple Quay
BRISTOL
BS1 6PN

Our ref: AE/2018/123138/01-L01
Your ref: *

Date: 5 September 2018

Dear Ms. Cottam

EIA SCOPING - THURROCK FLEXIBLE GENERATION PLANT. LAND TO THE NORTH OF FORMER TILBURY POWER STATION

Thank you for your consultation dated 10 August 2018. We have reviewed the Environmental Impact Assessment – scoping report produced by RPS for the Thurrock Flexible Generation Plant, dated July 2018. Our response contains comments in relation to Flood Risk, Environmental Permitting in relation to flood risk activities, The Thames Estuary 2100 plan, the Future Thames Flood Barrier, Water Quality, Ecology, Fisheries, Contaminated Land, Waste and Environmental Permitting.

Flood Risk

The EIA scoping report (section Water Resources and Flood Risk pages 103-107) highlights that a Flood Risk Assessment (FRA) is required and will consider risks to the proposed development from flooding as well as the potential for the proposed development to increase flood risk elsewhere.

The required FRA will need to assess the actual and residual tidal flood risk to the site over the development lifetime – taking into consideration the impacts of climate change on sea levels (https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances).

A breach assessment will need to be undertaken and the FRA will need to include details of appropriate mitigation measures for the proposed development. The NPPF PPG states that 'In Flood Zone 3a Essential Infrastructure should be designed and constructed to remain operational and safe in times of flood'. The FRA will need to determine what measures are required to ensure the safety of the development, and the Planning Authority will need to ensure that the measures proposed are acceptable and appropriate.

This assessment should be based upon the existing Thurrock Council Strategic Flood Risk Assessment (SFRA), in particular the Level 2 report which considers the residual tidal flood risk due to breach of the tidal defences but also by taking into account the redevelopment of nearby sites. The SFRA and supporting appendices are available via https://www.thurrock.gov.uk/planning-policy-evidence-and-supporting-documents/evidence-and-supporting-documents. This assessment of residual risk is essential to demonstrating that this proposal is safe for its design life and does not increase tidal flood risk offsite. It is important to ensure that the development proposal will not impede or divert flood waters and that it maintains flood storage. The tidal breach is a residual risk but the strategic layout of the site, based upon breach characteristics and the provision of suitable refuge, is essential in ensuring a reduction in impact if a breach occured. The key characteristics to consider for the specific breach are depth, inundation time and hazard transition characteristics across the entire development site.

Whether any mitigation for the offsite impacts is required may depend on the scale of the impacts to properties. The FRA should include information on the actual depth of flooding to the third party receptors, both currently and with the proposed works, as well as the increase in flood depths. The FRA should also show whether the works would cause any properties to be at risk of flooding in a breach that are not currently at risk. This may require topographic threshold surveys to be undertaken. If the proposed works would cause additional properties to flood, increase the hazard to people, or alter the property-level flood mitigation measures that can be implemented, then the FRA may need to mitigate these impacts. The FRA should detail whether mitigation would be possible, and what will be included as part of the application. The Planning Inspectorate will need to determine whether the proposed resulting offsite impacts are acceptable.

A Flood Response Plan (FRP) will be required for the proposed development. The FRP should account for all sources of flooding experienced at the site with the correct actions specified for the given inundation time. It should be drawn up in close liaison with Thurrock Council's Emergency Planner, the Emergency Services and us to ensure it includes appropriate actions related to potential site circumstance and that it is compliant with the wider emergency plans for the District.

Environmental Permitting Regulations 2016

A Flood Risk Activity Permit will be required for any works in, under, over or within 8 metres (m) from a fluvial main river and 16m from a tidal main river and from any flood defence structure.

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.

The scoping document proposes that once through water cooling could be incorporated into the scheme, we would welcome the opportunity to discuss with the applicant, how this would interact with flood defences on the River Thames.

Thames Estuary 2100 Plan / TEAM2100

We welcome the acknowledgement of the Thames Estuary 2100 Plan (the Plan) within section 8.145 of the EIA scoping report and the proposed capital works on the tidal defences associated with the Plan.

Cont/d..

A point to clarify in section 8.145 is that we have permissive powers available to us via section 165 of the Water Resources Act 1991 as amended by the Floods and Water Management Act 2010 which allow us to maintain and improve existing works as well as to construct new works on a designated main river watercourse or tidal flood defence. Our powers are permissive in respect of the duty upon the land owner thus there is no legal requirement on us to exercise these permissive powers to any given standard, or at all.

The Plan provides a vision for improving the tidal flood defence system for the period to 2100 so that current standards of flood protection are maintained or improved for most of the estuary taking account of sea level rise. TE2100 recommends actions that we and others will need to take in the short, medium and long term. The plan is based on contemporary understanding of predicted climate change, but is designed to be adaptable to changes in predictions (including for sea level rise) throughout the century.

Our Thames Estuary Asset Management (TEAM) 2100 programme is delivering the first 10 years of capital maintenance works recommended by the Plan. TEAM2100 programme pioneers a new asset management approach to ensure that the 300km of tidal walls, embankments and barriers along the Thames Estuary continue to protect 1.3 million people and £275 billion of property. The programme is being delivered jointly by ourselves, CH2M and Balfour Beattie, along with other suppliers. The programme is the UK's largest single flood risk programme of works, worth over £300m, and one of the government's top 40 major infrastructure projects. This programme includes completing detailed engineering investigations of tidal assets, and carrying out the necessary repairs or refurbishment works to ensure we maintain the current tidal flood risk on the estuary.

The flood defences providing benefit to the proposed Tilbury Flexible Generation Plant site, section 8.148, are currently considered to be below required condition, and are graded as condition grade 5. Our TEAM 2100 programme has assessed these defences as requiring significant remedial works or replacement within 5 years. The government is contributing funding towards the first 10 years of investigating, refurbishing and repairing assets in the estuary. As part of Defra's Flood and Coastal Resilience Partnership funding policy, we need to find the remaining 15% of funding from those who benefit from these assets.

We note section 8.161 acknowledges the need for the required flood risk assessment (FRA) to consider the future baseline environment to inform any further mitigation measures for the proposed development. The TE2100 preferred policy for the tidal defences benefitting the site is to maintain the current standard of protection over the next 100 years, keeping pace with climate change (based upon current sea level rise projections). Current aspirations under the Plan are to raise defence crest levels from 2036-2040, a timescale which aligns with the design life of the proposed development stated within section 3.40. We are looking to work in partnership with beneficiaries throughout the Thames Estuary, to explore potential contribution options.

Therefore, we would welcome further strategic conversation with the applicant to explore how we can work in partnership to determine the most cost-effective means of delivering the required repairs to these assets as part of our TEAM2100 programme and the longer-term Plan defence crest level raising aspirations. Contributing to this programme of works means investing in flood defences which will protect the people, property and key infrastructure, including the applicant's site and gas pipeline distribution infrastructure, at risk in the Thames Estuary for the coming 40 years and beyond.

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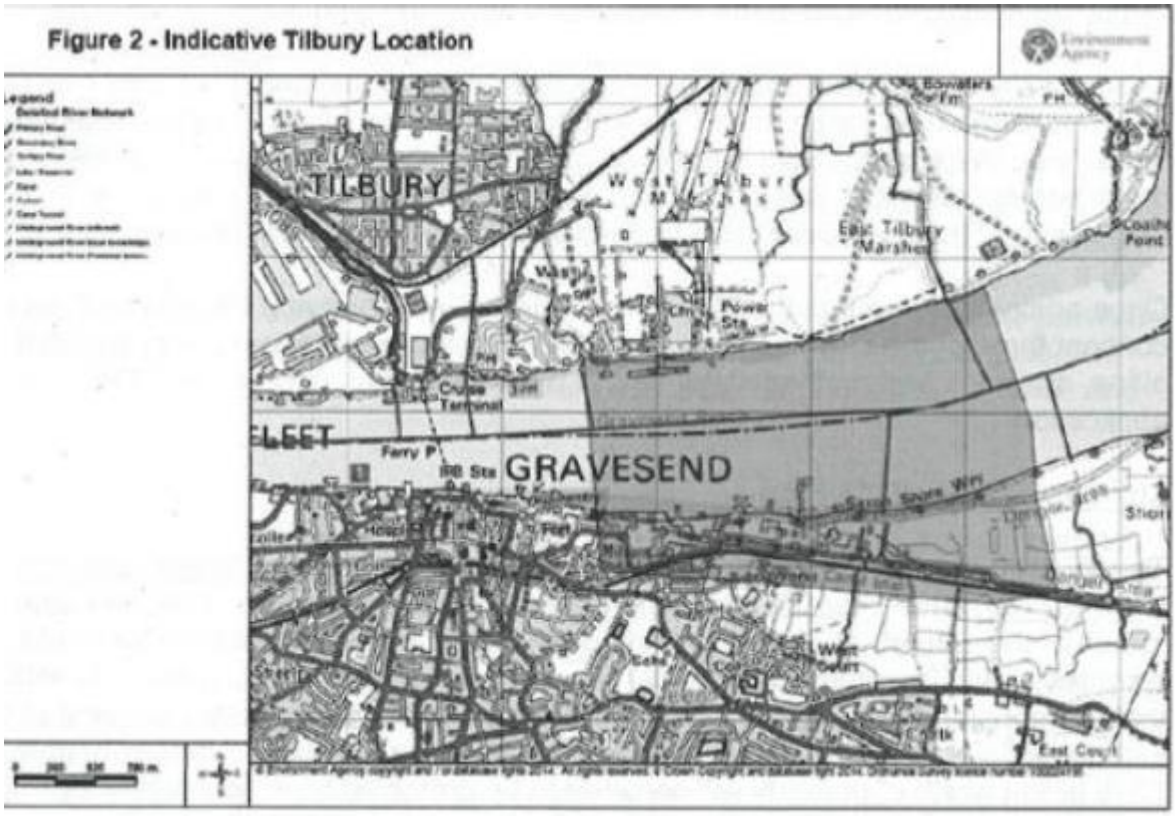
Future Thames Flood Barrier

The scoping report indicates that the completed development will be designed to operate for at least 35 years, after which its operation will be reviewed, at this stage if the continuing use of the plant is not viable, it will be decommissioned. Based on this information it is possible that there could be a conflict of land use between the plant and a future barrier at the site.

To manage increasing water levels across the estuary beyond 2070 our TE2100 Plan has explored, assessed and appraised many options, and have determined two 'front-runners' based upon today's understanding of the estuary and climate change. Chapter 9 of the Plan currently recommends the adaptation of the existing Thames Barrier and to raise all existing defences downstream (TE2100 Plan Option 1.4) as the optimum approach for the next 60 years. We currently anticipate that a new arrangement for tidal defences in the Thames estuary may be required by 2070. Given the anticipated long lead in-time and current sea level rise projections, a decision on that new arrangement would be required in 2050. The plan suggests that one possible new arrangement would be the construction of a new barrier further downstream (Option 3.0). Any future barrier would need to come into operation around 2070. We know that it would be possible to adapt the Thames barrier and the associated defences to last through to the end of the century, but, when looking at the economics and the need to keep a high reliability in the system, it may prove more beneficial to construct a new Barrier downstream and four potential frontages for a replacement barrier have been identified. Of these four frontages, two are located on the Thurrock stretch of the Thames –Tilbury (Option 3.1 – shown in the plan below) and Long Reach, Purfleet (Option 3.2). Of these two frontages, the Long Reach, Purfleet is considered by the TE2100 plan as the preferred frontage.



Selection of sites for barriers for flood management within the identified frontages can be made only as part of a wide appraisal of alternatives for achieving the desired levels of protection. However the following local factors are to be considered in identifying possible sites:

- Location where navigation is not impeded, preferably on a straight length of navigation channel and with minimum cross currents and cross winds
- Avoiding existing urban or industrial infrastructure
- Minimising effects on the existing river
- Sheltered locations for gates, locks and navigation openings to avoid excessive wave loadings
- Access routes to site for construction and maintenance
- Acceptable foundation conditions
- Availability

We have commissioned our TEAM2100 project team to undertake a desktop-study to further refine the candidate barrier locations within the four frontages considered within the TE2100 plan. Emerging draft indications from our latest project work suggests that the western extent of the Tilbury frontage would be suitable to deliver a new barrier. This is due to several factors akin to those listed above including that the river is marginally narrower, it won't coincide with the Lower Thames Crossing (discussions have taken place with the Department for Transport) and that geotechnical conditions are more favourable. Large areas of land will be required for any new barriers, and therefore we are looking to safeguard land where opportunities present themselves along these candidate frontages as we currently do not have confirmation that any future barrier could definitely be delivered on the others sites. Pending the final outcomes of the desktop study referred to above:

- It is currently anticipated that the land requirements will be similar to the existing Thames Barrier, with a larger area on one side of the estuary and a smaller area on the other.
- For any proposed barrier along the Tilbury reach, the larger area would be on the southern bank (Gravesend area), for the principal reason being that the main control tower and other facilities are close to high ground.
- As a means of comparison the current Thames Barrier operational footprint similar to what may be anticipated on the northern(Tilbury) bank is 0.46ha. The construction footprint for the previous Thames Barrier was 9.25ha, although it is anticipated that 6ha of land would be required to construct a future barrier.

We would therefore expect to see consideration given to how the TE2100 plan requirements can be taken into account as part of this proposal. Given the proposed nature of the application the impact of a future barrier maybe minimal, but we would welcome further discussions on how to incorporate space for any potential future barrier within the proposals. We are unlikely to have any construction or operational need over land along this frontage for over 40 years. We acknowledge that the proposed lifespan of the development and so this may not be an issue however we would be pleased to provide any further information you may require from us to help facilitate our aspirations under the TE2100 plan.

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Water Quality

We believe Water Framework Directive (WFD) risk assessments should be a standalone chapter within the EIA/ES, containing all relevant supporting detail, not simply references to other parts of the ES. The evidence presented in a WFD assessment needs to be an integral part of the WFD document.

The criteria for assessment of certain WFD elements is not amenable to the "high level" significance analysis used for the EIA, since WFD qualifying elements have very well defined criteria: waterborne chemicals are assessed based on concentrations and the annual average and /or maximum allowable concentrations prescribed in WFD or its daughter directive the Environmental Quality Standards Directive (EQSD). All construction (not simply dredging) in marine waters which would ordinarily require a marine licence will require a valid WFD assessment.

Activities which may lead to the disturbance of marine sediments during construction will need to determine how much sediment may be re-suspended, and over what timeframe, whether those sediments contain contaminants covered by WFD /EQSD concentration limits for water, and if the amounts of sediment are significant, then we may require chemical analyses (to CEFAS equivalent standards, for a suite of chemicals which we will advise)to be undertaken so that full impact assessment can be underpinned by the appropriate chemical data. For construction activities, chemical analysis may not be required if we satisfied that the volumes of sediment being disturbed are too small to present a significant risk to water quality based on our judgement and experience of historic sediment data collected within the Thames estuary.

We provide web-based guidance for WFD risk assessment to cover the scoping of WFD risks, but impact assessment (the next stage in assessment for elements scoped in) of WFD risks is too complex to provide generic advice, and must be considered in the specific context e.g the waterbody's baseline concentrations, time of year, tidal state(s), and the adjoining waterbodies. We suggest the applicant engages in dialogue with us before attempting to undertake impact assessment for water quality, in order to agree the levels of detail required and avoid unnecessary costs of conducting sediment analysis where we may not require it.

The report indicates that the proposal seeks to scope out saltmarsh, fish and biocide assessment, we believe that these cannot be scoped out as they need to be considered (at scoping stage at least) for WFD. We note that paragraph 8.113 references the possibility of removing biocide from the project and this is not consistent with the intention to scope out the assessment of biocides from the outset. It implies there is an intention to use biocides and these should be assessed, including detailed impact assessment within WFD water quality section if the biocide is a controlled substance under EQSD/WFD. It will also need to be considered under any permitting regime required for the discharge into controlled waters.

We would welcome further clarification relating to the number of water quality surveys that are detailed in table 8.6 of the scoping report. The table indicates that spot samples will be taken every three months but given potential for change in a single tide, we feel this may not provide useful data in relation to WFD. We feel that a sample regime of sampling at 4 sites x 1 sample per month may be useful for WFD baseline data, and the AQMS station at Purfleet may provide continuous temperature, dissolved oxygen and conductivity data (which can be used to infer salinity regime).

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Should the applicant decide to use once through cooling water in their project design they will need to consider thermal modelling. This will underpin the assessment of water quality, both for water quality influences, in isolation, by the thermal plume and for any in-combination assessments. We have provided the applicant with further information in regards to thermal modelling as a technical appendix at the end of this letter.

Ecology

The scoping report identifies a mosaic of habitats associated with the site. The main issues that should be considered are:

- Impact on statutory designated sites (SSSIs, SPAs)
- Impact on non-statutory sites (Local Wildlife Sites)
- Protected species, particularly water voles and great crested newts
- Water Framework Directive, particularly any effects on terrestrial watercourses/ditches
- Impacts on fish and eels in ditches also need to be considered and surveys undertaken
- Invasive species. If any are present then eradication measures will be required.
- Invertebrate populations. The site is likely to have a significant assemblage of scarce brownfield invertebrates. This will need detailed surveys and adequate mitigation/compensation measures such as compensatory ditches and wetland.

The developer should adequately incorporate mitigation measures to offset the impacts on receptors during construction and operation. Where mitigation is not possible, then significant compensation will be required, off-site if necessary. We would like to see incorporation of wildlife friendly SuDs and green roofs in the development where possible, as these offer an opportunity to provide net gains in regards to biodiversity.

We note in section 3.35 the applicant indicates that they may consider the use of barge delivery for bulk materials such as aggregates utilising an existing jetty. The impacts of the jetty should be taken into account if the permission for this development and its implementation were to go beyond August 2022, when the current permission for the jetty expires. The jetty was agreed on a temporary basis on the understanding that it would be removed, and therefore no permanent mitigation for the impacts of its construction were included. Section 3.35 also indicates a larger jetty and pontoon could be constructed, such an undertaking would need to demonstrate that there would be no adverse impact on marine ecology and where appropriate propose mitigation measures to limit any impact.

Saltmarsh can only be scoped out on the understanding that no saltmarsh (including upper saltmarsh species) are present in the River Thames corridor. Rather than scoping out a particular habitat type, the assessment should just state that it will scope in all habitats within the zone of influence of the development.

The outfall and intake at the River Thames will need to assess the impact of scour or any required maintenance on the inter-tidal habitats that exist. Assessments should conclude whether there are any physical impacts that will lead to a net loss of any habitat as a result.

Fisheries

The scoping report highlights the potential impact on fish. We note that paragraph 8.113 indicates the use of passive wedge wire cylinder screening in the cooling intake

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to reduce the potential impacts on entrainment and impingement. The installed screens should constitute best practice protection for juvenile eels (glass eels and elvers). We would welcome the opportunity to work with the developer to assist them in the development of appropriate fish screens and look forward to reviewing the fish entrainment modelling. We note that thermal plume modelling is proposed and this should consider the impact on marine ecology including fish.

Whilst the report indicates that the use of the existing jetty is not considered to have the potential for a significant impact on the aquatic environment, we are aware of a number of other developments in the area which cumulatively have an impact. When undertaking assessments including construction plans, we feel the developer should consider the in-combination effect on the marine ecology, this would also be a requirement for a Environmental Permit application.

Contaminated Land

There are two historical (not permitted) sites that lie adjacent to areas proposed for the development. Princess Margaret Road Landfill (Love Lane) NGR 568171 177668 had wastes deposited between 1934 and 1988. Our records describe the wastes as Inert, Industrial and Commercial, but we have no more detailed information. Low Street Brickworks NGR 567238 177705 was operational between 1956 and1977 and our records indicate Industrial and Commercial wastes were deposited. We do not have any further information, but the developer should be aware of their existence and the possibility of contaminant migration into ground proposed for development. The Local Authority may have more information regarding these landfills.

The potential route for the cooling water pipeline and the intake/discharge point lies over previously landfilled areas for which there are existing permits. The east/west route (northern section) passes over part of the Tilbury Ash Disposal Landfill Site. This has a permit for Non-hazardous waste disposal.

The north/south section of the route crosses Goshams Farm (East Tilbury Marshes) Landfill Site. Our records indicate that household wastes were deposited, although waste deposit ceased in 1958 (we have no start date). But it has recently been subject to importation of material for the purposes of restoration, which is close to, or has recently been completed. It currently has a permit for the deposit of wastes for recovery. The developer should be aware that trenching works for any pipeline could extend into the wastes deposited. Site investigations, risk assessment, options appraisal and the development of remedial/mitigating strategies should be carried out. This is particularly the case with Goshams Farm Landfill Site, due to the age and the lack of reliable information with respect to early deposits. The possibility of unexpected waste types and extent should be recognised.

The route also includes a section of the Thames foreshore and extends eastwards towards East Tilbury Landfill. This site accepted, between 1979 and 1991, both solid and liquid wastes that would be classified as hazardous today. The possibility of contaminant migration from this site should be considered. As there are two currently permitted sites, our National Permitting Service should be consulted with regards to any possible implications of development on such sites.

We note that under the section ‘Geology, Hydrogeology and Land Contamination’, there is no mention of the need for groundwater abstraction or dewatering. If there is a requirement for either activity, we should be consulted at the earliest convenience, particularly if the applicant is looking to dis-apply Section 24 of the WRA in the DCO

application..

The WFD groundwater body underlying the site is South Essex Thurrock Chalk, this is currently at poor status (High Confidence) and we are not currently licensing any new consumptive abstraction from that groundwater body. WFD does not allow the overlying secondary aquifers to be differentiated from the Chalk.

As of January this year dewatering became a licensable activity as a New Authorisation. If dewatering is required i.e. for construction purposes, we would expect the EIA to assess the potential impact from dewatering on surface water features, ecology and other water users. The potential for abstraction of historical contaminated groundwater and/or mobilisation of contaminants should also be considered.

Waste

All construction work creates waste, some can be reused on site and some will be removed from site. CL:aire guidance should be followed if soils movement is required and an acceptable receiving site can be found. If any waste is to be used on site to build roadways or other structures, then a permit or an exemption may be required and a deployment of mobile treatment may be required. The developer should note that tonnages of waste used apply to permits and exemptions. The applicant should design their scheme to minimise the generation of waste and consumption of raw materials.

Environmental Permitting

An environmental permit is required from us for this project before the commencement of operations, under the Environmental Permitting (England and Wales) Regulations 2018 (EPR) (as amended) as a Section 1.1 Combustion Activity.

We recommend parallel tracking the DCO and permit applications for this project which provides the opportunity to identify any key issues of concern and to enable these to achieve a timely resolution. Should twin tracking not be progressed then we would recommend early discussions with the applicant prior to the submission of the Environmental Permit Application. Further detail on pre-application can be found at:

https://www.gov.uk/government/publications/environmental-permit-pre-application-advice-form

Detailed design for the proposed development has not been completed and as such there is currently not sufficient information within the scoping document to comment further on specific environmental permitting aspects, however we outline general points with respect to permitting below. We submit these without prejudice to the determination of the Environmental Permit Application:

During permit determination the applicant is required to consider Best Available Techniques (BAT) in order to avoid or reduce emissions resulting from installations. Additionally, the applicant is further required to consider the reduction of impacts on the environment as a whole. Specifically in this instance, this should include in-combination affects (for both air and water) with neighbouring proposed developments and the potential for these considerations to influence technology choice, whilst achieving BAT.

Further information on permitting is available on www.gov.uk at:

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http://www.gov.uk./topic/environmental-mangement/environmental-permits.

Air Quality

The scoping report does not provide the screening distance that has been selected for designated sites (i.e. SACs, SPA, RAMSAR and SSSI sites). It should be noted that for an Environmental Permit application 'Air emission risk assessment' guidance should be used to inform screening distances for designated sites. This can be found at: (https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#screening-for-protected-conservation-areas)

As noted within the scoping reports, the proposed development is located in close proximity to a number of Air Quality Management Areas (AQMAs) with the nearest, being located approximately 1.8km away. Detailed consideration of background (baseline) concentration levels in and outside these areas will be required and considered during the Environmental Permit application stage.

It is further noted that the applicant will undertake air quality modelling of air pollutants during the operation phase of the development, inclusive of cumulative impacts of neighbouring proposed developments, for the EIA submission. Air quality modelling will also be required from the developer as part of the Environmental Permit application.

The granting of planning permission does not automatically mean a development will receive an environmental permit, however, we are willing to work with the applicant both during the pre-application period and the examination period of the DCO to ensure that all permitting issues are addressed and any delays are avoided.

We trust this information is useful.

Yours sincerely

Mr. Pat Abbott
Planning Advisor

Direct dial 0208 4748011
Direct e-mail pat.abbott@environment-agency.gov.uk

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Technical Appendix – Thermal Modelling

The applicant should follow the advice below in regards to thermal modelling:-

Proposed Temperature Targets for the Assessment of Mixing Zones in Transitional and Coastal Waters

Peter Jonas, Senior Advisor – Marine, Water Quality, Environment Agency
17th January 2015
Karen Pehrson Edwards, Principal Marine Modelling & Planning Officer, RBMS, Environment Agency, February 2018

Introduction

Water quality targets are needed to assess the thermal impact of cooling waters from power stations on transitional and coastal (TraC) waters, and to determine environmental permits for discharges to such waters. This is a draft paper proposing temperature targets to define the mixing zones for thermal discharges to TraC waters. In relation to these targets, a mixing zone is defined as the part of a body of surface water which is adjacent to the point of discharge and within which the targets may be exceeded, provided that the environmental objectives of the Water Framework Directive are met within the water body as a whole. This definition reflects the working definition of a mixing zone provided within the CIS Guidance on Mixing Zones pursuant to Article 4(4) of the Directive 2008/105/EC (EC December 2010).

For rivers, there are Water Framework Directive (WFD) standards for water temperature, which are defined in the River Basin Districts Typology, Standards and Groundwater threshold values (Water Framework Directive) (England and Wales) Directions 2010. These are given in Table 1 below.

Table 1. Temperature standards for rivers

Column 1	Column 2		Column 3		Column 4		Column 5	
	High		Good		Moderate		Poor	
River temp type	Non-cyprinid	Cyprinid	Non-cyprinid	Cyprinid	Non-cyprinid	Cyprinid	Non-cyprinid	Cyprinid
River temp (°C) as an annual 98-percentil	20	25	23	28	28	30	30	32

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e standard								
Increase (or decrease) in temp (°C) in relation to the ambient river temp, as an annual 98-percentile standard	2	2	3	3	-	-	-	-

Note to Table: The standards specified for temperature in the bottom row; Columns 2 and 3 of Table 1 must not be used for the purpose of classifying the status of bodies of surface water except where the water receives consented thermal discharges.

For TraC waters, there are no explicit WFD standards for temperature, although draft proposals were made by UKTAG in March 2008.

Regulatory Background

Water Framework Directive

Draft WFD standards were published by UKTAG in March 2008, which formed the basis for the WFD standards for rivers quoted in Table 1.

Table 2. Proposed boundaries for temperature (for rivers)

	Temperature (ºC) (Annual 98-percentiles)			
	High	**Good**	**Moderate**	**Poor**
Cold water	20	23	28	30
Warm water	25	28	30	32

It was stated concerning the maximum temperature values defined above for rivers, that:

“It is proposed that the values are not used for the classification of lakes, estuaries and coastal waters; but are to be used for these waters to calculate the action needed to achieve a target class, or for day-to-day operational control of discharges and abstractions. In the regulation of thermal discharges more specific locally derived

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background reference conditions may be required if the thresholds (above) are not appropriate."

An additional requirement of the draft standards was that, outside the mixing zone, a temperature uplift relative to background (ΔT) of 3ºC is allowable, except for waters of high ecological status where a 2°C uplift limit is proposed. In a footnote on page 26 of the UKTAG report, it was also proposed that these proposed uplift standards are the 98th percentile, or in other words, should not be exceeded for more than two per cent of the time.

Subsequent guidance from Defra in the River Basin Planning Guidance, Vol 2 (August 2008) included instruction for the Agency to comply, pending their formal adoption, with the draft UKTAG standards for temperature for rivers, lakes, estuaries and coastal waters in making regulatory decisions. This position was endorsed in Defra's River Basin Planning guidance issued in July 2014.

Habitats Directive

In addition to these proposed targets under WFD, there are existing temperature thresholds for assessing the impact of thermal discharges on European marine sites designated under the Habitats Directive (WGTAG Paper 160, January 2006). These are shown below in Table 3.

Table 3. Temperature thresholds for assessing the impact of thermal discharges on SAC/SPA sites in TraC waters

Designation	Deviation from ambient	Maximum temperature
SPA	2°C as a Maximum Allowable Concentration (MAC) at the edge of the mixing zone	28°C as a 98 percentile at the edge of the mixing zone
SAC (any designated for estuary or embayment habitat and/or salmonid species)	2°C as a MAC at the edge of the mixing zone	21.5°C as a 98 percentile at the edge of the mixing zone

Shellfish Waters Directive

There was also a guideline standard for temperature under the Shellfish Waters Directive. The standard stated that "A discharge affecting shellfish waters must not cause the temperature of the waters to exceed by more than 2°C the temperature of waters not so affected, for 75% of samples taken." This Directive was repealed in 2013. However, the Water Framework Directive must provide at least the same level of protection to shellfish waters (which the WFD classifies as protected areas) as the Shellfish Waters Directive did.

Proposed Temperature Targets for Mixing Zones in TraC waters

- Until there is better understanding of the impact on temperature and temperature change on the ecology of estuaries and coastal waters from thermal discharges, the Environment Agency will use the freshwater UKTAG (WFD) standards for 'Good'

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status for non-cyprinids to define the extent of the mixing zones for thermal discharges in TraC waters in relation to WFD requirements. There are separate mixing zones for the absolute temperature and the temperature uplift. These are:

- The water temperature at the edge of the allowed absolute temperature mixing zone shall not exceed an annual 98 percentile of 23^{o} Centigrade; and
- The water temperature uplift above ambient background water temperature outside the allowed water temperature uplift mixing zone shall not exceed 3^{o} Centigrade for more than two per cent of the year.

- It should be noted that, because many thermal discharges impact on intertidal areas, periods of exceedance of water temperature and/or water temperature uplift at intertidal locations are to be evaluated as occurring only when the location is immersed[1].
- Furthermore, in line with international good practice as outlined in the BEEMS Scientific Advisory Report Series 2011 no. 008 (Thermal standards for cooling water from new build nuclear power stations), it is also recommended that the mixing zone should not occupy more than 25% of the cross-sectional area of an estuarine channel as an annual 98 percentile.
- Where appropriate, other temperature standards will need to be considered in relation to conservation designations and specific conservation objectives, as indicated in Table 3, and other protected areas, such as shellfish waters. Additional standards may also be required for estuarine channels, where there may be the need to assess the potential for the plume to cause a thermal barrier to fish movements.

[1] The clarification in the note is important since the approach to modelling intertidal areas may differ from model to model. Some models may associate a temperature, temperature rise and indeed volume of water with a 'dry' location in order to manage the modelling of wetting and drying in a numerically stable way. It would be inappropriate for such temperature or temperature rise data to contribute to statistics of exceedance and therefore model output from periods when the cells are 'dry' should not be used. Moreover, instruments may be deployed on intertidal areas for monitoring purposes and these will record temperature continuously, regardless of whether the location is 'wet' or 'dry'. It would be inappropriate for data for periods when the instrument is 'dry' to contribute to statistics of exceedance. In practice such periods can easily be identified through consideration of water depth (pressure) or salinity data for the same instrument.

It should also be noted that, while the above temperature targets provide a useful indication of the extent of a mixing zone, consideration will continue to be given to the impact of an individual thermal discharge on the ecology of a water body to ensure that the objectives of the Water Framework Directive are met.

From: Mark Chapman [mailto:mark.chapman@espug.com]
Sent: 14 August 2018 10:46
To: Thurrock FPG
Subject: RE: EN010092 - Thurrock Flexible Generation Plant - EIA Scoping Notification and Consultation

Emma

Thank you for the email.

I can confirm, that as no ESP assets are located within the boundary of work, ESP do not have any comments to make at this time.

Many thanks.

Regards

Mark Chapman
Head of Network (Gas)

Direct line: 01372 587553
Mobile: 07917 758259
Email: mark.chapman@espug.com

From: ESP Utilities Group Ltd [mailto:donotreply@espug.com]
Sent: 15 August 2018 14:56
To: Cottam, Emma
Subject: Your Reference: EN010092-000018 Our Reference: PE136854. Plant Not Affected Notice from ES Pipelines

Emma Cottam
The Planning Inspectorate

15 August 2018

Reference: EN010092-000018

Dear Sir/Madam,

Thank you for your recent plant enquiry at: (EN010092-000018).

I can confirm that ESP Gas Group Ltd has no gas or electricity apparatus in the vicinity of this site address and will not be affected by your proposed works.

ESP are continually laying new gas and electricity networks and this notification is valid for 90 days from the date of this letter. If your proposed works start after this period of time, please re-submit your enquiry.

Important Notice

Please be advised that any enquiries for ESP Connections Ltd, formerly known as British Gas Connections Ltd, should be sent directly to us at the address shown above or alternatively you can email us at: PlantResponses@espipelines.com

Yours faithfully,

Alan Slee
Operations Manager

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Bluebird House
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http://www.espug.com

Essex County Council

FAO Ms Emma Cottam
The Planning Inspectorate
3D Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Our Ref: ECC/TFGP/ScopingOpinion

Your Ref: EN010092-000018

Date: 6 September 2018

Sent by email: ThurrockFPG@pins.gsi.gov.uk

Dear Ms Cottam,

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

Application by Thurrock Power Ltd (the Applicant) for an Order granting Development Consent for the Thurrock Flexible Generation Plant (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 the opportunity to respond on behalf of Essex County Council (ECC) as a neighbouring authority and statutory consultee on this Statutory Consultation on the Scoping Report to inform the Environmental Statement (ES) for the proposed development for the Thurrock Flexible Generation Plant.

ECC is a neighbouring and strategic authority within the definition of the Duty to Co-operate S110 of the Localism Act 2012 and Section 30 of the Planning and Compulsory Purchase Act 2008. The proposed Thurrock Flexible Generation Plant is a strategic cross-boundary matter and ECC wish to engage with this process, with the following relevant roles:

- A key partner and service provider within Essex promoting economic development, regeneration, infrastructure delivery and new development for the benefit of Essex and the region;
- The highways and transportation authority for Essex, with responsibility for the delivery of the Essex Local Transport Plan;
- The Minerals and Waste Planning Authority and Lead Local Flood Authority for Essex;
- The Public Health advisor for the county of Essex; and
- The Local Education Authority for Essex and as a key partner in the promotion of employability and skills.

ECC has a long history of close working with Thurrock Council, a neighbouring unitary authority within Greater Essex and as partner authorities in South Essex, within London Thames Gateway; South East Local Enterprise Partnership (SELEP) and the Opportunity South Essex Partnership (OSE). It will be necessary for Thurrock Power Ltd to have regard to the wider regional priorities, as set out by ECC, SELEP and OSE.

ECC wishes to engage with this ongoing process, to develop the Preliminary Environmental Information Report (PEIR) and inform the ES that will form part of the application for the Development Consent Order (DCO) application for the Thurrock Flexible Generation Plant.

ECC has identified a range of issues and comments regarding the Scoping Report, which require further clarification, additional information and actions to be incorporated within the ES. ECC's comments are outlined below.

ECC Comments by Service Area

The nature and scope of the consultation responses that follow concern:

- Highways and Transportation
- Minerals and Waste Planning
- Lead Local Flood Authority – Flood and Water Management
- Public Health and Wellbeing
- Economic Growth, Regeneration and Skills
- Historic Environment and Archaeology
- Landscape and
- Natural Environment

Highways and Transportation

ECC needs to be satisfied that any impacts on the strategic routes connectivity, capacity and resilience are addressed and potential benefits for the Essex economy are optimised. ECC requires further data and analysis on the wider strategic routes to:

- Identify the impact on Essex and surrounding areas;
- Understand employee access to and from the site, job numbers and expected modes of travel (including sustainable access and potential links with London Gateway);
- Evaluate the impact, with regard to TfL transport projects in the vicinity of the scheme and Essex;
- Establish the projected increase in traffic arising from the scheme and the cumulative impact of current planned growth (and transport projects) including those located within Greater Essex and in the east London boroughs adjoining Thurrock and Essex.

- Establish the implications, sensitivity and inter-relationship on transport movements across the wider strategic network, including the Dartford crossing and the forthcoming Lower Thames Crossing (LTC).
- Understand the timescales for project delivery and the cumulative impacts and timing with other major transport infrastructure projects in the vicinity, be it the LTC, A13 road widening, A127/A130 Fairglen Interchange improvements, and the A127 route management strategy; and
- Understand the sustainable transport provision for employees and freight during both the construction and operational phases of the development. For example how will employees travel to the site?

ECC would expect these details and proposals to be addressed in the Transport Assessment (TA) Report.

LTC is a strategic transport NSIP project which is important to the UK as a whole and is supported by ECC. The road network connecting to the LTC is the responsibility of Highways England (HE). ECC would like to be reassured that both the construction and operational impacts of the proposed Thurrock Flexible Generation Plant on the construction and operation of the LTC have been fully considered. This equally applies any proposed new junction to support the Tilbury 2 NSIP scheme.

ECC seek confirmation from HE and Thurrock Power Ltd that these discussions have taken place, and that HE have no objections to the Thurrock Flexible Generation Plant.

Specific Comments

Paragraph 8.47 discusses operational traffic and should be re written to clearly state whether the applicant expects to prepare a TA for the operational phase, and the analysis they intend to undertake to assess the need for a TA. There is a reference to “scoping out an assessment” but this phrasing is vague and needs clarification. ECC considers that operational traffic should also be considered as there is the potential for impacts on the roads within the ECC highway network or be robustly demonstrated why it should be out of scope. It is not considered that there is sufficient evidence to scope operational traffic out at this stage.

Paragraph 8.48 notes that “consultation may also be required with ECC as a neighbouring highway authority”. This should be a requirement and should be re-written as “consultation will also be required with ECC as a neighbouring highway authority”. Based on the Scoping Report ECC would expect this to be a fairly straight forward process on the basis the applicant can provide data to demonstrate that the transport impact on the ECC network is negligible.

Paragraph 8.50 - cumulative impacts are important here. ECC will once again wish the applicant to demonstrate that they have agreed any impacts on the strategic road network and necessary mitigation with HE. Construction traffic routing, especially related to

abnormal loads, will need to be assessed for its impact (if any) on the ECC network. Construction worker travel plan should consider sustainable modes and access for potential construction workers based in Greater Essex.
Paragraph 8.53 - ECC would like to see data to back up the proposal to remove operational traffic from the scope of the assessment.

In terms of mitigation measures, ECC recommends this include travel plans for construction workers and operational workers, and that such measures should seek to link with any mitigation measures proposed to be put in place for Tilbury 2 and the Tilbury Energy Centre Scheme, given the close proximity of the sites. ECC as neighbouring highway authority would wish to be consulted on all aspects relating to traffic movements and impact on the highway network including points above, along with workers travel planning etc.

Minerals and Waste Planning

ECC is a neighbouring Minerals Planning Authority and neighbouring Waste Planning Authority. ECC has no comments to make at this stage in relation to this EIA Scoping Report or the wider proposal.

Lead Local Flood Authority – Flood and Water Management

ECC is a neighbouring Lead Local Flood Authority (LLFA).

If a surface water drainage strategy is to be developed in discussions with the Environment Agency, ECC as a neighbouring LLFA and Risk Management Authority (RMA) should be included in these discussions. This should be clearly identified and the role that will be played should be transparent from the earliest opportunity.

Paragraph 8.158 - ECC as LLFA wishes to be consulted in relation to water quality.

The impact on groundwater and groundwater movement should be included in the assessments. The assessments should also consider infiltration potential.

Pluvial flood risk should be explicitly considered and be presented as a separate section of the ES. At present it appears to be focused on fluvial flood risk.

It is recommended that the ES refer to the Flood and Water Management Act, Land Drainage Act, and British Standards related to flooding, surface water and construction, and as a minimum.

Public Health and Wellbeing

ECC is the Public Health advisor in the two tier administrative area of Essex, and is the host authority in respect of the neighbouring authorities in Essex - Basildon, Brentwood,

and Castle Point. ECC Public Health wishes to engage with this process in liaison with colleagues in Public Health England and Thurrock Unitary Authority Public Health advisors (including environmental health). The following comments are made.

It is strongly recommended that a health impact assessment is prepared as part of this proposal. The wider determinants of health, with reference to any potential socio-economic benefits, should be explored i.e. employment opportunities including during the construction phase of this project.

ECC would request that Environmental Health colleagues in Thurrock Unitary Authority and Public Health England are consulted so to ensure that the potential environmental impacts upon human health are addressed. It is strongly advised that the Public Health England Centre for Radiation, Chemicals and Environmental Hazards (CRCE), with their remit of human health protection, are advised of this scoping document and have the opportunity to advise on their inclusion requirements to the report and the subsequent planning application.

Public Health at ECC wishes to be engaged on the wider public health issues that are identified and may impact upon Essex residents. ECC anticipate engaging with Thurrock Unitary Authority Public Health team on these matters.

Economic Growth, Regeneration and Skills

Section 8.61 - Despite the report's statement that there is very little government guidance setting out preferred method for assessing potential socio-economic effect, there are common methods used in other settings which could be applied here.

Whilst this is an infrastructure proposal, it is recommended that the applicant considers the employment generation through the construction phase. In particular consideration should be given to datasets to quantify potential construction employment effects through the Construction Industry Training Board Labour Forecasting Tool.

Consideration should also be made to develop a supplementary planning document to develop a local employment legacy, skills and training needs for both the construction and operational phases. The construction phase could potentially see a number of skills pinch-points and early consideration and engagement is needed to address these skills and local labour challenges. This may include the need for investment in the local skills provision in order to address skills issues and develop a skills legacy.

This should be considered cumulatively with the other NSIP projects within the immediate vicinity of the proposed site, namely LTC, Tilbury 2 and the Tilbury Energy Centre, which will also generate significant requirements for local employment and development of construction and engineering skills across the area.

Historic Environment and Archaeology

The Archaeology and Cultural Heritage section contains the information relating to the proposed assessment methodology of the historic environment impacts. It should be noted that the proposed development area is situated in a sensitive area of heritage assets situated between two scheduled coastal forts.
It is recommended that considering the impacts likely to be caused by this development to both the heritage assets and their settings including listed buildings, scheduled monument, conservation areas and archaeological deposits, the applicant should organise joint early discussions between Historic England, conservation officer and archaeological advisors in advance of their EIA assessment to ensure the work is being undertaken appropriately and covers all aspects that will be required to be assessed.

Considerable recent work has occurred within the area and all of this data will require reviewing and adding to the existing data held on the HER.

A field assessment is likely to be needed to understand potential land fill within the area and how this has impacted on the historic ground surface. Even if this has occurred then the historic creeks and field boundaries that survive are likely to contain surviving archaeological deposits.

Landscape

The approach and methodology set out for the Landscape and Visual Impact Assessment (LVIA) and included in the EIA Scoping Report gives a broad outline of the assessment process and aspects needed to assess the impact of the proposed development through the EIA process.

The non-technical summary correctly identifies the need to assess cumulative impacts arising from other national infrastructure projects and developments within this area.
There will be a need to consider the landscape and visual impacts associated with the development of land which may otherwise have provided an element of landscape mitigation for the proposed development of Tilbury 2 and the Energy Centre. The proposed location for the Thurrock Flexible Generation Plant is directly to the east of the DCO order limits for Tilbury 2 so this will impact on the scope for the marshes to offer wider landscape mitigation for this development.

<u>Specific Comments</u>

Paragraph 6.41 - The DCO boundary will need to incorporate all land where the primary landscape mitigation measures are proposed. The LVIA will need to identify how the proposal will impact upon the effectiveness of the proposed landscape mitigation strategy for Tilbury 2.

Paragraph 8.18 and 8.19 - Proposes 20 potential viewpoints with the exact location of representative viewpoints and photomontage ‘to be agreed with Thurrock Council’. Figure

9 shows the proposed locations. These viewpoint locations appear to be limited in range and in terms of assessment of visual impacts. The final choice of viewpoints should be agreed with all the relevant local planning authorities.

Visual receptors should be considered in terms of their type for example residential, transport road/rail and recreational i.e. visitors to promoted sites, bridleway and footpath users. It is suggested that other areas where viewpoints need to be considered and identified are as follows:

- Fort Road, east of Tilbury (note VP 11 Tilbury 2)
- West Tilbury from the St James Churchyard, and from footpath 68
- West Tilbury from Church Road
- North of West Tilbury, from footpaths 67 and 63.
- Chadwell St Mary, south east side of settlement from footpaths
- East Tilbury, edge of new settlement extension and bridleway 58
- South of Station Road, footpath 200
- Coalhouse Fort, various locations including the car park
- Coalhouse Point and footpath 146, Two Forts Way

Figure 9.8 of the Tilbury 2 LVIA documentation also provides useful locations in relation to some of the areas.

Paragraph 8.20 - States that five visual representations will be provided. It is suggested that this seems rather limited given the range and scope of likely visual receptors with the zone of theoretical visibility. Once the assessment process has been undertaken it is likely that this will highlight the need for additional visual representations to be presented. Some viewpoint locations may also coincide with the Heritage receptor locations for example Coalhouse Fort and its setting.

Paragraph 8.21 - States that ‘mitigation measures will be considered as part of the iterative design process’. This statement appears rather weak. On this basis the following is recommend.

The potential landscape and visual impacts arising from this proposed NSIP development on the identified receptors, designated sites and adjacent landscapes will need to be assessed and identified. Proposals for appropriate landscape mitigation measures, to deal with the identified landscape and visual impacts will need to be set out in a Landscape Mitigation Strategy, in a similar manner to that proposed for Tilbury 2.

The strategy will need to identify additional landscape mitigation measures which are required to deal with the residual landscape and visual impacts arising from the development, and associated infrastructure. This is likely to include the need for off-site measures.

Mitigation measures will need to be identified and these should be designed to accord with the key characteristics and qualities of the neighbouring landscape character areas. The Tilbury urban area, West Tilbury, Tilbury Marshes and Chadwell escarpment LCA areas are likely to experience the most significant visual impacts and measures to mitigate impacts and reinforce the landscape condition should be designed accordingly.

Where the identified landscape measures fall outside the DCO boundary line then specific agreements to ensure that works are secured, delivered (funded and implemented) and managed appropriately will need to be formulated.

It is suggested that a Landscape Mitigation Fund be set up and funded from the various major developments within the area and used to fund landscape mitigation projects and enable management measures/projects to be undertaken.

Arboriculture

Although the report references the fact there are trees on site, there does not appear to be any specific information provided on proposals for any arboricultural surveys.

For the size and scale of the proposals, it will be necessary to understand the constraints that the existing trees on site pose. In order to determine whether these trees will be suitable for retention or removal, a Tree Constraints survey should be carried out in line with British Standard 5837: 2012, detailing all trees within the red line boundary and within 15m of the site.

Trees that are categorised as either A or B do form a constraint on development. Any potential removals should be carefully considered and if removal is necessary, should be mitigated for within the Landscape Management Plan. Category C trees do not form a constraint on development.

Once details of site design have been progressed, it will be necessary to complete an Arboricultural Impact Assessment, Method Statement and Tree Protection Plan (as outlined in BS5837: 2012) as part of a full planning application. This will ensure any retained trees are suitably protected throughout development and any tree losses are mitigated for.

Natural Environment

This proposed NSIP is likely to result in indirect impacts on statutory designated sites both SPA and SSSI and direct impacts on several non-statutory designated sites, such as Local Wildlife Sites (LoWS).

For the most part, ECC is satisfied that nationally agreed guidelines have been followed for the ecology surveys, but please see the section specific comments below. All mitigation

and compensation should take place within the red line boundary submitted for the DCO application.

The EIA should thoroughly explore all reasonable options to enhance the development for Protected and Priority species and habitats, and others of significance at a local level.

It is recommended that the HRA screening needs to identify which Impact Risk Zones (IRZs) the site falls within for Natura 2000 (N2K) sites identified by Natural England on MAGIC website for this type of development which may or may not be 10km. An assessment should also be made of SSSIs and LoWS (within 2km) and Marine Conservation Zones (rMCZ's).

The Shadow HRA needs to consider impact pathways for Likely Significant Effects (LSE) on the Thames Estuary and Marshes SPA/Ramsar and North Downs SAC from **the development alone or in-combination with other plans and projects** e.g. LTC, Tilbury2 and Tilbury Energy Centre – all NSIPs in the locality.

Where further ecological field work is required will be undertaken to ensure that up to date information is used as a basis for assessment, these should be supplemented by data from Essex Field Club and Essex Wildlife Trust to inform the survey requirements and ensure that Priority and Protected Species are considered adequately. Records from new or updated surveys undertaken should be shared with both records centres.

It is considered that the proposed structure for the ES should include a dedicated section on the Cumulative and In Combination in Impacts and Benefits, to provide a collective assessment of the Impacts/Benefits and any mitigation.

If you require further information or clarification on any points raised in this response please contact Graham Thomas or Anne Clitheroe, details set out below.

A fully detailed and specific Ecological Management Plan will be expected as part of the planning submission, focussed on national and local conservation priorities.

<u>Specific Comments</u>

Paragraph 8.86 - Reference to LoWS is limited to 1km from the main development site and states the presence of two such sites, but section 2.5 of the PEA in Appendix D shows that there are two LoWS within the red line boundary, a further five adjacent to it and 11 more within 2km. Direct and indirect impacts to all of these site s should be considered within the EcIA. These sites should also be considered for enhancement should compensation be required.

Figure 2 (Sheet1) - This figure gives the red line boundary for the development, which differs from the area covered by the PEA contained in Appendix D. Area K, as shown on this figure, crosses land known as Tilbury Ashfields, and will affect land already managed in mitigation for ecological impacts arising from an active planning consent there. Any

cumulative impact on this site, which is of high significance for its invertebrate populations should be carefully assessed and substantial compensation for any impacts will be expected.

Appendix D - 2.1 - Biological records have been obtained from EWT's Biological Records Centre, but Essex Field Club also hold biological records including for invertebrates, which is likely to be a significant issue in this location and so data should also be obtained from them to inform the EIA.

Appendix D – 3.42 - Area K is described as improved grassland, but is actually part of the Tilbury Marshes Local Wildlife Site, recorded in the Site description as being relict grazing marsh with a "good grazing-marsh flora".

Appendix D – 3.45 - The evaluation of habitats plays down the status of some grassland areas as remnants of Coastal Grazing marsh, a Priority Habitat. Further detailed botanical survey is required to establish the plant communities present (Area K) and to properly evaluate its conservation value and potential for restoration or enhancement.

Appendix D – 4.2 - Only Area A has been subject to further botanical survey. As mentioned above, an appropriate botanical survey of Area K, which is proposed as planning gain land, should be carried out to establish its current character and condition in relation to its coastal grazing marsh origin.

Appendix D – 8.28 - Although not subject to a national conservation designation, it should be noted that the breeding pair of Raven represents the only known breeding site in Essex at the present time, and is therefore of high County – level significance. Compensation for the loss of the nest site should be considered.

If you have any queries regarding the information contained in this letter please do not hesitate to contact as below.

Yours sincerely

[redacted]

Enquiries to: Graham Thomas
graham.thomas@essex.gov.uk

or

Graham Thomas
Head of Planning & Development Service
Economies, Localities and Public Health

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Our Ref: CAS-627953
Your Ref: EN010092-000018
Date: 4th September, 20218

Dear Madam,

Re: Town & Country Planning Act 1990

Planning Application Nº.: EN010092-000018

Description: Application by Thurrock Power Ltd for an Order granting Development Consent for the Thurrock Flexible Generating Plant

Location: Immediately to the north of the existing Tilbury Substation and site of the decommissioned Tilbury coal fired power station, Fort Road, Tilbury. Part of the main development site is known as Walton Common (registered common land number CL228). It forms part of the common known as The Green, Hall Hill, Fort Road, Parsonage, Walton and Tilbury Fort Commons (ID 33611).

Thank you for your letter dated 10th August 2018 enclosing location drawings and scoping report showing details of the above proposal.

The application has been considered and I draw your attention to the following comments:

Access

Access for Fire Service purposes has been considered in accordance with the Essex Act 1987 - Section 13.

The arrangements should be in accordance with the details contained in the Approved Document to Building Regulation B5

More detailed observations on access and facilities for the Fire Service will be considered at Building Regulation consultation stage.

Building Regulations

It is the responsibility of anyone carrying out building work to comply with the relevant requirements of the Building Regulations. Applicants can decide whether to apply to the Local Authority for Building Control or to appoint an Approved Inspector.

Local Authority Building Control will consult with the Essex Police, Fire and Crime Commissioner Fire and Rescue Authority (hereafter called "the Authority") in accordance with "Building Regulations and Fire Safety - Procedural Guidance".

Approved Inspectors will consult with the Authority in accordance with Section 13 of the Building (Approved Inspectors etc.) Regulations 2010 (as amended).

Water Supplies

The architect or applicant is reminded that additional water supplies for fire-fighting may be necessary for this development. The architect or applicant is urged to contact the Water Technical Officer at Service Headquarters, telephone 01376-576344.

Sprinkler Systems

"There is clear evidence that the installation of Automatic Water Suppression Systems (AWSS) can be effective in the rapid suppression of fires. Essex County Fire & Rescue Service (ECFRS) therefore uses every occasion to urge building owners and developers to consider the installation of AWSS. ECFRS are ideally placed to promote a better understanding of how fire protection measures can reduce the risk to life, business continuity and limit the impact of fire on the environment and to the local economy.

Even where not required under Building Regulations guidance, ECFRS would strongly recommend a risk based approach to the inclusion of AWSS, which can substantially reduce the risk to life and of property loss. We also encourage developers to use them to allow design freedoms, where it can be demonstrated that there is an equivalent level of safety and that the functional requirements of the Regulations are met."

If you have any further queries, then please contact the above Officer quoting our reference number.

Yours faithfully

Ken Acton
Fire Safety Officer
South West Area Command

From: Meakins, Corinne [mailto:corinne.meakins@forestrycommission.gov.uk] **On Behalf Of** East and East Midlands Forest Area Enquiries
Sent: 13 August 2018 10:12
To: Thurrock FPG
Subject: Forestry Commission response EN010092-000018 Thurrock Flexible Generation Plant (the Proposed Development)

To Emma Cottam,

Thank you for consulting the Forestry Commission on this application , there doesn't appear to be any ancient woodland close to the site that would l be impacted by this application therefore we do not have any comment to make.

Yours sincerely

Corinne Meakins
Local Partnership Advisor
East and East Midlands
Forestry Commission England
Tel: 0300 067 4583
Mobile; 07900 227 123
Corinne.meakins@forestrycommission.gov.uk
www.forestry.gov.uk

Gravesham Borough Council

Delegated Report

Application No:	20180853
Location:	Tilbury Power Station Fort Road Tilbury Essex
Description:	Consultation is in regard to a request made to the Secretary of State for a Scoping Opinion made under Regulations 10 and 11 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 in regard to a Scoping Report (RPS Reference: OXF10872/July2018/Revision 8) submitted by RPS Group in relation to a prospective NSIP made under the Planning Act 2008 (as amended) regarding a prospective Development Consent Order application for the construction and operation of: 1) Reciprocating gas engines with rated electrical output totalling 600 MW; 2) Batteries with rated electrical output of 150 MW and storage capacity of up to 600 MWh; 3) Gas, electricity and potential cooling water connections, private access road(s) and minor public highway widening for delivery of large loads; 4) Designation of replacement common land (exchange land) and possible creation of habitat for protected species translocation; and 5) Possible transfer of land to Thurrock Council
Applicant:	The Planning Inspectorate

Proposal

This is a request under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 for a scoping opinion in relation to a prospective NSIP made under the Planning Act 2008 (as amended) regarding a prospective Development Consent Order application for the construction and operation of:

1) Reciprocating gas engines with rated electrical output totalling 600 MW;

2) Batteries with rated electrical output of 150 MW and storage capacity of up to 600 MWh;

3) Gas, electricity and potential cooling water connections, private access road(s) and minor public highway widening for delivery of large loads;

4) Designation of replacement common land (exchange land) and possible creation of habitat for protected species translocation; and

5) Possible transfer of land to Thurrock Council

Relevant Planning History

This development site is located within an adjoining authority's jurisdiction and Gravesham Borough Council has no information, other than what is contained in the above mentioned scoping report as to the planning history of the site. Irrespective of this fact, the Council has been consulted on a number of applications within that adjoining authority's jurisdiction and those which are considered relevant are listed below:

20120446	Scoping Opinion under Regulation 13 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, proposal to build and operate a two stage advanced recycling and electricity generation facility. Port of Tilbury, Thurrock Decision No Objections Decided 29/08/2012
20120666	Scoping Opinion under Regulation 13 of Town and Country Planning (Environmental Impact Assessment) Regulations 2011 for proposed Biomass Phase 2, proposed commercial greenhouse development. Tilbury Biomass Phase 2, Thurrock Decision No Objections Decided 29/08/2012
20120818	Consultation regarding outline application for works required on the Tilbury Power Station site (onshore application) to extend the lifetime by 12 - 15 years. Tilbury Power Station Site, Fort Road, Tilbury Decision No Objections Decided 16/08/2013
20120819	Consultation regarding outline application for works needed in or on the tidal Thames (offshore application) to extend Tilbury Power Station lifetime by 12 - 15 years. Tilbury Power Station Site, Fort Road, Tilbury Decision No Objections Decided 16/08/2013
	Request for an Environmental Impact Assessment (EIA) Scoping Opinion in respect of (a): proposed redevelopment of land for use as a port in association with

20160850	the existing Port of Tilbury, comprising a roll on/roll off (Ro-Ro) terminal, aggregates terminal including new and improved conveyors, external storage, improvements to existing land access, creation of hard surfaced pavements, erection of welfare buildings, improvements of an extensions to existing jetty including creation of new Ro-Ro berth and (b) construction of new and improved surface access to the land at the former Tilbury Power Station in association with the change of use and redevelopment of the land for port uses comprising new link road from Ferry Road (A1089) to Fort Road, (including associated changes to local highway and rights of way network) and formation of a rail spur and sidings. Tilbury 2 Power Station, Fort Road, Tilbury Decision - Observations Sent Date – 13.10.2016
20170320	Consultation on a scoping opinion and under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009-Regulation 9. Port of Tilbury London Ltd, Tilbury Freeport, Tilbury. Decision - Observations Sent Date – 24.04.2017
20170388	Continued re-profiling of the site 9 metres AOD using inert reclamation material imported by river, in place of Pulverised Fuel Ash from the adjacent now redundant Power Station. Land Adjacent Tilbury Power Station, Fort Road, Tilbury Decision - Observations Sent Date – 27.04.2017

Representations

The Planning Inspectorate, being the Appropriate Authority is responsible for undertaking consultation on this Scoping request and Gravesham Borough Council are only a consultee. Therefore, there is no requirement or obligation on the part of GBC to undertake any external consultation in regard to this submission. The Planning Inspectorate would have consulted directly with: The Environment Agency; Historic England; the Marine Maritime Organisation; Natural England; Port of London Authority; the Royal Society for the Protection of Birds (RSPB), Etc.

As this is an application for a scoping opinion, no neighbour consultations have been carried out.

Appraisal

Background

Due to the scale of the prospective development, the proposal would be deemed to be a Nationally Significant Infrastructure Project (NSIP), which would fall to be considered by The Planning Inspectorate (PINs), as it relates to the construction of a generating station in England with an energy generating capacity in excess of 50 megawatts. (Articles 14(1)(a) and 15(1) of the Planning Act 2008 (as amended).

Power Stations with an energy generating capacity in excess of 300 megawatts are considered to be Schedule 1 development as defined by The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regs). The definition of an Environmental Impact Assessment (EIA) Development, as set out in Regulation 3(2) of the EIA Regs is development that falls within Schedule 1 of the EIA Regs. Therefore an EIA will be required.

Regulation 10 of the EIA Regs allows for the applicant to seek a scoping opinion from the Secretary of State as to the content of the EIA and that is the subject of this consultation form PINs.

Considerations

Regulation 5 of the EIA Regs details information for inclusion in an EIA. In addition to this, the internal responses from the Council's Environmental Protection Team and any other relevant representations need to be considered in terms of whether the EIA scope needs to be broadened.

The EIA scoping report is comprehensive, covering Air Quality; The Aquatic Environment; Ground Conditions and Hydrology; Flooding; Terrestrial Ecology; Landscape and Visual Effects; Noise and Vibration Traffic and Transport; Socio-Economic and Amenity; Cultural Heritage; Population and Human Health; Waste; and Cumulative and In-Combination Effects. In terms of these areas listed below the Council would defer to the expertise of the relevant expert/statutory bodies:

- The Aquatic Environment – The Environment Agency and Natural England;
- Ground Conditions and Hydrology – The Environment Agency;
- Flooding - The Environment Agency;
- Terrestrial Ecology - The Environment Agency and Natural England;
- Traffic and Transport – The Highways Agency, if relevant, and the relevant Local/County Planning Authority;
- Cultural Heritage; English Heritage; and Waste – The Environment Agency and the relevant Local/County Planning Authority

From a Gravesham perspective, the key issues that need to be covered by the Environmental Statement (both on a solus basis and in combination with other schemes) are:

- Noise

- Air Quality
- Landscape and visual resources
- Cultural heritage
- Terrestrial and marine ecology

In terms of cumulative impacts, the list of projects included in the Scoping Report includes:

- POTLL Tilbury 2
- Lower Thames Crossing
- Tilbury Green Power (within existing Tilbury Docks area – Tilbury 1)
- The continuing demolition of RWE Tilbury B power station
- RWE proposals for Tilbury Energy Centre
- London Distribution Park
- Goshens Farm land remediation

Cumulative impacts should be considered for both the construction and operational phases of the developments. In addition, consideration should be given as to the implications of some of the above not coming forward, given they do all have consent or there may be a failure to implement. For example, in the event of Tilbury 2 or the Tilbury Energy Centre not being granted consent or being taken forward, the proposed development subject of current scoping would be in a more exposed location relative to Gravesham given the absence of screening development. This may have implications in terms of visual impact and noise transmission.

It is also suggested that consideration be given as to whether the NSIP proposals for London Resort at Swanscombe Peninsula could result in cumulative impacts that need to be taken into consideration – particularly if water cooling is used or water transport used during the construction phase, given the proposed Marine Conservation Areas detailed in the Scoping Report.

The following comments are provided in relation to the identified key areas of concern from a Gravesham perspective:

- <u>Noise</u>

Noise has been a key issue in relation to the proposals for Tilbury 2 and there is potential for noise generated at both the RWE Tilbury Energy Centre and the Tilbury Flexible Energy Generation Plant to impact both individually and cumulatively on sensitive receptors to the south of the River Thames. The adopted Gravesham Local Plan Core Strategy (2014) identifies a key development site on the waterfront at Gravesend Canal Basin (under policy CS04) which will result in the introduction of further residential units in this area.

The Council would therefore seek to ensure that potential noise impacts on both existing and potential sensitive noise receptors on the south side of the River Thames are fully understood for both the construction and operational phases. To ensure consistency of approach with adjoining projects, the developer is directed to the papers available on the NSIP website in relation to Tilbury 2 at https://infrastructure.planninginspectorate.gov.uk/projects/south-east/tilbury2/

The developer is advised in the first instance to contact Allan Glasson in the Council's environmental health section to discuss any issues relating to noise – e-mail allan.glasson@gravesham.gov.uk or telephone: 01474 33 72 55.

- Air Quality

The project has the potential (individually but particularly in combination with the other schemes listed above) to impact on air quality locally. As identified within the Scoping Report, a number of air quality management areas have been declared in Gravesham where there are exceedances of air quality objectives.

One of these covers the Gravesend town centre one-way system, details of which are available on line at http://www.gravesham.gov.uk/home/environmental-health/air-quality/air-quality-management-areas. Monitoring data and other information is also available on the Kentair website at http://www.kentair.org.uk/

The Environmental Statement should provide sufficient information to determine any potential impacts on air quality within the Gravesham area, including the significant impact this development may have on the background levels of nitrogen dioxide.

The developer is advised in the first instance to contact Deborah Wilders in the Council's environmental health section to discuss any issues relating to air quality – e-mail deborah.wilders@gravesham.gov.uk or telephone: 01474 33 72 41.

- Landscape and visual resources

The proposal will extend the area of industrial development to the east of Tilbury Fort, with the potential up to 60 x 40m high exhaust stacks in particular being a prominent feature. Whilst Green Belt is not an environmental designation per se, the development is likely to impact on the perception of openness and rurality of the countryside to the east of Tilbury lying north of the existing developed riverside. Taken in combination with Tilbury 2, the RWE Tilbury Energy Centre, and Lower Thames Crossing this could significantly change the landscape character of this area when viewed from south across the River Thames. The need to have security lighting on-site means that this impact also needs to be assessed both during the daytime and during hours of darkness.

Whilst the Scoping Report includes visual receptors to the south of the River Thames in Gravesham, it is suggested that the same ones be used as for Tilbury 2 / Tilbury Energy Centre so that there is consistency of approach and comparisons can be drawn between assessments.

Footpath NG1 and NS138 are of particular importance as the main riverside footpath comprised in the Saxon Shore Way/Coastal Path east of Gravesend. An assessment of visual impact from the junction of PROWs NS138 and NS318 is therefore welcome given its location adjacent to Shornemead Fort, a currently undesignated heritage asset forming part of the historic Thames defences. This therefore will also be important in determining potential impact on the significance of these heritage assets through development within their setting. A viewpoint adjacent to Gravesend Town Pier and at Windmill Hill is also supported as key vantage points.

However, it is requested that the visual impact of the proposal also be assessed from the Gravesend Riverside Leisure Area/New Tavern Fort given the popularity of this area as one of the key open spaces within Gravesham and its historical importance relative to Tilbury Fort. This would be consistent with the approach taken in respect of Tilbury 2 and the RWE Tilbury Energy Centre.

- Cultural heritage

  Whilst the Scoping Report refers to heritage assets to the north of the River Thames at 2.24 and at 8.23, there is no mention of the numerous assets to the south in Gravesham. Given the inter-relationship of these assets (particularly those relating to defence heritage) there is potential for development to the north to affect how those to the south are appreciated and interpreted in context.

  Fortunately, the proposal does not appear to directly affect the inter-visibility of West Tilbury with Tilbury Fort, which is historically important given the former is the site of the camp that supported the latter and where Elizabeth 1 made her speech at the time of the Spanish Armada. The incremental development of the area to the east of Tilbury forming the context of the defence heritage assets could however impact upon their significance and require justification and mitigation.

  Because of this, it is considered that the impact of the development in terms of its wider context both north and south of the river should be properly assessed as per Tilbury 2 / Tilbury Energy Centre.

- Terrestrial and marine ecology

  The Council would defer to Natural England and other specialist agencies with the necessary expertise to assess the impact of the proposals subject of the Scoping Report. However, it is noted that Natural England raised concerns regarding Tilbury 2 based on potential impact on nearby SPA/Ramsar sites, noting that existing activities at Goshen Farm could already be impacting adversely on bird populations. As such, it was unable to agree at the close of the examination that there would be no adverse impact on the designated sites or that the proposed Environmental Mitigation and Compensation Plan was an adequate response.

  For information, Natural England's deadline 7 response submitted at the close of the examination is available on line at https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000989-Natural%20England%20%20Written%20Response.pdf.

Whilst the Scoping Report covers the potential need for Appropriate Assessment under the Habitats Regulation, there doesn't appear to be mention of potential impact on Functionally Linked Habitat that supports the designated sites.
It is noted that such impacts were an area of concern in relation to the examination of the Tilbury 2 application as can be seen in the ExA's Report on the Implications for European Sites (13 July 2018) available on line at
https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000920-TIL2%20-%20Report%20on%20the%20Implications%20for%20European%20Sites%20(RIES).pdf

On looking at the EIA Scoping Report for Lower Thames Crossing (Oct 2017), Fig 9.1 sheet 2 of 5 at page 382 shows the foreshore to the River Thames and large areas lying immediately east of the main development site (within the red line boundary) subject of the current Scoping Report as areas of potential Functionally Linked Habitat (see https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010032/TR010032-000006-LTC%20EIA%20Scoping%20Report.pdf)

Given the facility may be water cooled and result in changes to water temperature in the River Thames and proximity to other areas that Highways England has identified as potential Functionally Linked Habitat, it is suggested that implications in terms of survey and analysis be discussed with Natural England.

Other Issues

It is noted that on alternatives to the proposed scheme, paragraph 5.22 onwards sets out the required locational criteria for such a development; alternative technologies considered; alternative means of cooling; and alternative designs. In particular, 5.24 states that a number of potential locations have been considered through a sequential site search exercise and that these will be detailed in the Environmental Statement. Paragraph 6.10 then goes on to say that a consideration of development location, scale and technology has not identified any reasonable alternatives, taking into account the need for a development of the nature proposed.

However, paragraph 5.22 also includes as a key driver to site selection not only the physical requirements of proximity to gas and grid connections (along with avoiding the need to construct new long distance grid connections and loss of electricity through transmission) but also land ownership on the basis that this can reduce the timescale, cost and uncertainty of delivery.

Whilst National Policy Statement EN1, the Overarching National Policy Statement for Energy (EN- 1, July 2011) sets out the Government's approach to the consideration of alternatives within section 4.4, paragraph 4.4.1 makes it quite clear that the existence or otherwise of alternatives as part of the decision making process is a matter of law even though guiding principles are provided in the subsequent paragraph 4.4.3.

In this context, it would be helpful if the Planning Inspectorate could provide guidance within its Scoping Opinion as to whether ownership is in itself sufficient to constrain a consideration of reasonable alternative in this case. One reason for asking this is that,

aside from voluntary acquisition, the 2008 Act process provides for CPO whereby an absence of ownership or control would not in theory necessarily prevent delivery.

There is also a need to avoid a situation whereby the EIA process is effectively circumvented simply on the basis of ownership considerations – i.e. the development has to be here because that's where the developer wants it and therefore there is by definition no reasonable alternative.

The Council is also mindful that the proposal is being brought forward in the context of a market for electricity supply whereby there may be environmentally preferable alternatives that could be delivered either by this developer or by others. This may have implications if Appropriate Assessment under the Habitats Regulations is required and a case needs to be made in terms of Imperative Reasons of Overriding Public Interest (IROPI).

Whilst not an EIA consideration, the Council notes that the application site lies within the Green Belt where specific policy considerations apply. Section 5.10 of EN-1 makes clear that national Green Belt policy applies in relation to energy projects and that 'inappropriate development' should not be permitted unless 'very special circumstances' that clearly outweigh definitional, actual and any other harm are demonstrated. In determining applications significant weight is to be accorded the protection of the Green Belt.

Taken as a whole, the proposed development would appear to fall outside the exceptions to Green Belt policy now listed in the revised National Planning Policy Statement (NPPF, 2018) and it would be the responsibility of the applicant to demonstrate that the above policy hurdle is passed. This in itself would require the applicant to demonstrate that reasonable alternatives have been properly considered or that the demand for electricity would not otherwise be met.

It may therefore be prudent for the developer to consider the implications of this in conjunction with the EIA workstream, as the need to properly consider reasonable alternatives may run in parallel.

Local Finance Considerations

No local finance considerations are relevant.

Conclusions and Reasons for Decision

It is recommended that subject to the scoping opinion adequately covering the above issues, including:

- The importance of the possible impact on ecological receptors in the locality being quantified and suitable mitigation being proposed and implemented in the future to ensure that any impact is minimal and acceptable to all parties;

- The air quality modelling proposed would not provide the real picture of possible impact on all receptors. Modelling which uses only the annual average wind direction (i.e. south westerly), does not provide the real picture of possible impact on those receptors south of the river therefore modelling needs to take into account the fact that, at certain times of the year, north easterly and east north easterly winds are equal to, if not

greater than, the prevalence of south westerlies thus directing any emissions towards receptors south of the river.

- The importance of the Cumulative effects, as details at Section 6 – EIA Processes (Page 58), and the 'In-Combination Effects' are thoroughly assessed. The Council considered that this element is the most important part of the Environmental Impact Assessment process, due to the significant number of Nationally Strategic Infrastructure Projects and other large planning proposals currently being promoted, considered or determined in the vicinity of the proposed development site. The Council stresses that the in-combination effects in regard to air quality, noise and vibration, landscape and visual effects, socio-economic and cultural heritage are the areas where it considered special attention needs to be undertaken in regard to this development.

Subject to the above matters being adequately address, Gravesham Borough Council would not raise concern in regard to the Scoping Report being adopted pursuant to Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

See draft Decision

Case Officer: Chris Butler	**Team Leader:** Wendy Lane
Signed: 	**Signed:** Wendy Lane
Dated: 7th September 2018	**Dated:** 7th September 2018

Recommendation for 20180853 DCREC

Officer	Mr Christopher Butler
Proposal	Consultation is in regard to a request made to the Secretary of State for a Scoping Opinion made under Regulations 10 and 11 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 in regard to a Scoping Report (RPS Reference: OXF10872/July2018/Revision 8) submitted by RPS Group in relation to a prospective NSIP made under the Planning Act 2008 (as amended) regarding a prospective Development Consent Order application for: Construction and operation of: 1) Reciprocating gas engines with rated electrical output totalling 600 MW; 2) Batteries with rated electrical output of 150 MW and storage capacity of up to 600 MWh; 3) Gas, electricity and potential cooling water connections, private access road(s) and minor public highway widening for delivery of large loads; 4) Designation of replacement common land (exchange land) and possible creation of habitat for protected species translocation; and 5) Possible transfer of land to Thurrock Council
Address	Tilbury Power Station Fort Road Tilbury Essex
Valid	10th August 2018.
Target	7th September 2018

Keep File	**~~Y/~~N (delete as appropriate)**
Reason	**~~Enforcement/Complex/Major/Appeal~~**

Works of Construction Informative **~~Y/~~N (delete as appropriate)**

Recommendation – Observations Sent – as set out below:

From a Gravesham perspective, the key issues that need to be covered by the Environmental Statement (both on a solus basis and in combination with other schemes) are:

- Noise
- Air Quality
- Landscape and visual resources
- Cultural heritage
- Terrestrial and marine ecology

In terms of cumulative impacts, the list of projects included in the Scoping Report includes:

- POTLL Tilbury 2
- Lower Thames Crossing
- Tilbury Green Power (within existing Tilbury Docks area - Tilbury 1)
- The continuing demolition of RWE Tilbury B power station
- RWE proposals for Tilbury Energy Centre
- London Distribution Park
- Goshens Farm land remediation

Cumulative impacts should be considered for both the construction and operational phases of the developments. In addition, consideration should be given as to the implications of some of the above not coming forward, given they do all have consent or there may be a failure to implement. For example, in the event of Tilbury 2 or the Tilbury Energy Centre not being granted consent or being taken forward, the proposed development subject of current scoping would be in a more exposed location relative to Gravesham given the absence of screening development. This may have implications in terms of visual impact and noise transmission.

It is also suggested that consideration be given as to whether the NSIP proposals for London Resort at Swanscombe Peninsula could result in cumulative impacts that need to be taken into consideration - particularly if water cooling is used or water transport used during the construction phase, given the proposed Marine Conservation Areas detailed in the Scoping Report.

The following comments are provided in relation to the identified key areas of concern from a Gravesham perspective:

- Noise

Noise has been a key issue in relation to the proposals for Tilbury 2 and there is potential for noise generated at both the RWE Tilbury Energy Centre and the Tilbury Flexible Energy Generation Plant to impact both individually and cumulatively on sensitive receptors to the south of the River Thames. The adopted Gravesham Local Plan Core Strategy (2014) identifies a key development site on the waterfront at Gravesend Canal Basin (under policy CS04) which will result in the introduction of further residential units in this area.

The Council would therefore seek to ensure that potential noise impacts on both existing and potential sensitive noise receptors on the south side of the River Thames are fully understood for both the construction and operational phases. To ensure consistency of approach with adjoining projects, the developer is directed to the papers available on the NSIP website in relation to Tilbury 2 at https://infrastructure.planninginspectorate.gov.uk/projects/south-east/tilbury2/

The developer is advised in the first instance to contact Allan Glasson in the Council's environmental health section to discuss any issues relating to noise - e-mail allan.glasson@gravesham.gov.uk or telephone: 01474 33 72 55.

- Air Quality

The project has the potential (individually but particularly in combination with the other schemes listed above) to impact on air quality locally. As identified within the Scoping Report, a number of air quality management areas have been declared in Gravesham where there are exceedances of air quality objectives.

One of these covers the Gravesend town centre one-way system, details of which are available on line at http://www.gravesham.gov.uk/home/environmental-health/air-quality/air-quality-management-areas. Monitoring data and other information is also available on the Kentair website at http://www.kentair.org.uk/

The Environmental Statement should provide sufficient information to determine any potential impacts on air quality within the Gravesham area, including the significant impact this development may have on the background levels of nitrogen dioxide.

The developer is advised in the first instance to contact Deborah Wilders in the Council's environmental health section to discuss any issues relating to air quality - e-mail deborah.wilders@gravesham.gov.uk or telephone: 01474 33 72 41.

- Landscape and visual resources

The proposal will extend the area of industrial development to the east of Tilbury Fort, with the potential up to 60 x 40m high exhaust stacks in particular being a prominent feature. Whilst Green

Belt is not an environmental designation per se, the development is likely to impact on the perception of openness and rurality of the countryside to the east of Tilbury lying north of the existing developed riverside. Taken in combination with Tilbury 2, the RWE Tilbury Energy Centre, and Lower Thames Crossing this could significantly change the landscape character of this area when viewed from south across the River Thames. The need to have security lighting on-site means that this impact also needs to be assessed both during the daytime and during hours of darkness.

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It is noted that such impacts were an area of concern in relation to the examination of the Tilbury 2 application as can be seen in the ExA's Report on the Implications for European Sites (13 July 2018) available on line at https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000920-TIL2%20-%20Report%20on%20the%20Implications%20for%20European%20Sites%20(RIES).pdf

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In this context, it would be helpful if the Planning Inspectorate could provide guidance within its Scoping Opinion as to whether ownership is in itself sufficient to constrain a consideration of reasonable alternative in this case. One reason for asking this is that, aside from voluntary acquisition, the 2008 Act process provides for CPO whereby an absence of ownership or control would not in theory necessarily prevent delivery.

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Imperative Reasons of Overriding Public Interest (IROPI).

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Taken as a whole, the proposed development would appear to fall outside the exceptions to Green Belt policy now listed in the revised National Planning Policy Statement (NPPF, 2018) and it would be the responsibility of the applicant to demonstrate that the above policy hurdle is passed. This in itself would require the applicant to demonstrate that reasonable alternatives have been properly considered or that the demand for electricity would not otherwise be met.

It may therefore be prudent for the developer to consider the implications of this in conjunction with the EIA workstream, as the need to properly consider reasonable alternatives may run in parallel.

Conclusions

Subject to the above and below matters being adequately address, Gravesham Borough Council would not raise concern in regard to the Scoping Report being adopted pursuant to Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

- The importance of the possible impact on ecological receptors in the locality being quantified and suitable mitigation being proposed and implemented in the future to ensure that any impact is minimal and acceptable to all parties;

- The air quality modelling proposed would not provide the real picture of possible impact on all receptors. Modelling which uses only the annual average wind direction (i.e. south westerly), does not provide the real picture of possible impact on those receptors south of the river therefore modelling needs to take into account the fact that, at certain times of the year, north easterly and east north easterly winds are equal to, if not greater than, the prevalence of south westerlies thus directing any emissions towards receptors south of the river.

- The importance of the Cumulative effects, as details at Section 6 - EIA Processes (Page 58), and the 'In-Combination Effects' are thoroughly assessed. The Council considered that this element is the most important part of the Environmental Impact Assessment process, due to the significant number of Nationally Strategic Infrastructure Projects and other large planning proposals currently being promoted, considered or determined in the vicinity of the proposed development site. The Council stresses that the in-combination effects in regard to air quality, noise and vibration, landscape and visual effects, socio-economic and cultural heritage are the areas where it considered special attention needs to be undertaken in regard to this development.

Case Officer: Mr Christopher Butler

Signed:

Dated: 7th September 2018

Team Leader: Wendy Lane

Signed: Wendy Lane

Dated: 7 September 2018

HSE

Health and Safety Executive

HID Policy - Land Use Planning
NSIP Consultations
Building 2.2, Redgrave Court
Merton Road, Bootle
Merseyside, L20 7HS

Your ref: EN010092
Our ref: 4.2.1.6479

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

FAO Emma Cottam
The Planning Inspectorate
Temple Quay House
Temple Quay,
Bristol
BS1 6PN

Dear Ms. Cottam

7th September 2018

PROPOSED Thurrock Flexible Generation Plant (the project)
PROPOSAL BY Thurrock Power Ltd (the applicant)
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 (as amended) – Regulations 8 and 9

Thank you for your letter of 10 August 2018 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 is one major accident hazard site and two major accident hazard pipelines within the proposed development boundary of the Thurrock Flexible Generation Plant for this nationally significant infrastructure project:

Major accident hazard sites:

1) HSE ref H1277; operated by British Bata Shoe Company

Major accident hazard pipelines:

1) HSE ref 8189, operated by National Grid PLC; 5 feeder Hordon / Tilbury Thomas North
2) HSE ref 8191; operated by National Grid PLC; 18 feeder Stapleford / Tilbury Thomas North

HSE's Land Use Planning advice would be dependent on the location of areas where public may be present and so it is possible that HSE may advise against this proposal. When we are consulted further by the Applicant with further information, under Section 42 of the Planning Act 2008, we can update our 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.

Hazardous Substances Consent 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 an 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 explosive sites in the vicinity.

Please send any further electronic communication on this project directly to the HSE's designated e-mail account for NSIP applications. Alternatively, any hard copy correspondence should be sent to:

Mr Dave Adams (MHPD)
NSIP Consultations
2.2 Redgrave Court
Merton Road
Bootle, Merseyside
L20 7HS

Yours sincerely,

[redacted]

PP
Dave Adams
CEMHD4 Policy

From: Gonet, Teresa [mailto:Teresa.Gonet2@highwaysengland.co.uk]
Sent: 31 August 2018 13:52
To: Thurrock FPG
Cc: Planning SE; transportplanning@dft.gsi.gov.uk; growthandplanning
Subject: FAO: Case Officer Emma Cottam, Highways England response re EIA Scoping Requestfor Sub Station Power Station, Fort Road, West Tilbury, RM18 8UL

For the attention of: Case Officer Emma Cottam

Site: Sub Station Power Station, Fort Road, West Tilbury, RM18 8UL

Development: EIA Scoping Request

Highways England's Ref No: #5706

Dear Emma,

Thank you for your consultation letter dated 10th August 2018 on the above EIA scoping request for the proposed Sub Station Power Station, West Tilbury. Highways England has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the strategic road network (SRN). The SRN is a critical national asset and as such Highways England works to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

Highways England have no comment on whether an EIA is required; but if it is (or is produced voluntarily), it should be compatible and consistent with the Transport Assessment that should also be submitted as part of this application and should contain information on all transport related effects including noise, vibration and air quality.

The proposed method of assessment for the EIA should be in line with Highways England's recommended method of drawing upon the information presented in the Transport Assessment. Any assessment should be undertaken in accordance with the DfT Circular 02/2013 "The Strategic Road Network and the Delivery of Sustainable Development" outlining how Highways England will engage with developers including assessment requirements to deliver growth and safeguard the operation of the SRN. This includes a robust assessment of the vehicular impacts "with" and "without" development for the horizon year (full occupation) and the end of the Local Plan period to examine the net impact of non-consented development. Any modelling will also need to accurately reflect the Local Plans of neighbouring authorities.

In the case of this proposed development, Highways England is interested in the potential impact that the development might have upon the M25, in particular Junction 30, the A13 and A1089. We are interested as to whether there would be any adverse safety implications or material increase in queues and delays on the SRN as a result of development or construction phase where it may be for a prolonged period of time with excessive HGV and large plant trips. The project of

this magnitude has the potential to generate a significant number of heavy goods vehicle (HGV) trips, a large proportion of which are likely use the SRN. In order to minimise potential impacts to the SRN we would look to site operators to identify opportunities to reduce trips during peak periods, this might be through construction and operational management plans to support individual sites within an identified corridor.

It should be noted that Highways England's Lower Thames Crossing team has also reviewed this consultation and there are numerous areas where the two proposed schemes overlay, creating potential conflicts. It should be noted that engagement between Highways England and the Developer has already begun and we look forward to continuing that engagement as the proposals develop. Should the scheme proposals, as submitted to PINS change significantly at any point, we should be consulted and given the opportunity to comment further on revised proposals.

I trust you find these comments useful. Please do not hesitate to contact me if you require further information through our team mailbox planningse@highwaysengland.co.uk

Thank you,

Sent on behalf of Janice Burgess, Spatial Planning Manager at Highways England

Teresa Gonet,
OD SE Spatial Planning Team
Highways England | Bridge House | 1 Walnut Tree Close | Guildford | GU1 4LZ
Tel: +44 (0) 300 470 1165

Web: www.highways.gov.uk, www.highwaysengland.co.uk

Birmingham B32 1AF | *https://www.gov.uk/government/organisations/highways-england* **|** *info@highwaysengland.co.uk*

Historic England

EAST OF ENGLAND OFFICE

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

Direct Dial: 01223 582720

Our ref: PL00472630

6 September 2018

Dear Ms Cottam

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

Application by Thurrock Power (the applicant) for an Order granting Development Control Consent for the Thurrock Flexible Generation Plant (the Proposed Development) PINS REF: EN10092-000018

Thank you for your letter of 10 August with a formal request for a scoping opinion in relation to the above application. Historic England, as the government's lead advisor on the historic environment, would like to offer comments on this proposal, taking into consideration the information provided by the applicant: This is the EIA Scoping Report - Thurrock Flexible Generation Plant Land adjacent to National Grid Sub Station, Tilbury By RPS on behalf of Thurrock Power Ltd.

Historic England Advice

1. The proposed development (Thurrock Flexible Generation Plant) would comprise reciprocating gas engines, batteries and associated electrical and control equipment, a new permanent access road and potential temporary construction access roads, a gas pipeline connection to the gas national transmission system and potentially a cooling water pipeline to the River Thames. The electric export connection will be via underground cables to the adjacent National Grid Tilbury substation.

2. The historic environment is a finite and non-renewable environmental resource which includes designated and non-designated heritage assets, historic landscapes and sites of historic and evidential interest. It is a rich and diverse part of England's cultural heritage and makes a valuable contribution to our cultural, social and economic life. This development would be within a wider historic landscape that contains a number of designated and non-designated heritage assets. For clarity, we have set out our comments on the historic environment under the following headings: built historic environment, buried archaeological remains/geoarchaeology and marine

archaeological remains.

3.0 Built Historic Environment.

3.1 There are no designated heritage assets which would be directly affected by the proposed development. The principal designated heritage assets which may be impacted indirectly by the proposed development are: the scheduled monuments at Tilbury Fort, Earthworks near West Tilbury Church, WWII anti-aircraft battery at Bowaters Farm, East Tilbury Battery and Coalhouse Fort. Separately listed buildings at Grade I include St Katharine's Church and those at Grade II* include the riverside station at Tilbury Cruise Terminal and the Church of St James. Seven grade II listed buildings also fall within the study area.

3.2 We advise that the impact of the proposed development on the setting and significance of designated and non-designated heritage assets to be fully assessed in accordance with legislation, policy and guidance. In particular, we recommend the analysis follows the staged approach to assessment set out the Good Practice Advice in Planning 3: The Setting of Heritage Assets. The ES document would need to provide sufficient visual information to illustrate how the proposed infrastructure would be seen in views from key designated heritage assets and would be pleased to provide more detailed advice on proposed viewpoints for photomontages once an initial list has been drawn up.

3.3 We would recommend a single Historic Environment chapter for the ES. However, the historic environment sections would also need to integrated, and cross referenced to other relevant chapters. This is most relevant to the Landscape and Visual Assessment where we consider that it would be important to use historic environment receptors in to the assessment process. We consider that photomontages and/or wirescape images from heritage specific viewpoints would be essential particularly from key designated heritage assets. Wider landscape views are also needed, including any images that would seek to illustrate cumulative impacts in view of the quantum of development proposals in the vicinity. The assessment of 'setting' likewise should not be solely be restricted to visual impact, and would need to consider the impact from other environmental factors such as noise, traffic and lighting.

3.4 Historic England has in the past raised concerns about the use of matrices and table to determine significance, magnitude of impacts and receptor sensitivity. This is in reference to the Design Manual for Roads and Bridges (DMRB) which is commonly used for the Environmental Impact Assessment (EIA) process for infrastructure projects. Whilst the standardised EIA matrices are a useful tool, the analysis of impact, harm, significance and setting is a matter of qualitative and expert judgment which cannot be achieved solely by the use of systematic matrices and the use of tables should be seen primarily as supporting material. We recommend that the applicant seek to deliver a clearly expressed, iterative and non-technical narrative for

significance and harm, which is tailored to this specific environment.

4.0 Archaeology/Geoarchaeology

4.1 There is geophysical data which suggests potential for undesignated buried archaeological remains within the development area. If the water cooling option were to be adopted there would be potential impacts on marine archaeological remains. It is thus likley that there will be direct and indirect impacts on the terrestrial and marine historic environments that will need to be taken into account.

A geophysical survey (magnetometery) has been carried out across the development area (Wessex 2017), which has identified some anomalies, but it is important to note that this approach will not identify some remains of archaeological interest. This includes organic remains, such as wooden structures or boats, or deposits such as peat that may be of archaeological and palaeoenvironmental interest. A number of studies carried out in and around Tilbury Fort have identified important Holocene period alluvial and peat sequences indicative of periods of marine and regression and transgression. It is noted in Section 8.164 that the geological maps and BGS borehole records indicate that the main development site is underlain by Alluvium, suggesting that similar sequences Holocene sequences may be preserved here as well. The previous studies have demonstrated that the accumulation of peat was diachronous, highlighting the potential of the different sequences sampled to provide information about site specific landscape evolution over time and the mosaic of environments that existed on the floodplain in the past. Further work will therefore need to be carried out to determine the potential of the alluvial deposits identified at the site and the potential that these deposits to address archaeological questions.

We would recommend in the first instance that the existing sequences/deposit models produced for nearby sites are investigated as part of the desk-based assessment phase of works. This may provide useful information about the proposed development area as well as highlight gaps in the understanding that could be targeted for further study. We would also recommend a joined-up approach is used when investigations are considered for the development area, whether this is to address engineering questions, the presence of contamination or for archaeological purposes. Communication and collaboration between the various specialists could reduce the duplication of effort and maximise the potential of each sample to address the questions that need to be investigated as part of the application process.

Yours sincerely,

Deborah Priddy

Historic England

EAST OF ENGLAND OFFICE

Inspector of Ancient Monuments
debbie.priddy@HistoricEngland.org.uk

Yours sincerely,

Deborah Priddy
Inspector of Ancient Monuments
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Marine Management Organisation

Comments on Environmental Impact Assessment Scoping Report

Title: Thurrock Flexible Generation Plant

Applicant: Thurrock Power Ltd

MMO Reference: DCO/2018/00015

Contents

1 Proposal

1.1 Thurrock Power Ltd proposes to develop a flexible generation plant on land north of Tilbury Substation in Thurrock. The flexible generation plant will provide up to 600 megawatts (MW) of electrical generation capacity and up to 150 MW of battery storage capacity on a fast response basis when called by the National Grid. If consented, it will provide resilience to the electricity grid when this is needed due to intermittent generation from other sources (such as wind power) or short term demand from consumers.

1.2 If consented, the flexible generation plant itself will comprise reciprocating gas engines, batteries and associated electrical and control equipment. A new permanent access road and potential temporary construction access roads, a gas pipeline connection to the gas national transmission system and potentially a cooling water pipeline to the River Thames are proposed for development. The electrical export connection will be via underground cables to the immediately adjacent National Grid Tilbury Substation.

2 Project Background

2.1 Alternative sites and technologies for the proposed development have been considered by Thurrock Power. The proposed development site offers a suitable connection to the London 275 kilovolt (kV) transmission network at Tilbury Substation. The guidance of national policy, consultation with National Grid and a detailed assessment of ‘Best Available Technology’ have together led the applicant to conclude that there is a need for a flexible generation plant using the technology proposed.

3 Location

3.1 The proposed main development site is located on land south west of Station Road near Tilbury, Essex, and comprises undeveloped land with no current buildings. The main development site is around 18 hectares (ha) in size and the entire area within the draft application boundary is around 182 ha. The main development site is approximately 800m east of Tilbury, with its immediate surroundings being agricultural land, other than the National Grid 275 kV Tilbury Substation immediately to the south, and the railway line passing through the application site boundary to the north of the main development site.

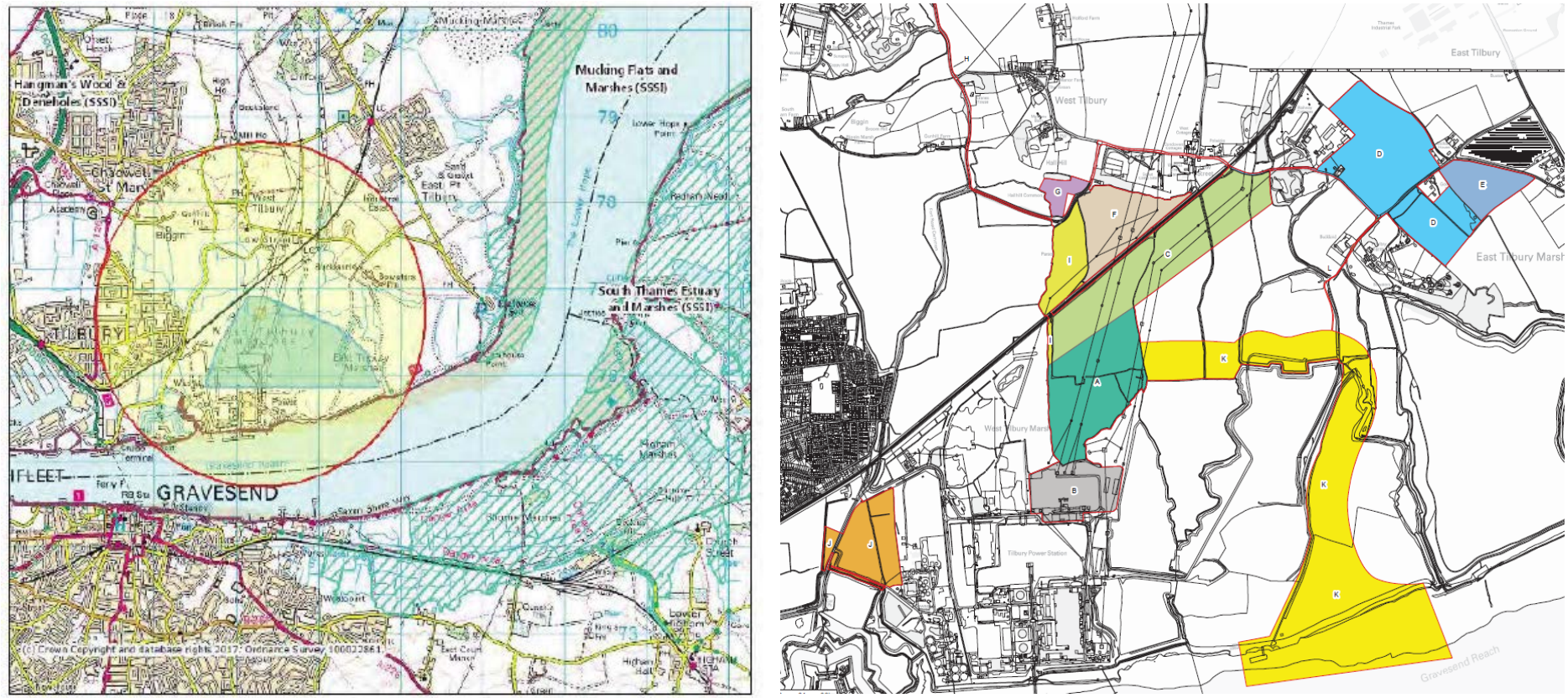

Figure 1: Location of proposed works for Thurrock Flexible Generation Plant (See EIA Scoping Report Figures for further details)

4 The Marine Management Organisation's role in Nationally Significant Infrastructure Projects

4.1 The Marine Management Organisation (MMO) was established by the Marine and Coastal Access Act 2009 (the "2009 Act") to make a contribution to sustainable development in the marine area and to promote clean, healthy, safe, productive and biologically diverse oceans and seas. The responsibilities of the MMO include the licensing of construction works, deposits and removals in the marine area by way of a marine licence[1] . Marine licences are required for deposits or removals of articles or substances below the level of Mean High Water Springs (MHWS), unless a relevant exemption applies under the Marine Licensing (Exempted Activities) (Amendment) Order 2013 (the "2013 Order").

4.2 In the case of Nationally Significant Infrastructure Projects ("NSIPs"), the Planning Act 2008 (the "2008 Act") enables Development Consent Order's ("DCO") for projects which affect the marine environment to include provisions which deem marine licences[2]. Alternatively, applicants may wish to separately seek consent for a marine licence directly from the MMO rather than having it deemed by a DCO.

4.3 For NSIPs where applicants choose to have a marine licence deemed by a DCO, during pre-application the MMO will advise developers on the aspects of a project that may have an impact on the marine area or those who use it. In addition to considering the impacts of any construction within the marine area, this would also include assessing any risks to human health, other legitimate uses of the sea and any potential impacts on the marine environment from terrestrial works.

4.4 Whether a marine licence is deemed within a DCO or consented independently by the MMO, the MMO is the delivery body responsible for post-consent monitoring, variation, enforcement and revocation of provisions relating to the marine environment. As such, the MMO has a keen interest in ensuring that provisions drafted in a deemed marine licence enable the MMO to fulfil these obligations. This includes ensuring that there has been a thorough assessment of the impact of the works on the marine environment (both direct and indirect), that it is clear within the DCO which works are consented within the deemed marine licence, that conditions or provisions imposed are proportionate, robust and enforceable and that there is clear and sufficient detail to allow for monitoring and enforcement. To achieve this, the MMO would seek to agree the deemed marine licence with the developer for inclusion with their application to the Planning Inspectorate ("PINS").

4.5 Further information on licensable activities can be found on the MMO website[3]. Further information on the interaction between PINS and the MMO can be found in our joint advice note[4].

4.6 The MMO recognises there is some overlap between the geographical jurisdiction of the MMO and the local planning authorities (i.e. between MHWS and mean low water springs).

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[1] Under Part 4 of the 2009 Act
[2] Section 149A of the 2008 Act
[3] https://www.gov.uk/guidance/do-i-need-a-marine-licence
[4] https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2012/04/Advice-note-11-Annex-B-MMO.pdf

4.7 The MMO has considered this and is of the view that matters which fall within the scope of the marine licensing provisions of the 2009 Act (i.e. anything below MHWS) are generally best regulated by conditions on marine licences. This should minimise the risk of inconsistency between different schemes of regulation, or of a duplication of controls.

4.8 In considering applications for marine licences to be consented independently by the MMO, the MMO regularly consults with bodies including, but not limited, to:

- The Environment Agency
- Natural England
- Natural Resources Wales (for works in or affecting Wales)
- the Maritime and Coastguard Agency
- Historic England
- local planning authorities
- local harbour authorities
- local inshore fisheries and conservation authorities
- the Royal Yachting Association (RYA)
- the Royal Society for the Protection of Birds
- the corporation of the Trinity House of Deptford Strond.

4.9 Where a marine licence is to be deemed within a DCO, the MMO would expect that comments provided by the above list of bodies and any other relevant bodies are taken into consideration.

5 Activities for this project that would be licensable under the 2009 Act

5.1 The report includes very limited detail regarding construction activities and their associated methodologies. Whilst this is the case, based on the information supplied, it would appear that construction of the intake and outfall structures and all associated works below MHWS associated with the proposed cooling water system would be licensable under the 2009 Act.

5.2 In addition to this, it would appear that from the scoping report (Section 3.35) the applicant proposes to utilise a jetty to the South East of the land package to facilitate access via barge (Item K, Figure 2, Sheet 1). Works to facilitate the use of the jetty as an access asset are also likely to be licensable under the 2009 Act.

5.3 Any additional works or activities taking place within the UK Marine Area (Section 42 of the 2009 Act) which may require a marine licence under the 2009 Act should be notified to the MMO at the earliest opportunity, and the impacts of such works considered in the Environmental Impact Assessment (EIA) process.

6 Scoping Opinion

6.1 On 10th August 2018, the Planning Inspectorate requested a Scoping Opinion from the MMO. In so doing, a Scoping Report entitled “EIA Scoping Report – Thurrock Flexible Generation Plant” has been submitted to the MMO for review.

6.2 We have significant concerns surrounding some of the screening & scoping decisions to-date particularly with respect to environmental impacts in the Marine Environment (such as fisheries). Beyond this matter which is clarified below, the MMO is broadly in agreement with the topics outlined in the Scoping Report and in addition, we outline that the following aspects be considered further during the EIA and must be included in any resulting Environmental Statement.

7 Cultural Heritage

7.1 The MMO welcomes the methodology for informing the Cultural Heritage Assessment which can be found in section 8.27 of the scoping report, but would defer to Historic England and their formal response to the PINS on this matter.

7.2 The MMO note that there are a number of heritage features within the vicinity of the proposed project area. The MMO is content that these have been considered in section 8.23 of the scoping report, and as per section 7.2 of this report, welcome the methodology for assessing potential impacts.

8 Landscape and Visual Impact

8.1 The MMO welcomes the methodology for informing the potential landscape and visual impacts which can be found in section 8.10 of the scoping report, including considering mitigation measures as part of the iterative design process.

8.2 Visual disturbance to local ornithological features should be considered in any final ensuing ES. The MMO draw your attention to the local Royal Society for the Protection of Birds (RSPB) Thames Estuary and Marshes Important Bird Area (IBA) which is within the direct vicinity of the proposed outfall, intake and jetty work area.

8.3 Visual disturbance to the species within the vicinity of works should be considered in any final ensuing ES. Whilst Natural England are most well-placed to advise on this matter, the MMO draw your attention to the following local designated sites: Mucking Flats and Marshes Site of Special Scientific Interest (SSSI); South Thames Estuary and Marshes SSSI; Thames Estuary and Marshes Special Protected Area and; Thames Estuary and Marshes Ramsar.

9 Noise and Vibration

9.1 The ES should include an assessment of the potential risk of impact of underwater noise on sensitive receptors. This should be supported by relevant and recent scientific literature, for example, Popper et al (2014) for fish and National Marine Fisheries Service (NMFS) (NOAA) (2016) for marine mammals.

9.2 The MMO agrees with the scoping in of 'aquatic environment' for further assessment. Section 8.110 of the report identifies that 'there may be disturbance of aquatic ecological receptors in the vicinity of the development during construction, including direct effects such as underwater noise on fish and aquatic mammal species'. However, detailed information on the construction works is limited at this stage. The MMO expect this to be expanded on as part of the ES.

9.3 Although not explicitly clear in the report, the MMO requests that the potential impacts of underwater noise on marine receptors to be considered in the

Environmental Statement (ES). Underwater noise (e.g. increased background noise and specific sound sources) may impact marine receptors in the following various ways:

- Masking – noise can interfere with an animal's ability to detect biologically important sounds
- Behavioural changes – noise can cause animals to alter their behaviour
- Physiological stress
- Auditory injury (hearing loss) – temporary or permanent
- Non- auditory injury / tissue damage
- Direct or indirect mortality

9.4 The MMO note that at this stage, no specific mitigation measures in relation to underwater noise have been proposed. This must be considered in the ES.

9.5 The MMO supports the scoping-in of the aquatic environment for further assessment. Specific marine receptors (to be scoped in) have not been identified as such, although information on the baseline conditions is provided in the report.

9.6 Detailed information of the proposed construction works is also limited, however, underwater noise has been identified as having the potential to directly affect fish and marine mammals. As above, the MMO expects that the potential impacts of underwater noise on marine receptors will be considered in the ES and this should be substantiated with detailed species-specific assessments.

9.7 Noise disturbance to local ornithological features should be considered in any final ensuing ES. The MMO draw your attention to the local RSPB Thames Estuary and Marshes IBA which is within the direct vicinity of proposed outfall, intake and jetty work area.

9.8 Noise disturbance to the species within the vicinity of works should be considered in any final ensuing ES. Whilst Natural England are most well-placed to advise on this matter, the MMO draw your attention to the following local designated sites: Mucking Flats and Marshes Site of Special Scientific Interest (SSSI); South Thames Estuary and Marshes SSSI; Thames Estuary and Marshes Special Protected Area and; Thames Estuary and Marshes Ramsar.

10 Contaminated Land, Land Use and Hydrogeology

10.1 The MMO welcomes the intention to assess the potential for contamination, particular consideration should be given to disturbance of the river bed sediment (both during construction and operation) within section 8.101 of the ES.

11 Marine Ecology and Fisheries

11.1 The scoping report discusses the likely requirement for thermal plume modelling to fully assess the potential impacts from the cooling water intake. The MMO request clarification that this includes the potential impact to benthos near the outfall pipe should be sought for the ES.

11.2 At present, the scoping report (section 8.112) only cites RWE Tilbury with regards to in-combination impacts concerning thermal plume. MMO require this to be

expanded on, taking into account any other facilities within an agreed study area which may lead to a temperature uplift on the Thames Water Body.

11.3 To date, the MMO has not been approached to inform the scope of thermal and/or chemical modelling for the cooling water system. MMO would expect these discussions to take place as a critical requirement at this stage of the project.

11.4 All other benthic aspects relevant to the construction and operation of the development have been scoped in. However, the intertidal and subtidal surveys are stated to commence in August 2018. Details of sampling design have not been clarified. Details on sampling equipment, methodology, sample location and level of sample replication should be provided in the ES and be sufficient for addressing the underlying reasons for the survey requirement i.e. biota, particle size distribution and contaminants.

11.5 Relevant datasets from the aquatic ecology surveys undertaken for the RWE Tilbury Energy Centre (TEC) development may become available and provide suitable information for the proposed development. This information should be provided in the ES.

11.6 In addition, an assessment of the cumulative impacts of the RWE TEC development's water-cooling proposal will be carried out. This information should be provided in the ES.

11.7 The MMO considers the data gathering and consideration of likely effects on benthos are appropriate.

11.8 Chemical treatment of biofouling within the once through water cooling system is not thought to be necessary due to knowledge of the nearby Tilbury Power Station's similar system; thus, avoiding the impact of chemical emissions on the benthos. If the use of chemical treatment is necessary, then the impacts of this will need to scoped in to the ES.

11.9 The scoping report does not include information on how the cooling water intake arrangement mitigates the risk of impingement, and therefore the impact to the benthos has not been presented. MMO would expect consideration ~~to~~ of this to be presented in the ES, and strongly disagree with the lack of inclusion at this stage.

11.10 Table 8.7 within the scoping report concludes that the fish screen will prevent fish from entering the pipe – the MMO fundamentally disagree with this conclusion at this stage, noting that the project is significantly far from a point where such a conclusion can be reached. The risks associated with impingement, entrainment and entrapment of species within the cooling water system are significant and must be considered by the applicant at the earliest opportunity. Engagement is strongly encouraged with both the MMO, and the Environment Agency.

11.11 It should also be clarified that whilst it may be possible to mitigate fish impingement through the use of specialised screens (such as that which is quoted in the report), the entrainment and impingement of fish eggs, larvae and other plankton will be much more difficult. The MMO would expect the risk of this to be

proportionately assessed, given both: the likelihood that organisms will be entrained and impinged, and the commercial, economic and environmental importance of vulnerable fish receptors. As such, MMO would consider it necessary to seek plankton advice to assess this impact.

11.12 With regard to details regarding mitigation where the cooling water intake is concerned, MMO would expect to see specifications and methodology of the protective wedge wire screen including where inside the cooling pipe this would be placed; the target species that would benefit; evidence that it is effective to the point that is being assumed by the applicant, i.e. that it is effective enough to significantly mitigate against fish impingement. The applicant must provide further detail as to why their selected screen is sufficient in the mitigation of threat to marine life.

11.13 MMO support the applicant's recognition of the Thames Estuary recommended Marine Conservation Zone (rMCZ) as being a potentially relevant marine receptor, particularly given the area's national importance for fish spawning and nursing. MMO recommend continuation of the assumption that the rMCZ should be assessed as if it were a verified MCZ.

11.14 MMO note that the applicant has accurately identified the notable fish receptors smelt (Osmerus eperlanus), herring (Clupea harengus), sprat (Sprattus sprattus), thornback ray (Raja clavata), dover sole (Solea solea), seabass (Dicentrarchus labrax) and sea lamprey (Petromyzon marinus). The applicant has also accurately identified the national importance of the Thames for smelt spawning: indeed, this population is considered the most important in the UK. MMO recommend that the applicant consider specific smelt conservation advice compiled by the Zoological Society of London.

11.15 MMO would expect the applicant to consider the increased vulnerability of European seabass in UK waters, as per UK restrictions on fishing activity, in their consideration of likely significant effects.

11.16 The entire Thames Estuary is also considered to be a very important area for Sole – particularly with regard to spawning activity. This in turn supports one of the most important commercial fisheries in the North Sea region. This stock is also considered to be at risk of reduced reproductive capacity and as such, the MMO expect proportionate consideration of the potential impact of the cooling water outflow on Ssole in the Thames, and the North Sea.

11.17 The baseline environment assessment was informed by data and reports from the Environment Agency (EA), Water Framework Directive (WFD), Cefas and the Thames Estuary Dredge Association (TEDA). Whilst this is a broad range of good material to support the baseline description, MMO note that TEDA data are somewhat dated, and that there could be more relevant up to date material used. These data also refer to the Outer Thames Estuary, which, whilst relevant to a higher level, do not give the best description of the Thames' riverine environment. Nonetheless, the baseline environment description is detailed and accurate

12 Estuarine and Geomorphology & Coastal Processes

12.1 Section 8.7 of the scopnig report discusses water cooling system construction impacts due to sediment disturbance, displacement and removal, sediment suspension and resettlement, and changes to hydrodynamics. The operational phase of the cooling water system also has potential to cause similar effects, and these should also be scoped in and included in the ES.

12.2 Changes to the hydrodynamics from installation of temporary and permanent structures (cooling water pipes) is identified in the context of effects on aquatic ecology (paragraph 8.110). However, changes to the hydrodynamics could also affect riverbank morphology, with potential changes to sediment transport regime and bed level (scour). The MMO expect to see morphology of the riverbank (intertidal and subtidal) to be identified as a receptor and included in the ES.

12.3 Impacts relating to coastal processes that have been explicitly scoped out include saltmarsh assessment and use of what is referred to as an 'existing consented jetty'. Any new or amended jetty structure will need to be considered with respect to coastal processes (see item 13.2 below). Notwithstanding this clarification, table 8.7 provides sufficient justification for these impacts being scoped out and the MMO is largely in agreement with these conclusions (excluding the points above including 11.10). However, impacts on riverbank and riverbed morphology should be scoped in, and the EIA should assess whether there will be far field impacts that could influence the saltmarsh.

12.4 Riverbank morphology and bathymetry should be suitably monitored if impacts are expected to occur as a result of the water-cooling system. PSA analysis will form a useful part of the assessment, however should be complemented by bathymetric surveys.

12.5 The applicant will consider the option for either an air based or water-based cooling system, and MMO expect this decision to be informed by the outcomes of the EIA. This embeds mitigation into the project design process.

12.6 Monitoring and mitigation may be required if the water-cooling system is selected; this is not covered in the scoping document but should be addressed in the ES. If the development includes a cooling water system, then impacts on riverbank and bed morphology should be scoped in and assessed appropriately within the EIA. The proposed assessment of effects on aquatic ecology is focussed on construction impacts. This should be extended to consider operational impacts of the cooling water system on sediment disturbance, displacement/removal of seabed sediments, sediment suspension and resettlement.

13 Navigation

13.1 The MMO expect consideration to be given to navigation and other users of the sea, given that the proposal includes marine works (specifically construction of a jetty and potential use of barges). Given the quantity of material to be brought onto site, it is concerning that this has not been addressed under sections 8.41-8.52 of the scoping report.

13.2 It is the MMO's understanding that the jetty proposed (item K, Site Plan Development Zones) is a Thames Tideway Tunnel (TTT)-related structure and during licensing (MLA/2017/00055), it was stated that 'The jetty itself has been designed as a temporary structure and is expected to operate for 5 years for the Tideway project before being decommissioned.' We are also aware that the corresponding licence covering this structure (L/2017/00214/1) includes proposals for its decommissioning. There are a number of outstanding questions to be answered with respect to the jetty; if works are planned before the end of the TTT-jetty use, how will access be coordinated so as to avoid navigational risk and, more broadly, in order to reduce conflict between legitimate users of the sea? Conversely, if works are set to extend beyond the period where the Jetty is being used by the TTT project, what provision is in place to use the jetty for access (noting that the current structure is due to be decommissioned after TTT use).

13.3 The Maritime Coastguard Agency, local harbour authority and local boating/yacht clubs all may wish to comment on potential navigational issues relating to the project.

14 Health Impacts

14.1 The MMO welcomes the intention to consider potential impacts to Human Health in respective topics within the ES (for example air quality & contamination), rather than a separate chapter, due to the lack of potential for impacts given the nature, scale and location of the project.

15 Traffic & Transport

15.1 The MMO welcomes the approach to assess potential impacts from traffic and transport during construction and operation of the proposed works. The Local Planning Authority and Department for Transport may wish to comment.

15.2 As discussed in section 13.1 of this report, given the quantity of material to be brought onto site, it is concerning that use of the jetty for barge access has not been addressed under sections 8.41-8.52 of the scoping report.

16 Climate Change

16.1 The MMO welcomes the approach to carry out assessments on the potential impacts from greenhouse gas emissions through construction and operation of the proposed works, as discussed in sections 8.190-8.197 of the scoping report.

16.2 The MMO note that reference is not made to the forthcoming updated climate change predictions under UKCP18. UKCP09 (and its forthcoming replacement UKCP18) are an important source of data to inform climate change resilience. This should be borne in mind going forward and a precautionary approach should be taken with regards to ‘worst case’ coastal process / flood risk impacts considered with respect to the site operating throughout periods of climate change.

17 Water Resources & Flood Risk

17.1 The MMO welcomes the scope of assessments in relation to potential impacts to water quality, groundwater & risk of flooding as a result of the proposals. For further comment on these matters, MMO defers to the Environment Agency.

17.2 As discussed in section 16.2 of this report, a precautionary approach should be taken with regards to 'worst case' coastal process / flood risk impacts considered with respect to the site operating throughout periods of climate change.

18 Cumulative Impacts & In-Combination Impacts

18.1 The MMO welcomes the approach to carry out a Cumulative Effects Assessment in order to assess impacts from incremental changes caused by other projects in the vicinity of these works. There is likely to be significant stress introduced into the marine environment with this proposal.

18.2 There are a number of activities which may coincide in their introduction of stress into the marine environment, both in the immediate vicinity and in the wider Thames Estuary. Those in the immediate vicinity include:

- Cement works jetty at Frog Island, Dagenham
- Tilbury Power Station
- Tilbury Terminal 2
- Rainham Jetty, Essex
- Belvedere Energy Park, Bexley

19 Risk of Major Accidents and Disasters Relevant to the Project

19.1 The MMO would expect to see a full consideration in the ES, of how the surrounding environment would be impacted should a major accident/disaster, which is not within Thurrock Power Ltd's control, destroy or damage the facility, for example as a result of a tidal surge.

20 Planning Context

20.1 In relation to cooling options, Sections 3.24-3.27 of the scoping report state that "The applicant may select a preferred solution during subsequent stages of the pre-application process, may seek development consent for both options within the project design envelope, or may make a local authority Town and Country Planning Act application outside the DCO consenting regime for the cooling water connection as 'associated development". The MMO note that in order for the project to be fully assed in its entirety then all potential options must be assessed with the ES (and design envelope). The approach described within the EIA scoping report is in conflict with the 'project as a whole' approach to EIA; given the potential significance of marine-impacts if direct cooling via The Thames is taken forward, this needs to form part of the overall ES.

20.2 Section 1.16 of the scoping report details the consultation carried out to-date. No MMO consultation has been carried out prior to this stage, which is concerning given the MMO is a key regulator for activities taking place below MHWS. If a cooling

water intake and access (through a jetty, for example) is required, there may be significant challenges to overcome and the lack of prior discussion is therefore a concern.

21 Conclusion

21.1 The topics highlighted in this scoping opinion must be assessed during the EIA process and the outcome of these assessments **must** be documented in the ES in support of the application. This statement, however, should not necessarily be seen as a definitive list of all EIA requirements. Given the scale and programme of these planned works other work may prove necessary.

21.2 Although a number of elements have been raised throughout this document which must be taken into account at EIA/ES stage, MMO have a number of particular concerns – namely, the risks posed to fisheries species through the potential cooling-water system, and the claims that fish will be prevented from entering the cooling water system; as described above, it is MMO's stance that the project is a significant way from reaching this conclusion.

21.3 Further concerns remain regarding the lack of an approach to MMO with regard to informing the scope of thermal / chemical modelling for the cooling water system.

21.4 Interaction with the MMO at the earliest opportunity is recommended, in order to attempt to resolve these and other key issues.

Jamie Short
Marine Licensing Case Officer
7 September 2018

From: Helen Croxson [mailto:Helen.Croxson@mcga.gov.uk]
Sent: 05 September 2018 15:31
To: Thurrock FPG
Cc: Thomas Bulpit
Subject: Re: EN010092-000018 Thurrock Power Ltd

Dear Emma,

Thank you for your letter dated 10 August 2018 inviting the Maritime and Coastguard Agency (MCA) to comment on the Scoping consultation on the Thurrock Flexible Generation Plant.

From the information provided, it appears that the only aspects for MCA to consider would be with regards to the safety of navigation should any infrastructure or works be required in or over the marine environment, and the impact of the works on any MCA infrastructure in the area, which on initial inspection is unlikely.

Should any works be required in or over the marine environment, a Marine Licence may be required under the Marine and Coastal Access Act 2009, at which time the MCA will be invited to comment on the licence application from a navigation safety perspective. In addition, the MCA would point the developers in the direction of the Port Marine Safety Code (PMSC) and its Guide to Good Practice; they would need to liaise and consult with any relevant Port/Harbour Authority to develop a robust Safety Management System (SMS) for the project under this code.

Yours sincerely,

Helen

Maritime & Coastguard Agency

Helen Croxson, Offshore Renewables Advisor
Navigation Safety Branch, Bay 2/25
Maritime & Coastguard Agency
Spring Place, 105 Commercial Road, Southampton, SO15 1EG
Tel: 0203 8172426
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From: NATS Safeguarding [mailto:NATSSafeguarding@nats.co.uk]
Sent: 14 August 2018 15:30
To: Thurrock FPG
Subject: RE: EN010092 - Thurrock Flexible Generation Plant - EIA Scoping Notification and Consultation [Our Ref: SG26698]

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours Faithfully

NATS Safeguarding

D: 01489 444687
E: NATSSafeguarding@nats.co.uk

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk

Please note: We have recently made some changes to our mailbox structure, I would be grateful if you could delete previous instances of our email address (e.g. in outlook email address auto-fill) and re-typing NATSSafeguarding@nats.co.uk to ensure that the correct inbox is picked up

From: Thurrock FPG [mailto:ThurrockFPG@pins.gsi.gov.uk]
Sent: 10 August 2018 10:58
Subject: EN010092 - Thurrock Flexible Generation Plant - EIA Scoping Notification and Consultation

Date: 07 September 2018
Our ref: 255103
Your ref: EN010092-000018

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

Emma Cottam MRTPI, EIA and Land Rights Advisor
The Planning Inspectorate
ThurrockFPG@pins.gsi.gov.uk

BY EMAIL ONLY

Dear Ms Cottam,

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

Application by Thurrock Power Ltd (the Applicant) for an Order granting Development Consent for the Thurrock Flexible Generation Plant (the Proposed Development)

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

Location: Land adjacent to national Grid substation, Tilbury

Thank you for seeking our advice on the scope of the Environmental Statement (ES) in your consultation dated 10 August 2018 which we received on the same date.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Case law[1] and guidance[2] has stressed the need for a full set of environmental information to be available for consideration prior to a decision being taken on whether or not to grant planning permission. Annex A to this letter provides Natural England's general advice on the scope of the Environmental Impact Assessment (EIA) for this development.

Given the scale and type of this proposal, we offer the following bespoke advice which we hope is helpful, to complement the general advice we provide in Annex A.

General Principles
We understand from *EIA Scoping Report for Thurrock Flexible Generation Plant* authored by RPS Group (dated July 2018, revision 8, hereafter referred to as 'The EIA Scoping Report') that the proposal "potentially" may include a cooling water pipeline to the River Thames. As the proposal has yet to be refined in this regard, we advise that the EIA will need to cover all possible impacts on presumption that the cooling pipe is installed. Once the proposal is refined, then the scope of the EIA can be adjusted accordingly.

We draw your attention to the National Policy Statement for Energy EN-1: in particular to paragraph 5.3.4 that the project should seize opportunities to conserve and enhance biodiversity and

[1] Harrison, J in *R. v. Cornwall County Council ex parte Hardy* (2001)
[2] *Note on Environmental Impact Assessment Directive for Local Planning* Authorities Office of the Deputy Prime Minister (April 2004) available from http://webarchive.nationalarchives.gov.uk/+/http://www.communities.gov.uk/planningandbuilding/planning/sustainabilityenvironmental/environmentalimpactassessment/noteenvironmental/

geological conservation interests. The immediate proximity of the proposed development boundary holds considerable nature conservation interest, some of which has been assessed as being of national or international importance (whether this is formally designated or otherwise). In the context of the Tilbury cluster of NSIPs we refer you to the relevant case files for the Tilbury2 port expansion, and Natural England representations made, in particular on terrestrial invertebrates and passage and overwintering birds.

We would expect that this proposal should offer net environmental gains, consistent with paragraph 118 of the recently revised National Planning Policy Framework. Opportunities should be sought not only to avoid, mitigate, and where necessary compensate for impacts on important environmental features but also to deliver net gains for the environment through intelligent site design.

Information requirements

There are a number of matters that are proposed to be 'Scoped Out', as shown in Tables 7.2 & 8.5, that we believe should be 'Scoped in' to the ES, plus other additional information we believe is required in the ES (further comments are set out below):

1. Common Land: management objectives and outcomes for any mitigation land;
2. Wintering bird surveys (especially linked to functionally linked land);
3. Operational Impacts of the water cooling pipe;
4. Protected Species surveys: to be reviewed in the context of the potential water cooling pipe option;
5. Saltmarsh; and
6. Use of the existing/consented jetty.

1. *Common Land.* We note that the proposal includes the loss of an area of common land known as Walton Common. We understand that there has been a consultation process with the local community regarding implications for Walton Common with respect to the proposal, and that a land exchange[3] is under discussion (paragraph 8.55 of the EIA Scoping Report). We advise that land being offered as replacement ("exchange land" in the EIA Scoping Report) should be of least equal value when compared to the land being replaced, in the context of (amongst other matters) the public interest[4]. The EIA should consider the planned land management objectives for such mitigation land as there may be valuable opportunities to provide enhancement such as replacement meadow seeding to provide nectar for pollinators. The compatibility of common land mitigation and other ecological mitigation requirements should be carefully examined.

2. *Wintering bird surveys.* Regarding the cooling pipe option, we have previously advised the applicant via Andrew Troup (an agent acting on behalf of the Applicant) through our Discretionary Advice Service. In essence Natural England was seeking a specific proposal for us to consider regarding the cooling pipe and associated ecological data requirements to inform an impact assessment. We welcome the intention (stated in the EIA Scoping Report at para 8.101 point two) to avoid undertaking potential works during the sensitive period. Given our advice to Mr Troup of 18 July 2018 that *"impacts to over-wintering birds in this area of the Thames foreshore are sensitive given the number of projects in the area, similar data requirements, and cumulative / in-combination effects"* it is important that appropriate evidence and analysis is included in the ES to inform the assessment under the Habitats Regulations. Therefore we advise that survey of wintering birds should include the other areas of development (such as farmland crossed by the gas connection pipe, and access routes) and not just the water cooling pipe vicinity, because these habitats may provide a functional linkage to the adjacent SPA and Ramsar site, and thus are relevant to the HRA and EIA. It is important that the EIA and Habitats Regulations Assessment consider impacts upon both the European site itself and on functionally linked land utilised by SPA birds. Wintering birds associated with adjacent SPA / Ramsar sites are widely known to use e.g. adjacent farmland habitats, and so it is currently unclear on what basis the conclusions of Table 8.5 have been reached (species may include Brent geese, golden plover, lapwing, depending on crop types and management patterns). It should be noted

[3] Appropriate legal advice should be sought regarding any such transfer of land.
[4] The public interest is defined in law under the Commons Act 2006: it is the public interest in nature conservation, landscape and access and archaeology.

that the Thames Estuary and Marshes SPA is also notified for its waterbird assemblage, in addition to the specific named qualifying species. Natural England currently disagrees with Table 8.5 on passage and wintering birds.

3. *Operational Impacts of the water cooling pipe*. We welcome the points raised at paragraph 8.101 of the EIA Scoping Report regarding LSE and impacts to the aquatic environment of the Thames Estuary and Marshes SPA / Ramsar site during the operational phase of the water cooling pipe. However information should also be provided within the ES the regarding operational impacts for access and maintenance of the water cooling pipe. This might usefully include timings of proposed maintenance (and whether these avoid the sensitive period for the SPA bird interest) together with information of working protocols to be used in the case of emergency repair or similar works to water cooling pipe.

4. *Protected Species surveys.* It is not clear to us whether the preliminary species surveys that are referenced in the EIA Scoping report include consideration of the cooling pipe option. Natural England advises that surveys should cover the whole area of development (i.e. including an appropriate corridor of the cooling pipeline option) or present compelling reasons why such surveys are not required. We also advise that the applicant should consult Natural England's published guidance for protected species licencing.

   Currently the methodology of the surveys proposed (e.g. for passage and wintering birds) is not sufficiently detailed for Natural England to agree that these will be fit for the purpose of HRA and EIA assessments (with reference to table 8.4). We strongly recommend that our pre-application DAS service is used to agree evidence requirements for the project.

5. *Saltmarsh*. The summary statement in Table 8.7 is not sufficiently detailed to allow Natural England to agree that the impacts to saltmarsh habitat may be scoped out. There is potential that works to install a water cooling pipe would release sediments which could smother saltmarsh habitats, and therefore saltmarsh should be scoped in).

6. *Use of the existing/consented jetty*. Further justification for the scoping out of impacts arising from use of the existing jetty should be provided, to evidence the assertion in Table 8.7 that it is limited and temporary relative to existing permitted usage.

Designated Sites

Please note that the nationally significant invertebrate assemblage on the adjacent Tilbury2 site could be considered to be of sufficient quality to meet the designation requirements of a Site of Special Scientific Interest ('SSSI'). Natural England is currently considering such a site for notification. We will be adding the site to our SSSI designations' pipeline in due course, consistent with the requirements of our designations' strategy. We will advise further as this progresses but consideration of impacts both alone and cumulative with other developments on these invertebrate assemblages will be necessary to meet the requirements of EIA.

Given the potential water cooling pipe option, and how this interacts with the Thames Estuary and Marshes SPA/Ramsar and South Thames Estuary and Marshes SSSI, we advise that the applicant should contact the Marine Management Organisation (MMO) in the first instance to discuss the requirements of a marine licence https://www.gov.uk/topic/planning-development/marine-licences Projects either entirely or partially below the mean high water mark are likely to require a marine licence.

Habitats and Species of Principal Importance

We note that a scoping exercise has been undertaken by Colin Plan Associates regarding invertebrate interest, and are broadly comfortable with the recommended mitigation (hedgerow retention, bee bank construction, etc). This is important given the nationally significant invertebrate interest in the locality of the adjacent power station (both within the power station site itself and in surrounding suitable habitats).

Cumulative and in-combination effects
The scale of development proposed in this area requires careful consideration of both temporary and permanent in-combination impacts. The EIA will need to consider impacts on existing environmental features, previous mitigation commitments of the land within and adjacent to the development and any mitigation and compensation schemes that are required enable the delivery of other development coming forward in this locality. We would advise that one approach would be the preparation of a co-ordinated mitigation strategy would be agreed between the applicants for this site and nearby developments which would safeguard and join up important environmental features and provide enhancement at the landscape scale.

We agree with the Tier 1 and 2 developments listed in para 6.58 with the potential for cumulative effects, although the applicant may find it helpful to consult Thurrock Council for other relevant projects to include.

Administrative correction: We note that in Table 1.1 of the EIA Scoping Report that Mr Jonathan Bustard is listed as representing Natural England and the Essex Wildlife Trust. Mr Bustard only represents Natural England, and we recommend that the applicant consult with Essex Wildlife Trust if they have not already done so.

Should the proposal be amended in a way which significantly affects its impact on the natural environment then, in accordance with Section 4 of the Natural Environment and Rural Communities Act 2006, Natural England should be consulted again.

Natural England anticipates further dialogue with the developer through our DAS service, to progress some of the items mentioned above, and to discuss a programme of further review of draft documents ahead of formal submission. We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us. For any queries relating to the specific advice in this letter only please contact Steve Roe on 0208 2257685. For any new consultations, or to provide further information on this consultation please send your correspondences to consultations@naturalengland.org.uk.

Yours sincerely

Steve Roe
Lead Adviser – Land Use Planning, West Anglia Area Team

Annex A – Advice related to EIA Scoping Requirements

1. General Principles

Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017, sets out the necessary information to assess impacts on the natural environment to be included in an ES, specifically:

- A description of the development – including physical characteristics and the full land use requirements of the site during construction and operational phases.
- Expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development.
- An assessment of alternatives and clear reasoning as to why the preferred option has been chosen.
- A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.
- A description of the likely significant effects of the development on the environment – this should cover direct effects but also any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects. Effects should relate to the existence of the development, the use of natural resources and the emissions from pollutants. This should also include a description of the forecasting methods to predict the likely effects on the environment.
- A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.
- A non-technical summary of the information.
- An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

It will be important for any assessment to consider the potential cumulative effects of this proposal, including all supporting infrastructure, with other similar proposals and a thorough assessment of the 'in combination' effects of the proposed development with any existing developments and current applications. A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

2. Biodiversity and Geology

2.1 Ecological Aspects of an Environmental Statement

Natural England advises that the potential impact of the proposal upon features of nature conservation interest and opportunities for habitat creation/enhancement should be included within this assessment in accordance with appropriate guidance on such matters. Guidelines for Ecological Impact Assessment (EcIA) have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM) and are available on their website.

EcIA is the process of identifying, quantifying and evaluating the potential impacts of defined actions on ecosystems or their components. EcIA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.

The National Planning Policy Framework sets out guidance in S.118 on how to take account of biodiversity interests in planning decisions and the framework that local authorities should provide to assist developers.

2.2 Internationally and Nationally Designated Sites

The ES should thoroughly assess the potential for the proposal to affect designated sites. European sites (e.g. designated Special Areas of Conservation and Special Protection Areas) fall within the scope of the Conservation of Habitats and Species Regulations 2017. In addition paragraph 118 of the National Planning Policy Framework requires that potential Special Protection Areas, possible Special Areas of Conservation, listed or proposed Ramsar sites, and any site

identified as being necessary to compensate for adverse impacts on classified, potential or possible SPAs, SACs and Ramsar sites be treated in the same way as classified sites.

Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 an appropriate assessment needs to be undertaken in respect of any plan or project which is (a) likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and (b) not directly connected with or necessary to the management of the site.

Should a Likely Significant Effect on a European/Internationally designated site be identified or be uncertain, the competent authority (in this case the Local Planning Authority) may need to prepare an Appropriate Assessment, in addition to consideration of impacts through the EIA process.

Sites of Special Scientific Interest (SSSIs) and sites of European or international importance (Special Areas of Conservation, Special Protection Areas and Ramsar sites)
The development site is near the following designated nature conservation site(s):

- Thames Estuary and Marshes SPA/Ramsar
- South Thames Estuary and Marshes SSSI (~2.8km to the south-east)
- Mucking Flats and Marshes SSSI (~2.5km to the east)
- Hangman's Wood and Deneholes SSSI (~4km, to the north-west)

Further information on the SSSI and its special interest features can be found at www.magic.gov . The Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within these sites and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects.

Natura 2000 network site conservation objectives are available on our internet site http://publications.naturalengland.org.uk/category/6490068894089216

2.3 Regionally and Locally Important Sites
The EIA will need to consider any impacts upon local wildlife and geological sites. Local Sites are identified by the local wildlife trust, geoconservation group or a local forum established for the purposes of identifying and selecting local sites. They are of county importance for wildlife or geodiversity. The Environmental Statement should therefore include an assessment of the likely impacts on the wildlife and geodiversity interests of such sites. The assessment should include proposals for mitigation of any impacts and if appropriate, compensation measures. Contact the local wildlife trust, geoconservation group or local sites body in this area for further information.

2.4 Protected Species - Species protected by the Wildlife and Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017
The ES should assess the impact of all phases of the proposal on protected species (including, for example, great crested newts, reptiles, birds, water voles, badgers and bats). Natural England does not hold comprehensive information regarding the locations of species protected by law, but advises on the procedures and legislation relevant to such species. Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups and individuals; and consideration should be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.

The conservation of species protected by law is explained in Part IV and Annex A of Government Circular 06/2005 *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System*. The area likely to be affected by the proposal should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES.

In order to provide this information there may be a requirement for a survey at a particular time of year. Surveys should always be carried out in optimal survey time periods and to current guidance

by suitably qualified and where necessary, licensed, consultants. Natural England has adopted standing advice for protected species which includes links to guidance on survey and mitigation.

2.5 Habitats and Species of Principal Importance
The ES should thoroughly assess the impact of the proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, published under the requirements of S41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act 2006 places a general duty on all public authorities, including local planning authorities, to conserve and enhance biodiversity. Further information on this duty is available here https://www.gov.uk/guidance/biodiversity-duty-public-authority-duty-to-have-regard-to-conserving-biodiversity.

Government Circular 06/2005 states that Biodiversity Action Plan (BAP) species and habitats, 'are capable of being a material consideration…in the making of planning decisions'. Natural England therefore advises that survey, impact assessment and mitigation proposals for Habitats and Species of Principal Importance should be included in the ES. Consideration should also be given to those species and habitats included in the relevant Local BAP.

Natural England advises that a habitat survey (equivalent to Phase 2) is carried out on the site, in order to identify any important habitats present. In addition, ornithological, botanical and invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present. The Environmental Statement should include details of:

- Any historical data for the site affected by the proposal (e.g. from previous surveys);
- Additional surveys carried out as part of this proposal;
- The habitats and species present;
- The status of these habitats and species (e.g. whether priority species or habitat);
- The direct and indirect effects of the development upon those habitats and species;
- Full details of any mitigation or compensation that might be required.

The development should seek if possible to avoid adverse impact on sensitive areas for wildlife within the site, and if possible provide opportunities for overall wildlife gain.

The record centre for the relevant Local Authorities should be able to provide the relevant information on the location and type of priority habitat for the area under consideration.

2.6 Contacts for Local Records
Natural England does not hold local information on local sites, local landscape character and local or national biodiversity priority habitats and species. We recommend that you seek further information from the appropriate bodies (which may include the local records centre, the local wildlife trust, local geoconservation group or other recording society and a local landscape characterisation document).

3. Designated Landscapes and Landscape Character

Nationally Designated Landscapes
As the development site is within/adjacent to Kent Downs Area of Outstanding Natural Beauty (AONB), consideration should be given to the direct and indirect effects upon this designated landscape and in particular the effect upon its purpose for designation within the environmental impact assessment, as well as the content of the relevant management plan for this AONB.

Landscape and visual impacts
Natural England would wish to see details of local landscape character areas mapped at a scale appropriate to the development site as well as any relevant management plans or strategies pertaining to the area. The EIA should include assessments of visual effects on the surrounding area and landscape together with any physical effects of the development, such as changes in topography. The European Landscape Convention places a duty on Local Planning Authorities to

consider the impacts of landscape when exercising their functions.

The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed.

Natural England supports the publication *Guidelines for Landscape and Visual Impact Assessment*, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition). The methodology set out is almost universally used for landscape and visual impact assessment.

In order to foster high quality development that respects, maintains, or enhances, local landscape character and distinctiveness, Natural England encourages all new development to consider the character and distinctiveness of the area, with the siting and design of the proposed development reflecting local design characteristics and, wherever possible, using local materials. The Environmental Impact Assessment process should detail the measures to be taken to ensure the building design will be of a high standard, as well as detail of layout alternatives together with justification of the selected option in terms of landscape impact and benefit.

The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England advises that the cumulative impact assessment should include other proposals currently at Scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.

The assessment should refer to the relevant National Character Areas which can be found on our website. Links for Landscape Character Assessment at a local level are also available on the same page.

Heritage Landscapes
You should consider whether there is land in the area affected by the development which qualifies for conditional exemption from capital taxes on the grounds of outstanding scenic, scientific or historic interest. An up-to-date list may be obtained at www.hmrc.gov.uk/heritage/lbsearch.htm.

4. Access and Recreation
Natural England encourages any proposal to incorporate measures to help encourage people to access the countryside for quiet enjoyment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways are to be encouraged. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Relevant aspects of local authority green infrastructure strategies should be incorporated where appropriate.

Rights of Way, Access land, Coastal access and National Trails
The EIA should consider potential impacts on access land, public open land, rights of way and coastal access routes in the vicinity of the development. Consideration should also be given to the potential impacts on any nearby National Trail. The National Trails website www.nationaltrail.co.uk provides information including contact details for the National Trail Officer. Appropriate mitigation measures should be incorporated for any adverse impacts. We also recommend reference to the relevant Right of Way Improvement Plans (ROWIP) to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced.

5. Soil and Agricultural Land Quality

Impacts from the development should be considered in light of the Government's policy for the protection of the best and most versatile (BMV) agricultural land as set out in paragraph 112 of the NPPF. We also recommend that soils should be considered under a more general heading of sustainable use of land and the ecosystem services they provide as a natural resource in line with paragraph 109 of the NPPF.

Soil is a finite resource that fulfils many important functions and services (ecosystem services) for society, for example as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution. It is therefore important that the soil resources are protected and used sustainably.

The applicant should consider the following issues as part of the Environmental Statement:

1. The degree to which soils are going to be disturbed/harmed as part of this development and whether 'best and most versatile' agricultural land is involved.

   This may require a detailed survey if one is not already available. For further information on the availability of existing agricultural land classification (ALC) information see www.magic.gov.uk. Natural England Technical Information Note 049 - *Agricultural Land Classification: protecting the best and most versatile agricultural land* also contains useful background information.

2. If required, an agricultural land classification and soil survey of the land should be undertaken. This should normally be at a detailed level, eg one auger boring per hectare, (or more detailed for a small site) supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, ie 1.2 metres.

3. The Environmental Statement should provided details of how any adverse impacts on soils can be minimised. Further guidance is contained in the *Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites*.

As identified in the NPPF new sites or extensions to new sites for peat extraction should not be granted permission by Local Planning Authorities or proposed in development plans.

6. Air Quality

Air quality in the UK has improved over recent decades but air pollution remains a significant issue; for example over 97% of sensitive habitat area in England is predicted to exceed the critical loads for ecosystem protection from atmospheric nitrogen deposition (England Biodiversity Strategy, Defra 2011). A priority action in the England Biodiversity Strategy is to reduce air pollution impacts on biodiversity. The planning system plays a key role in determining the location of developments which may give rise to pollution, either directly or from traffic generation, and hence planning decisions can have a significant impact on the quality of air, water and land. The assessment should take account of the risks of air pollution and how these can be managed or reduced. Further information on air pollution impacts and the sensitivity of different habitats/designated sites can be found on the Air Pollution Information System (www.apis.ac.uk). Further information on air pollution modelling and assessment can be found on the Environment Agency website.

7. Climate Change Adaptation

The England Biodiversity Strategy published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES should reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment 'by establishing coherent ecological networks that are more resilient to current and future pressures' (NPPF Para 109), which should be demonstrated through the ES.

8. Contribution to local environmental initiatives and priorities

The Thames Estuary and Marshes Focus Area
This site falls within Natural England's Thames Estuary and Marshes Focus Area. Part of the reason for the selection of this area are the important brownfield sites and habitats and species listed as being of principal importance for the purpose of conserving biodiversity, under section 41 of the Natural Environment and Rural Communities Act 2006 and, in particular its rich invertebrate assemblages.

9. Cumulative and in-combination effects

A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

The ES should include an impact assessment to identify, describe and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment, (subject to available information):

a. existing completed projects;
b. approved but uncompleted projects;
c. ongoing activities;
d. plans or projects for which an application has been made and which are under consideration by the consenting authorities; and
e. plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.

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

Land and Acquisitions
Spencer Jefferies
Development Liaison Officer
Network management
Spencer.Jefferies@nationalgrid.com
Direct tel: +44 (0)7812 651481

www.nationalgrid.com

SUBMITTED ELECTRONICALLY:
ThurrockFPG@pins.gsi.gov.uk

06 September 2018

Dear Sir/Madam

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

Application by Thurrock Power Ltd (the Applicant) for an Order granting Development Consent for the Thurrock Flexible Generation Plant (the Proposed Development)

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

This is a response on behalf of National Grid Electricity Transmission PLC (NGET)

I refer to your letter dated 10th August 2018 regarding the proposed Order. NGET wish to express their interest in further consultation while the impact on our assets is still being assessed.

National Grid are in regular contact with Thurrock Power ltd and National Grid will continue to liaise with the developer throughout the progression of this proposed development.

Please see relevant guidance for working near NGET assets below.

Where the Promoter intends to acquire land, extinguish rights, or interfere with any of NGET's apparatus, both will require appropriate protection and further discussion on the impact to its apparatus and rights.

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

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 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.

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

Technical information and guidance documents mentioned above in regards to National Grid's apparatus can be found at:

https://www.nationalgrid.com/uk/about-grid/our-networks-and-assets/land-planning-and-development

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

Yours sincerely

[redacted]

Spencer Jefferies
Development Liaison Officer, Land and Acquisitions.

From: Helena Payne [mailto:Helena.Payne@pla.co.uk]
Sent: 07 September 2018 13:41
To: Thurrock FPG
Cc: Lucy Owen; James Trimmer
Subject: EN010092-000018 - Scoping consultation in respect of the application by Thurrock Power Ltd for an Order Granting Development Consent for the proposed Thurrock Flexible Generation Plant. Port of London Authority Response.

FAO: Emma Cottam

Dear Emma

Thank you for consulting the Port of London Authority (PLA) on the Regulation 10 and 11 Scoping Report in support of the proposed Thurrock Flexible Generation Plant. I have now had the opportunity to review the submitted document and provide the following observations in respect to it's content:

General

The PLA's first observation relates to pre-application discussion, which disappointingly the PLA has not been party too to date. This is made even more disappointing given the red line development boundary includes the River Thames, of which the PLA is Harbour Authority. The PLA is the statutory body responsible for the conservancy of the River Thames ("the River") and the administration of navigation on, and works and dredging in, under or over, the River. Its area of jurisdiction and regulatory powers are mainly in the Port of London Act 1968.

The red line boundary shown on the submitted plans includes an area of the River, which is within the PLA's jurisdiction (and which is owned by the PLA). The extension of the red line into the River allows the Applicant to consider the option of water cooling using water from the Thames (considered further under Water Resources/Hydrographic Matters). Given the impact this may have on the River, it is surprising that the scoping report does not refer to the need for a Licence under s.66 of the Port of London Act, 1968, which relates to consenting river works. This is especially relevant in connection with the proposed cooling pipes required for this scheme and potential on-going maintenance and use of the existing jetty. The PLA expect this to be addressed within the forthcoming Environmental Statement (ES). It is also unclear whether these works within the River will either form part of the Development Consent Order (DCO) or whether the DCO will make alternative provision and disapply the requirement for a River Works Licence. The PLA has not had ~~any~~ discussions with the Applicant on this to date, and therefore must reserve its position on this matter until discussions have taken place.

Marine Ecology

The PLA advise that the Applicant recheck the status of the Marine Conservation Zone (MCZ) as the Tranche 3 consultation has now closed and there is a revised (much smaller) boundary for the now proposed MCZ. The Applicant's assessments may have been undertaken prior to this change, however it may be worth checking this point, as it could potentially minimise the scope of the assessment going forward. The revised boundary is available on the MAGIC website (https://magic.defra.gov.uk/ - which provides authoritative geographic information about the natural environment).

Coastal Processes

Whilst ecology and flood risk are covered, there does not appear to be much in the way of a coastal processes assessment to support the ecological assessment. If works are to be constructed in the current red line boundary, the PLA would have some serious concerns regarding the impact of an intake/outfall structure on the stability of the intertidal area given its rapid accretion over the last 20 years. Destabilisation of the intertidal area could also impact on the navigation channel and reverse the ecological benefits that have been achieved.

Marine Navigation

At paragraph 3.35 the Applicant has advised that in the construction phases of the development they will consider the option to use barge delivery on the Thames where possible for bulk materials such as aggregates. It is suggested that either the existing jetty and offloading facilities of the land raising option or the consented larger jetty and pontoon (permitted via planning application 17/00224/FULL from the Local Planning Authority) would be used. The PLA fully support use of the River, however a Navigational Risk Assessment (NRA) will be required for use of barges, the jetty and river (especially given any potential overlap with other projects (to be addressed under Cumulative Impacts)), and it is disappointing that further consideration of navigational matters has not been documented. The PLA welcome discussions with the Applicant on these matters as soon as possible.

Air Quality

Given the potential use of the River for the transport of materials during the construction phase of the development, it is surprising that the positive impact (for example reduction of CO2 and resultant reduction of lorry movements) from using barges in the transport of goods has not been included within this section of the scoping report. The PLA expect to see greater emphasis given to this within any forthcoming ES. An assessment of the appropriateness, as a mitigation, of providing shore power should also be included within the ES.

Water Resources/Hydrographic Matters

The scoping report contains very little detail of the cooling option and its assessment. The Applicant should review the riverward extent of the red line boundary as the Ordnance Survey (OS) Mean Low Water (MLW) does not account for the accretion that resulted from the construction of the Diver Shoal groynes 20 years ago. The drying line is currently up to 145m south of the OS MLW.

It is disappointing that the PLA has not been approached in terms of water resources or hydrographic matters. It is noted that supporting data, especially hydrographic data, does not include any sourced from the PLA.

Noise & Vibration

Paragraph 8.131 relates to construction and decommissioning traffic, which the PLA considers must also include ship/barges given the intention to utilise the Thames for the transportation of materials.

Cumulative Impacts

The proposed Order Limits (red line boundary) does not overlap with the RWE's red line boundary, however it does overlap with Lower Thames Crossing's development area boundary. The PLA would have expected greater emphasis and consideration given to the cumulative and in-combination effects of the proposed Generation Plant alongside other developments, including the Nationally Significant Infrastructure Projects (NSIP) at Tilbury 2 and RWE, as well as the Lower Thames Crossing, especially given the proposed timings for commencement of development on all of these sites could potentially overlap, resulting in a cumulative impact of construction traffic on road and river (amongst other matters). This should also be addressed in the forthcoming NRA.

Matters to be scoped out of the ES

Section 9.9 looks at matters to be scoped out of the ES. If river use is not to be scoped in, the PLA expect, at the very least, for it to be addressed within any forthcoming Construction Environmental Management Plan (CEMP), Navigational Risk Assessment (NRA) and River Logistics Plan (RLP), in support of the formal submission.

Conclusions

Overall, the PLA is disappointed not to have been included in discussions regarding the proposal to date. However, notwithstanding this, there are a number of assessments that need to be undertaken, as detailed above. The PLA is willing to engage with the applicant to discuss these matters further.

I hope the above is of assistance to you.

Regards

Helena

Helena Payne
Senior Planner
Port of London Authority

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VINCENT+GORBING

Our ref : MF/5120

05 September 2018

Emma Cottam MRTPI
EIA and Land Rights Advisor
Major Casework Directorate
Temple Quay House
2 The Square
Bristol,
BS1 6PN

Dear Madam

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

Application by Thurrock Power Ltd (the Applicant) for an Order granting Development Consent for the Thurrock Flexible Generation Plant (the Proposed Development)

Thank you for consulting our client, Port of Tilbury London Limited ("PoTLL"), regarding the EIA scoping for the above scheme by letter dated 10 August 2018. This letter and the two annexes attached hereto are the response of PoTLL to the Scoping Report.

The comments in this letter are made from the perspective of PoTLL's role as:-

1. The owner and operator of Port of Tilbury
2. The owner and promoter of a new Port Terminal on the western part of the former Tilbury Power Station site (known as Tilbury2) which is the subject of an application prepared, consulted on, assessed and submitted to the Secretary of State in October 2017 (reference TR030003) and subject to examination which formally closed on 20 August 2018.

The Scoping Report for the Thurrock Flexible Generation Plant ("TFGP") was published on 10 August 2018, very shortly before the last timetabled submission deadline and formal close of the Tilbury2 Examination. Despite the timing within the Tilbury2 examination process, PoTLL prepared and submitted a document to the Tilbury2 Examination entitled *"Note On Thurrock Flexible Generation Plant"* [Tilbury2 library reference number REP7-024[i]]. This provided observations on the potential for cumulative effects arising from TFGP with Tilbury2 and two other Nationally Significant Infrastructure Projects in the vicinity, namely Tilbury Energy Centre ("TEC") and Lower Thames Crossing ("LTC"). That document is attached as Annex 1 to this letter and should be seen as forming part of PoTLL's representations to this Scoping consultation.

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Attached as Annex 2 to this letter is a detailed analysis of the Scoping Report with respect to ecological matters prepared by PoTLL's consulting ecologists on the Tilbury2 project, Bioscan UK Limited.

Discussions held between PoTLL and Thurrock Power Limited

The Scoping Report states at para. 6.61 that the Applicant *"has worked closely with Highways England, RWE and Port of Tilbury to consider cumulative effects and mitigation requirements or opportunities (such as landscaping and biodiversity enhancement) afforded by some or all of these developments in conjunction and will continue to do so during the EIA process."* PoTLL accept that some limited discussions have occurred with the promotor of TFGP, but these have been at a high level regarding solely the interaction of the TFGP proposals and PoTLL's land interests. No detailed discussions have been held between Thurrock Power Limited and PoTLL as to the interaction of the temporal or geographic scope or potential design of the TFGP or its proposed environmental mitigation at this stage.

Order Limits

The TFGP site lies immediately adjoining the northern part of the Tilbury2 site, with a common boundary some 500m in length. The land within the Tilbury2 Order Limits in this part of the Tilbury2 site is proposed to be used in part for ecological mitigation and remain undeveloped and in part for the construction and aggregates terminal (CMAT).

It is also noted that there would appear to be some minor overlap in the proposed Order Limits boundary for TFGP and the Tilbury2 Order Limits in the area noted as "J" on Figure Number 2 (sheet 1), which is an area identified as "Possible S106 planning gain land." We note that the Order Limits of Tilbury2 in this area were modified at Deadline 5 of the Tilbury2 Examination[ii] and we recommend that the TFGP Applicant reviews their boundary in this area to ensure there is no overlap and that full regard to the proposed as well as existing use is fully taken into account in the baseline and future baseline for assessment.

Construction programme

The Scoping Report sets out the construction period for the TFGP as being from Q1 2021 to Q4 2021.

PoTLL consider that there will be limited, if any, temporal overlap in the anticipated construction programmes of Tilbury2 with TFGP. If the Tilbury2 DCO is granted, Tilbury2 will become operational with the opening of the RoRo terminal in Q1 2020. Construction on-site for the remainder of the terrestrial works including the CMAT would continue for another 12 months (i.e. until Q1 2021).

Assuming construction of TFGP commences at the earliest Q1 2021, all of the main construction activities related to the Tilbury2 proposals (in particular the new lengths of highway and rail line, all maritime infrastructure, and the grading and laying of appropriate pavements across the site) will be complete and the RoRo terminal, and quite possibly the full extent of the CMAT, will be operational.

Indeed, PoTLL consider that the time line set out by the applicants for the TFGP is highly optimistic considering no statutory consultation has been undertaken and the basic level

of environmental information provided in the Scoping Report, combined with the need to participate in the competitive Capacity Market auction process. As such, there are unlikely to be cumulative construction environmental effects between Tilbury2 and TFGP due to construction activities being undertaken for both projects at the same time.

The construction period for TFGP is more likely to overlap with that for TEC should both schemes gain permission and come forward as planned by their respective promotors and there is a possibility that TFGP, TEC and LTC could all be under construction at the same time; but by that time, Tilbury2 will be substantially completed and operational, with environmental mitigation and enhancement areas established and in management and maintenance. The TFGP should however consider fully the potential for both follow on effects of the timing of construction and potential disturbance in newly established environmental mitigation land as well as any potential overlap between their project, TEC and LTC and the change in baseline, future baseline and cumulative effects that could arise from these planned projects.

Approach to Cumulative Effects Assessment and mitigation

The extent of information available within the Scoping Report for TFGP is limited. Cumulative effects of that scheme with Tilbury2 will necessarily be undertaken by the promoter of the TFGP. The Scoping Report states that the potential for cumulative impacts with several other nearby major infrastructure projects that are in the process of applying for development consent has been identified and will be assessed in the EIA. These include Tilbury2, the Lower Thames Crossing and the Tilbury Energy Centre. PoTLL consider this to be the correct approach as they are significant planned projects.

The environmental impacts of TFGP, along with both LTC and TEC will fall to be assessed and considered by the relevant decision-makers as and when applications are progressed through the DCO process. All three have identified in their respective Scoping Reports that Tilbury2 is a cumulative project that will be assessed as part of their Environmental Assessment process.

The Tilbury2 application has progressed through the whole pre-application, application and examination process and the Examining Authority must report to the Secretary of State on or before 20 November 2018 and if submitted on that date the Secretary of State must make a decision on or before 20 February 2019. Therefore by the time TFGP, LTC and TEC applications are fully consulted on, designed and assessed with full regard to that consultation and submitted and accepted for full examination and testing in public through the DCO process, the Tilbury2 DCO may well have been made. If the decision was still to be made, all necessary detail of the Tilbury2 proposals will in any event be available to the promoters of those schemes as already fully published on the Planning Inspectorate website project page for Tilbury2[iii].

This will allow TFGP to fully take account of the environmental assessment, full examination submissions and documentation, detailed design of Tilbury2, any on-going monitoring, and the associated proposed mitigation and the statutory consultee responses to this information. This will ensure that potential cumulative effects will be quantified at the appropriate point and will allow for appropriate, avoidance and minimisation through design and mitigation strategies (in the TFGP, and indeed TEC and LTC proposed schemes) to properly address cumulative effects if these are indeed identified once the detail of these future proposals is known.

The annexed *"Note On Thurrock Flexible Generation Plant"* highlights potential environmental topics where cumulative effects could arise based on the very limited information provided in the scoping report submitted by TFGP. We would particularly highlight to the applicant comments therein on ecology, heritage and landscape and through this submission the water environment should water abstraction, cooling and discharge come forward as part of the TFGP project.

PoTLL has particular concerns regarding ecology, as the TFGP proposals have the potential to interact with impacts from the Tilbury2 project mainly by virtue of geographical proximity and the interconnection between certain habitat and species receptors. In particular, the site proposed for the TFGP itself is subject to a draft Local Wildlife Site designation (LoWS) (although this does not appear to have been identified in the scoping report), and is known to support semi-improved coarse grassland and relict grazing marsh habitats of confirmed value for reptiles and (in the boundary ditches) water voles, and with likely value for ground nesting and scrub birds, badgers and species from the nationally significant invertebrate assemblage associated with the power station area generally, potentially including Priority species such as hornet robberfly.

Thus, further impacts on such resources could arise from the TFGP with additional consequences for local metapopulations over and above those arising from Tilbury2 alone and/or Tilbury2 cumulatively with the TEC and LTC.

Scope of environmental topics

Table 7.2 of the TFGP 'scopes out' a number of topics or aspects of those topics.

PoTLL do not agree that Human Health (as a separate Health Chapter) should be scoped out. It is considered important to prepare a Health Impact Assessment and report this either separately or as a Chapter in the Environmental Statement. An integrated chapter in the ES was the approach taken by PoTLL in the Tilbury2 EIA and accepted by Thurrock Council Public Health.

The ES should clearly identify the location and distance from the development of all human receptors which may be affected by emissions from or activities associated with the Proposed Development during construction, operation and decommissioning. The assessment should particularly address human receptors on site (employees), at residential premises, commercial/industrial premises, transport infrastructure routes (such as roads and railways), schools, medical facilities, recreational/ tourism areas and publicly accessible land. In particular, individuals employed at Tilbury2 should be considered as a receptor of potential effects.

Health determinants should be identified including noise and vibration, air quality (including construction dust), lighting; traffic, transport and connectivity; open space and green space; neighbourhood quality, including landscape and townscape quality, local amenity and 'sense of place'; direct employment and wider economic impacts; education and training; local housing market; access to services; and physical activity.

PoTLL are also unconvinced that 'Waste management' should be scoped out at this stage. From experience at Tilbury2, there are likely to be waste arisings from the scheme as a result of achieving suitable ground conditions for development. Whilst the Scoping Report

indicates that any arisings will be contained within the site, even small arisings could have an environmental effect. As established by the assessment undertaken by PoTLL for the Tilbury2 project, waste capacity in Thurrock is more limited than in the wider Essex area, and therefore the impacts on this capacity from TFGP, particularly when considered cumulatively with Tilbury2, TEC and LTC could be significant.

Detailed comments on the scope of the assessment in respect of ecology are contained in Annex 2 to this letter.

We trust the above comments will be taken into account by the Secretary of State in preparing the Scoping Opinion for the TFGP project.

Yours faithfully

[redacted]

MARTIN FRIEND
DIRECTOR
FOR VINCENT AND GORBING
martin.friend@vincent-gorbing.co.uk

Enc:

Annex 1 : *Note On Thurrock Flexible Generation Plant* by PoTLL, submitted to the Tilbury2 Examination, August 2018

Annex 2 Additional comments on the Scoping Report in relation to onshore and intertidal ecology by Bioscan UK Limited

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[i] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000990-Note%20on%20Thurrock%20Flexible%20Generation%20Plant.pdf

[ii] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000880-PoTLL%20General%20Arrangement%20Plans%20v2.pdf

[iii] https://infrastructure.planninginspectorate.gov.uk/projects/south-east/tilbury2/?ipcsection=overview

Annex 1 :

Note On Thurrock Flexible Generation Plant **by PoTLL, submitted to theTilbury2 Examination, August 2018**

PORT OF TILBURY LONDON

PLANNING ACT 2008
INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES 2010

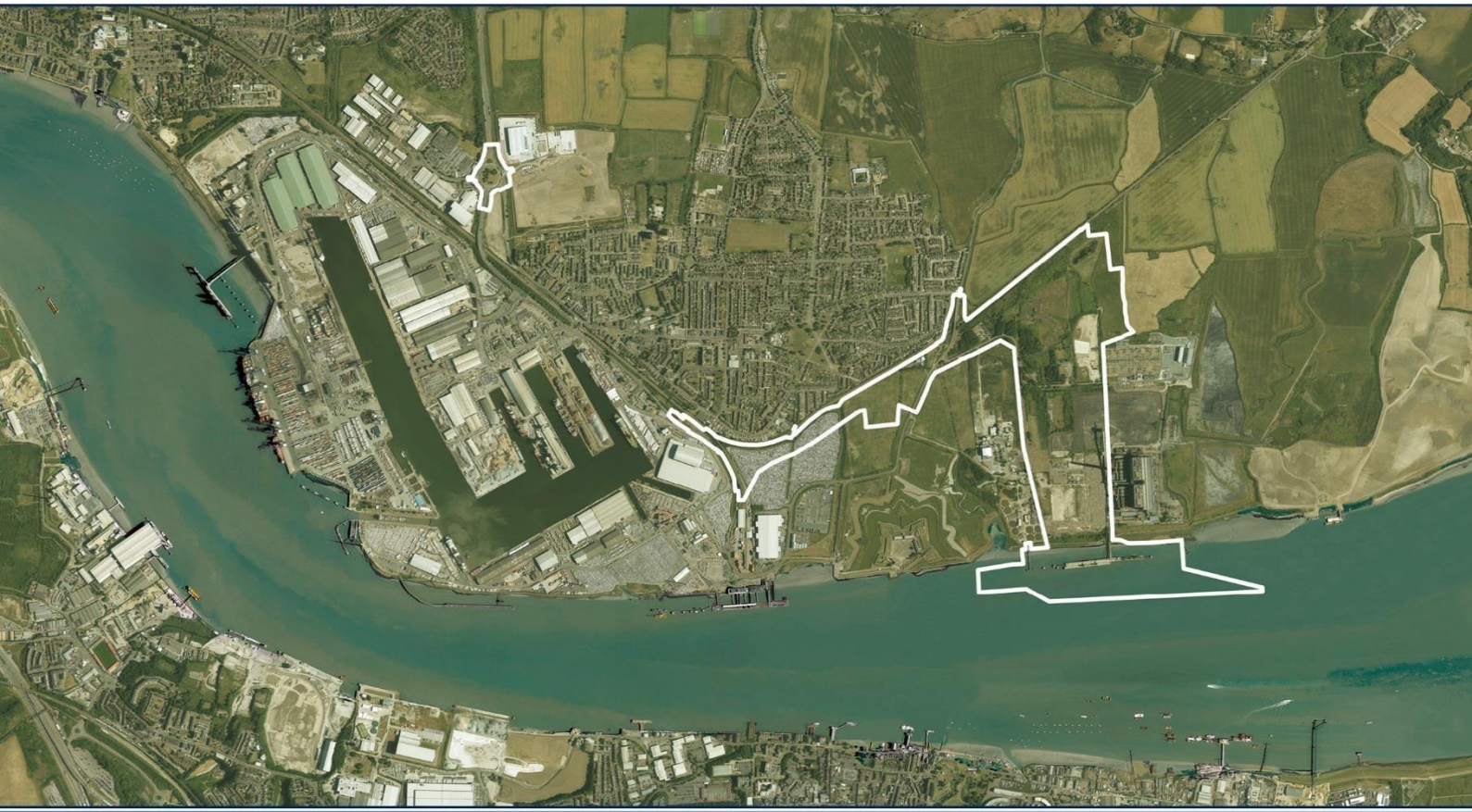
PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION

TILBURY2

TR030003

NOTE ON THURROCK FLEXIBLE GENERATION PLANT

TILBURY2 DOCUMENT REF: POTLL/T2/EX/225



TILBURY2

PORT OF TILBURY

PLANNING ACT 2008

PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION 'TILBURY2'

NOTE ON THURROCK FLEXIBLE GENERATION PLANT

CONTENTS

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1.0 INTRODUCTION

1.1 On 10 August 2018, PoTLL were advised by PINS that under the Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017(the EIA Regulations) – Regulations 10 and 11, a Scoping Consultation had commenced in respect of an application by Thurrock Power Ltd for a proposed Order granting Development Consent for an electricity generating installation known as the Thurrock Flexible Generation Plant ("TFGP").

1.2 The TFGP proposals adjoins the Tilbury2 site. Giving both the timing of this submission (6 working days before the end of the Tilbury2 Examination) and the level of information provided within the Scoping Report (for example a lack of any meaningful visualisations of the proposals), PoTLL consider that undertaking even a high level Qualitative Cumulative Effects Assessment of this proposal with Tilbury2 is not possible or appropriate at this point.

1.3 However, in order to assist the Examining Authority this note has been prepared by PoTLL to provide some high level comments on the potential interaction of the Tilbury2 proposals with the TFGP. This serves as an addendum to the Qualitative Cumulative Effects Assessment of Tilbury2 with Tilbury Energy Centre and Lower Thames Crossing (REP6-006).

1.4 PoTLL would note that the Scoping Report states at para. 6.61 that the Applicant *"has worked closely with Highways England, RWE and Port of Tilbury to consider cumulative effects and mitigation requirements or opportunities (such as landscaping and biodiversity enhancement) afforded by some or all of these developments in conjunction and will continue to do so during the EIA process."* PoTLL accept that some limited discussions have occurred with the promotor of TFGP, but these have been at a high level regarding solely the interaction of the TFGP proposals and PoTLL's land interests. No detailed discussions have been held between Thurrock Power Limited and PoTLL as to the interaction of the design of the TFGP or its proposed environmental mitigation at this stage.

2.0 DESCRIPTION OF THURROCK FLEXIBLE GENERATION PLANT

2.1 The Scoping Report for TFGP[1] indicates that the applicant, Thurrock Power Ltd, proposes to develop a flexible generation plant on land north of Tilbury Substation in Thurrock. The flexible generation plant will provide up to 600 megawatts of electrical generation capacity on a fast response basis when called by the National Grid, together with up to 150 megawatts of battery storage capacity.

2.2 Figures 1 to 3 in the Scoping Report show the proposed development location, application boundary and indicative layout of the flexible generation plant. The 'development boundary' does not cross the Tilbury2 site but immediately adjoins its north east corner.

2.3 The Scoping Report states that the flexible generation plant will comprise reciprocating gas engines, batteries, and associated electrical and control equipment. The scheme proposes a new permanent access road and potential temporary construction access roads, a gas pipeline connection to the gas national transmission system and potentially a cooling water pipeline to the River Thames.

2.4 A preliminary layout for the main development site is shown in Figure 3. The Scoping Report describes that this preliminary layout is subject to change following consultation with stakeholders and ongoing technical and environmental studies, but *"as currently designed shows the expected location and space requirements within the application site of the main development elements - gas engines, batteries, runoff attenuation, substation, and electricity, cooling water and gas connection points - responding to currently known site constraints."* (para. 3.8).

2.5 There is clearly a considerable degree of uncertainty as to the form of the proposals and *"due to the ongoing need for flexibility to accommodate further technical developments, the applicant will also seek to use a Rochdale Envelope approach in the EIA process*." (para. 3.10). Table 3.2 provides an envelope of development which includes items such as gas engines *"up to 60 units contained within four purpose-built buildings, each building being up to around 50 m by 125 m and 15 m high (including top-mounted cooling)"* and up to 60 "Gas engine stacks" of each up to 40 m high. The Scoping Report explains that the envelope would be refined wherever greater certainty about the design of elements of the proposed development is possible.

2.6 As well as the lack of design detail there are uncertainties around the technology to be utilised, including the cooling of the gas engines. The Scoping Report explains that these are provided with air cooling heat exchangers with fans likely to be mounted above each of the engines or on the ground if space permits (3.24) but that the option of 'once through' cooling water as an alternative to air cooling is being considered (3.25).

[1] EIA Scoping Report Thurrock Flexible Generation Plant Land Adjacent to National Grid Substation, Tilbury for Thurrock Power Limited, RPS, July 2018

2.7 The access arrangements are still being considered (3.30 – 3.36) albeit none of these interact with the Tilbury2 proposals.

2.8 The Scoping Report sets out the following construction period for the TFGP:

Q1 2021: main development site preparation and ground works, creation of construction access road and widening of pinch points on public highway, start of gas and (potentially) cooling water pipeline trenching (subject to potential seasonal constraints);

Q2 2021: construction/installation of gas engines, batteries and associated equipment; connection of gas supply pipeline and electricity export cable(s); (potentially) construction and connection of cooling water pipeline;

Q3 2021: commissioning and energisation; completion of landscaping and permanent access road(s);

Q4 2021: facility is available for operation.

2.9 Accordingly, there will be limited, if any, temporal overlap in the anticipated construction programmes of Tilbury2 with TFGP. As set out in the Tilbury2 Environmental Statement (paragraphs 5.126 and 5.127 (AS-006), Tilbury2 would become operational with the opening of the RoRo terminal in Q1 2020. Construction on-site for the remainder of the terrestrial works including the CMAT would continue for another 12 months (i.e. Q1 2021). Assuming construction of TFGP commences at the earliest Q1 2021, all of the main construction activities related to the Tilbury2 proposals (in particular the new lengths of highway and rail line, all maritime infrastructure, and the grading and laying of appropriate pavements across the site) will be complete and the RoRo terminal, and quite possibly the full extent of the CMAT, will be operational.

2.10 PoTLL consider that the time line set out by the applicants for the TFGP is highly optimistic considering no statutory consultation has been undertaken and the level of environmental information provided in the Scoping Report, combined with the need to participate in the competitive Capacity Market auction process. As such, there are unlikely to be cumulative construction environmental effects between Tilbury2 and TFGP due to construction activities being undertaken for both projects at the same time.

2.11 The construction period for TFGP is more likely to overlap with that for TEC should both schemes gain permission and come forward as planned by their respective promotors. As set out in our CEA of the project [REP6-006] it is assumed that construction of TEC project would commence at the earliest in Q2 or Q3 2021; this would therefore be under construction at the same time as TFGP. Mobilisation of construction for LTC could also take place in 2021 (although could slip by one year if private funding is required - SR on LTC, para. 2.1.4). There is therefore a possibility that TFGP, TEC and LTC could be under construction at the same time; but by that time, Tilbury2 will be substantially completed.

3.0 COMMENTARY

Approach to Cumulative Effects Assessment

3.1 The extent of information available within the Scoping Report for TFGP is limited. It is on this basis that PoTLL consider that qualitative and quantitative assessment of cumulative effects of the project with Tilbury2 will necessarily be undertaken by the promoter of the TFGP and that it is inappropriate and indeed not possible for PoTLL to undertake such an assessment at this stage.

3.2 The Scoping Report states that the potential for cumulative impacts with several other nearby major infrastructure projects that are in the process of applying for development consent has been identified and will be assessed in the EIA. These include Tilbury2, the Lower Thames Crossing and the Tilbury Energy Centre. PoTLL consider this to be the correct approach.

3.3 The TFGP promoter will need to develop and design a scheme that is relevant NPS compliant (NPSs EN-1, 2 and 3) and meets legislative and regulatory tests and requirements. The extent to which any cumulative effects arise will depend on both the final design of the project and any mitigation proposed by the promoter both during construction and operation. Indeed, it remains uncertain as to whether or when the proposal will be brought forward at this early stage as it is neither the subject of an application nor has statutory consultation been undertaken.

3.4 Moreover, as was set out in PoTLL Qualitative CEA of LTC and TEC, given the limited knowledge of the design and environmental mitigation which will form part of the TFGP at this stage, it is not the responsibility of the Tilbury2 project to mitigate potential cumulative effects with TFGP and it would not be possible to design such mitigation before the detail of that scheme is known. Requiring any additional mitigation as part of Tilbury2 to pre-empt this future scheme would be unnecessary and unreasonable.

3.5 TFGP, along with both LTC and TEC, require development consent under the Planning Act 2008, and it is undoubtedly EIA development. Accordingly, the environmental impacts of all three of those schemes will fall to be assessed and considered by the relevant decision-makers as and when applications are progressed. All three have identified in their respective Scoping Reports that Tilbury2 is a cumulative project that will be assessed as part of their Environmental Assessment process. By the time these applications are considered through the DCO process, the Tilbury2 DCO may well have been made; if the decision was still to be made, all necessary detail of the Tilbury2 proposals will in any event be available to the promoters of those schemes. This will allow these future proposals to fully take account of the detailed design of Tilbury2, any on-going monitoring, and the associated proposed mitigation. This will ensure that potential cumulative effects will be quantified at the appropriate point and will allow for appropriate design and mitigation strategies (in the following projects) to address cumulative effects if these are indeed identified once the detail of these future proposals is known.

Observations on possible cumulative effects to be considered by TFGP

3.6 The following paragraphs set out the environmental effects that the promotor of TFGP will need to consider on a cumulative basis with Tilbury2, LTC and TEC.

Construction impacts

3.7 From the information available to date (as described above) there will be only limited if any potential overlap in the construction period of Tilbury2 with TFGP.

3.8 The Tilbury2 infrastructure corridor, the laying out of the RoRo Terminal and all marine works will be completed by the end of 2020 when the operation of the RoRo terminal commences, prior to the earliest anticipated construction commencing on TFGP. Whilst construction of the CMAT will continue through 2021 and would potentially overlap with TFGP the extent of engineering works at Tilbury2 will be reducing during this period.

3.9 As such, adding the Tilbury2 construction works during 2021 to the enabling works at TFGP is unlikely to result in significant effects.

Socio-Economics

3.10 The four projects will cumulatively create a sustained period of construction. This could have both positive and adverse effects on socio-economic outcomes, in terms of job creation, skills and training opportunities, and potential stresses on existing infrastructure and community networks. The local demographic profile is expected to be affected by the proposal, particularly if additional employees move to the study area.

Health

3.11 The potential prolonged construction period (even though significant construction at Tilbury2 will be completed prior to commencement at TFGP, LTC or TEC) could have both physical and psychological health impacts on local communities.

3.12 The cumulative impact of all four projects once operational on health would need to be considered further once more detail on aspects such as air quality and noise are known.

Landscape Character and Visual Amenity

3.13 TFGP will create further change in the local landscape with Tilbury2, TEC and LTC, as such the cumulative effect on local landscape character could be of increased significance within the Tilbury Marshes character area. These schemes having been constructed would likely require a reassessment of this character area by Thurrock Council to better reflect what will be increasingly urban/urban fringe characteristics.

3.14 The combined sight and sound of the four projects could have an overall effect of increased significance on scenic quality and tranquillity. The area where this effect would likely be most marked is broadly defined by the rural

extents of the West and East Tilbury Marshes, including the north bank of the Thames as well as the eastern reaches of the Chadwell Escarpment.

3.15 The combined effect of TFGP with Tilbury 2, TEC and LTC could affect cultural heritage value associated with the SAM's of Tilbury Fort, New Tavern Fort and Coalhouse Fort. Being to the east of Tilbury2, the TFGP could increase the presence of industry in the far distance from Coalhouse Fort, adding to TEC and LTC if this were visible and audible in the middle distance (if a link to Tilbury were constructed). The cumulative impacts of all four schemes on leisure and tourism value would need to be considered further once the detail of TFGP is known, albeit it does not appear that any public rights of way are directly affected. In terms of visual amenity, the combined effects of all four projects would be experienced in views from the east and north-east that take in the TEC site and the TFGP (that would be prominent and consolidate the presence of industry at Tilbury2). From the east the effect could be substantial in close views but slight in more distant views such as Coalhouse Fort. From the south (when viewed from Gravesham), the cumulative effects of four schemes could be greater depending on how TFGP is viewed in relation to TEC.

3.16 The cumulative effect of artificial lighting would increase when Tilbury2, TFGP, TEC and LTC schemes are all operational.

Ecology

3.17 In terms of ecology, the Thurrock Flexible Generation Plant (TFGP) proposals have the potential to interact with impacts from the Tilbury2 project mainly by virtue of geographical proximity and the interconnection between certain habitat and species receptors. In particular, the site proposed for the TFGP itself is subject to a draft Local Wildlife Site designation (LoWS) (although this does not appear to have been identified in the scoping report), and is known to support semi-improved coarse grassland and relict grazing marsh habitats of confirmed value for reptiles and (in the boundary ditches) water voles, and with likely value for ground nesting and scrub birds, badgers and species from the nationally significant invertebrate assemblage associated with the power station area generally, potentially including Priority species such as hornet robberfly. Thus, further impacts on such resources could arise from the TFGP with additional consequences for local metapopulations over and above those arising from Tilbury2 alone and/or Tilbury2 cumulatively with the TEC and LTC.

3.18 Less likely to give rise to significant cumulative effects with Tilbury2, but more likely to give rise to such effects in combination with TEC and/or LTC are the ancillary elements of the TFGP project, particularly those involving land east of the power station site and through Goshems Farm area and which appears from the scoping report to have had little survey coverage and certainly less than the main site. Amongst other things the scoping report for TEC identifies the presence of high tide roosts of intertidal birds in this area suggestive of functional linkage to the Thames Estuary and Marshes SPA and Thames Estuary and Marshes Ramsar Site. There is also the suggestion that marine works and works below MHWS will be required in an area known to harbour significant concentrations of intertidal birds with possible additional implications for intertidal habitats functionally

linked to the SPA and Ramsar Site and key species that use them. This is not identified in the scoping report for TFGP but will clearly be a relevant consideration for the assessment of the project when the proponents come to carry out their CEA and in-combination HRA.

Archaeology

3.19 Construction works at TFGP, TEC and LTC could have an adverse effect on the potential buried archaeological and palaeoenvironmental resource which would be in addition to that assessed for Tilbury2. It is anticipated that a suitable strategy for each project would be agreed to avoid, minimise, manage and mitigate against this potential impact.

3.20 Through the successful implementation of the appropriate mitigation measures, it is considered likely that adverse cumulative effects on archaeological resource would be able to be avoided with potentially a beneficial residual effect.

Built Heritage

3.21 The combination of effects on built heritage from Tilbury2, TFGP, TEC and LTC will be greater than any of the individual projects but will to a large degree depend upon the mitigation allied to TFGP, TEC and LTC, for which no information is available.

3.22 The most sensitive asset – Tilbury Fort – and its setting will be affected by all four proposals. Coalhouse Fort, also a Scheduled Monument, could also be more acutely affected by the LTC, TEC & TFGP proposals. The TFGP, allied with the other projects, will need to consider how this is mitigated.

Land-Side Transport

3.23 The TFGP Scoping Report notes (paragraph 8.5.3) that operational traffic would be negligible and is scoped out. Hence in terms of traffic any cumulative effect will only arise due to the construction traffic once Tilbury2 is operational.

3.24 No assessment of the construction traffic is available for TFGP. The lack of detail provided in the TFGP Scoping Report means it is not possible to estimate a broad guide of construction traffic. It is therefore not possible to undertake a cumulative assessment.

3.25 However, it is worth noting that the TFGP Scoping Report states that the route for construction traffic would be via local roads to the north of the site connecting with the A13 at the Orsett Cock junction (paragraph 3.3.1). This is a different local route to that used by Tilbury2 traffic. Accordingly, the cumulative effects would be confined to the A13. It is also worth noting that the construction is predicted to last 12 months.

Hydrogeology and Ground Conditions

3.26 Through the successful implementation of appropriate good practice mitigation measures during the construction and operational phases, there

should not be any significant cumulative effects for the TFGP. LTC, TEC and the Tilbury2 projects in relation to hydrogeology and ground conditions.

Water Resources and Flood Risk

3.27 There are a number of potential combined cumulative effects due to TFGP, TEC and LTC which could impact on the water environment without appropriate design in these schemes and appropriate mitigation measures. This includes increased risk of flooding, increased surface run-off, pollution associated with discharge of process water, spills and leakages during operational periods. Although the magnitude and significance of the effects is currently unknown due to the limited information available on the schemes, it is considered that with the appropriate good practice approach to design and mitigation measures in place the combined effects are unlikely to be significant.

Noise

3.28 It is not anticipated that there will be any significant cumulative effects of TFGP with Tilbury2 during construction. As described above there is likely to be limited overlap between the construction phases of Tilbury2 with those of the TFGP proposal. In operation, the Scoping Report for TFGP indicates that noise generating plant items such as the gas engines, inverters, transformers, air coolers/conditioning units and substations have the potential to result in noise impacts. These will need to be considered cumulatively with the operation of Tilbury2, TEC and LTC.

Air Quality

3.29 It is not anticipated that there will be any significant cumulative effects of TFGP with Tilbury2 during construction. As described above there is likely to be limited overlap between the construction phases of Tilbury2 with those of the TFGP proposal. However, it is necessary to ensure that any dust emissions of all four proposals both individually and in combination are adequately mitigated through project CEMPs, which will be secured by the respective DCOs.

3.30 Once operational, the maximum ground-level concentrations from TFGP stack emissions may overlap with TEC and with the LTC new road network (if a link road to Tilbury is included), which may be used by Tilbury2 land-side transport. If significant effects are identified, then appropriate mitigation would need to be developed such as reconsideration of stack height and/or route alignment. Although the magnitude of the effects is currently unknown due to the limited information available on the schemes, on the basis of the low existing baseline concentrations in the relevant area, the combined residual effects are unlikely to be significant in relation to health protection objectives and limit values.

Waste and Materials

3.31 The waste arisings from all four projects are not known but in combination will be much greater than that assessed for Tilbury2. Each project will need to adhere to the principles of the waste hierarchy and, given the timelines

involved, consider waste capacity at the time those arisings occur. There will be some cumulative impact on waste capacity (since the waste arisings from TFGP, TEC and LTC will follow those from Tilbury2) but the significance of this cannot be determined without knowing the arisings (particularly from LTC which could be significant) or the capacity that would exist at that time. As established by the assessment undertaken by PoTLL for the Tilbury2 project, waste capacity in Thurrock is more limited than in the wider Essex area, and therefore the impacts on this capacity from these future projects could be more significant.

4.0 CONCLUSIONS

4.1 This note provides some initial comments by PoTLL on the potential for cumulative impacts of the Thurrock Flexible Generation Plan (TFGP) which is presently the subject of scoping consultation. It should be considered as an addendum to the Qualitative Cumulative Effects Assessment of Tilbury2 with Tilbury Energy Centre and Lower Thames Crossing (REP6-006).

4.2 In broad terms, a number of environmental effects of the TFGP could interact with Tilbury2 and also with LTC and TEC. If all four were indeed permitted, this interaction could have the potential to increase the level of environmental effect.

4.3 However, the extent of such cumulative effects will depend on both the final designs of the TFGP, TEC and LTC (which will clearly need to be designed to avoid and minimise their environmental effects) and any mitigation proposed by the promoters of those schemes both during construction and operation.

4.4 The TFGP Scoping Report confirms that the EIA process for TFGP will conduct a CEA that will consider all four projects – this is the appropriate approach to be taken to the assessment of cumulative effects arising from this project and Tilbury2.

ANNEX 2

TO THE RESPONSE TO TFGP SCOPING

STATEMENT ON ECOLOGY BY BIOSCAN UK LIMITED

Application by Thurrock Power Ltd (the Applicant) for an Order granting Development Consent for the Thurrock Flexible Generation Plant (the Proposed Development)

Additional comments on the Scoping Report in relation to onshore and intertidal ecology

by Bioscan UK Limited

on behalf of Port of Tilbury London Limited

This statement has been prepared by Bioscan UK Limited on behalf of Port of Tilbury London Limited (PoTLL). Bioscan are PoTLL's consulting ecologists on the Tilbury2 project, the site of which patly adjoins the site of the proposed Thurrock Flexible Generation Plant.

Ecological Designations

The Scoping Report focuses on the main site, and as such the distances cited from the statutory nature conservation designations described at para 2.18 and para 8.85 have been defined in relation to this area only (i.e. Area A), whereas the potential pipeline corridor (Area K) would lie significantly closer (~1km) to these national and internationally designated sites, and appears to encompass intertidal habitats which may have a functional linkage to those designations. This matter has not been discussed in the Scoping Report for TFGP but will clearly be a relevant consideration for the assessment of the project when the proponents carry out their Cumulative Effects Assessment (CEA) and in-combination Habitats Regulations Assessment (HRA).

Furthermore whilst the Lytag Brownfield Local Wildlife Site (LoWS) and Tilbury Centre LoWS have been identified (para 2.19, para 8.86), the presence of the Tilbury Power Station draft LoWS, which forms part of the TFGP 'main development site', appears to have been overlooked by the Applicant. The draft LoWS citation describes the core TFGP footprint as follows:

"Walton Common ... comprises remnant coastal grazing marsh that would formerly have dominated the local landscape. It provides additional foraging habitat for key invertebrates such as the Brown-banded Carder-bee (Bombus humilis) as well as representing additional reptile habitat. ... The surviving fragment of grazing marsh at Walton Common is worthy of conservation in its own right but provides additional foraging habitat for invertebrates and reptiles."

Impacts on this designation should be considered, including impacts on this surviving grazing marsh fragment in the wider landscape-scale context of the Thurrock Thames Marshes. The permanent loss of the draft LoWS and historic grazing marsh will also need to be weighed against the potential operational life of the proposed development being potentially limited to 35 years.

The Applicant has also failed to identify the Tilbury Marshes LoWS within the Scoping Report as falling within the proposed development boundary, and at para 3.38 this land (area J) is identified as having potential 'community use' under a future s106 agreement. Area J encompasses the triangle of grassland adjacent to Fort Road (and within the Tilbury Marshes LoWS) which originally formed part of the Tilbury2 Order Limits, but which was excluded in order to preserve this area of long-established grassland. Consideration will

therefore need to be given to whether potential 'community use' would be compatible with maintaining the ecological interest of this area.

Habitats

The Scoping Report references Extended Phase 1 survey work undertaken in February 2017 as documented at Appendix C. The survey work documented within Appendix C is not consistent with the findings of Tilbury2 ecological reporting, nor is it consistent even with the reporting provided at Appendix D of the Scoping Report; For example Appendix C dismisses Walton Common as 'improved grassland' (and concludes that water voles are unlikely to be present). The reporting also documents survey work which was undertaken by the author of the report on land privately-owned by the Port of Tilbury London Ltd (PoTLL), in the absence of landowner's permission.

An update habitat survey is documented at Appendix D. This describes Walton Common as 'semi-improved grassland' but does not consider whether it meets the definition of Priority coastal and floodplain grazing marsh habitat. Again, it is evident that survey work has been carried out within land under PoTLL ownership (despite landowner permission not having been obtained) for land described as area J. For this area, the habitat descriptions provided by the proponents of TFGP at para 3.32-3.41 can be compared to the detailed information set out within the Tilbury2 ES at Chapter 10[1], with associated Figures[2],[3] and Appendices[4],[5]. The description provided within the TFGP Scoping Report at para 3.32-3.41 and Figure 3.1 characterises the Lytag Brownfield LoWS as species-poor semi-improved grassland with scrub and hard-standing, without any recognition of the presence of Priority open mosaic habitat, or recognition of the interest of the habitat for lichens or invertebrates. Should this failure to recognise and assess the value of the habitats accurately, be carried over to documentation of other areas of the TFGP proposed development site, then the reliability of the other ecological survey information presented within the Scoping Report may be called into question.

Species

It is noted that the desk study documented at Chapter 2 of Appendix D does not include the comprehensive data available for the adjacent landholdings via the Tilbury2 Application and Examination submissions (which are readily accessible via the PINS website). Furthermore, records do not appear to have been sought from the Essex Field Club, which is likely to hold a far greater number of records relevant to the search area than the repositories contacted by TFGP. The evaluation section which follows is therefore considered incomplete.

A notable omission from the list of bird species recorded at Chapter 8 is nightingale (a red list species) which was regularly recorded by the proponents of the Tilbury2 scheme.

Chapter 10 of Appendix D concludes that badger activity is limited and assesses impacts on that basis. However the TFGP proponents should be aware that an artificial sett has now

[1] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000213-6.1%20Environmental%20Statement.pdf
[2] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000410-6.3%20Figures%20and%20Drawings%20-%20Figure%2010.2b%20Phase%201%20habitat%20survey%20plan%20-%20East%20of%20Fort%20Road.pdf
[3] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000412-6.3%20Figures%20and%20Drawings%20-%20Figure%2010.2d%20Section%2041%20priority%20habitats.pdf
[4] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000240-ES%20Appendix%2010.M%20Lichen%20Survey%20Report%20(2017).pdf
[5] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030003/TR030003-000239-ES%20Appendix%2010.L%20Invertebrate%20Survey%20of%20Tilbury2%20(2017).pdf

been constructed within the adjacent parcel of land (under planning consent 18/00448/FUL) and the badger assessment provided within the EIA should be updated to reflect this.

Matters Scoped Out

Comments on matters which the Applicant proposes (at Table 7.2 of the Scoping Report) to scope out of EIA are set out below:

- *Bats* – the Tilbury2 ecology surveys identified bat activity within the TFGP main development site. It is therefore considered inappropriate to scope bats out of the EIA process, given that there may be impacts associated with direct loss and illumination of features used by bats for foraging/commuting.
- *Fish impingement* – it is not clear whether the rationale for scoping this out has taken the presence of eels into consideration.
- *Saltmarsh* – in view of the potential construction of cooling water pipe outfalling to the Thames, the Applicant should detail how this would be delivered without any impacts on Priority saltmarsh habitat (such as direct loss/scour) before scoping this matter out.
- *Use of the existing jetty* – it is not clear whether the decision to scope this matter out has taken into consideration the potential for intensification of jetty use to have an impact upon Thames Estuary and Marshes SPA/Ramsar site citation bird species which use intertidal habitats adjacent to the jetty.

Mitigation Proposed

At para 3.37 and Figure 2 of the main scoping report, areas F and G are identified as offering replacement common land and could therefore be subject to heavy grazing. It is unclear how this would be compatible with establishing the reptile mitigation uses for this land as proposed at Chapter 7 of Appendix D, nor with the proposals for scrub planting for birds as described at Chapter 8 of Appendix D.

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Ms Emma Cottam
EIA and Land Rights Advisor
The Planning Inspectorate
Temple Quay House
2 The Square
Bristol, BS1 6PN

Your Ref : NA
Our Ref : 46494

6th September 2018

Dear Ms Cottam

Re: Scoping Consultation
Application for an Order Granting Development Consent for the proposed Thurrock Flexible Generation Plant

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Our response focuses on health protection issues relating to chemicals and radiation. Advice offered by PHE is impartial and independent.

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 however that the summation of relevant issues into a specific section of the report 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. 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 promoters should fully explain and justify their rationale in the submitted documentation.

The attached appendix outlines generic areas that should be addressed by all promoters when preparing ES for inclusion with an NSIP submission. We are happy to assist and discuss proposals further in the light of this advice.

Yours sincerely,

Environmental Hazards & Emergencies Dept
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

General approach

The EIA should give consideration to best practice guidance such as the Government's Good Practice Guide for EIA[1]. It is important that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational, and decommissioning phases.

It is not PHE's role to undertake these assessments on behalf of promoters as this would conflict with PHE's role as an impartial and independent body.

Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, EIA should start at the stage of site and process 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[2].

The following text covers a range of issues that PHE would expect to be addressed by the promoter. However this list is not exhaustive and the onus is on the promoter to ensure that the relevant public health issues are identified and addressed. PHE's advice and recommendations carry no statutory weight and constitute non-binding guidance.

Receptors

The ES 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. 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 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.

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[1] Environmental Impact Assessment: A guide to good practice and procedures - A consultation paper; 2006; Department for Communities and Local Government. Available from: http://webarchive.nationalarchives.gov.uk/20100410180038/http:/communities.gov.uk/planningandbuilding/planning/sustainabilityenvironmental/environmentalimpactassessment/

[2] DCLG guidance, 1999 http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf

We would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential impact on health from emissions (point source, fugitive and traffic-related). An effective Construction Environmental Management Plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.

Emissions to air and water

Significant impacts are unlikely to arise from 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 emissions in order that the EIA 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
- should encompass all pollutants which may be emitted by the installation in combination with all pollutants arising from associated development and transport, ideally these should be considered in a single holistic assessment
- should consider the construction, operational, and decommissioning phases
- should 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
- should fully account for fugitive emissions
- should include appropriate estimates of background levels
- should identify cumulative and incremental impacts (i.e. 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 (i.e. rail, sea, and air)
- should include consideration of local authority, Environment Agency, Defra national network, and any other local site-specific sources of monitoring data
- should compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as UK Air Quality Standards and Objectives and Environmental Assessment Levels)
    - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (a Tolerable Daily Intake or equivalent). Further guidance is provided in Annex 1
    - This should consider all applicable routes of exposure e.g. include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion
- should 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 (e.g. 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 EIA 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.

Additional points specific to emissions to air
When considering a baseline (of existing air quality) and in 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)
- should include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions)
- should include modelling taking into account local topography

Additional points specific to emissions to water
When considering a baseline (of existing water quality) and in the assessment and future monitoring of impacts these:

- should include assessment of potential impacts on human health and not focus solely on ecological impacts
- should identify and consider all routes by which emissions may lead to population exposure (e.g. surface watercourses; recreational waters; sewers; geological routes etc.)
- should assess the potential off-site effects of emissions to groundwater (e.g. on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure
- should include consideration of potential impacts on recreational users (e.g. from fishing, canoeing etc.) alongside assessment of potential exposure via drinking water

Land quality
We would expect the promoter to provide details of any hazardous contamination present on site (including ground gas) as part of the 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[3] 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 EIA should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).
For wastes arising from the installation the EIA should consider:

- 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

Other aspects

Within the EIA PHE would expect to see information about how the promoter 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.

The EIA should include consideration of 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 2009: both in terms of their applicability to the installation itself, and the installation's potential to impact on, or be impacted by, any nearby installations themselves subject to the 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[4], jointly published by Liverpool John Moores University and the 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 health risks may be

[3] 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)

[4] Available from: http://www.cph.org.uk/wp-content/uploads/2012/08/health-risk-perception-and-environmental-problems--summary-report.pdf

negligible.” PHE supports the inclusion of this information within EIAs as good practice.

Electromagnetic fields (EMF)

This statement is intended to support planning proposals involving 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 in the following link:

https://www.gov.uk/government/collections/electromagnetic-fields#low-frequency-electric-and-magnetic-fields

There is a potential health impact associated with the electric and magnetic fields around substations, and power lines and cables. The field strength tends 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

The Department of Energy and Climate Change has published a voluntary code of practice which sets out key principles for complying with the ICNIRP guidelines:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/37447/1256-code-practice-emf-public-exp-guidelines.pdf

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:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/48309/1255-code-practice-optimum-phasing-power-lines.pdf

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224766/powerlines_vcop_microshocks.pdf

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 was published by one of PHE’s predecessor organisations (NRPB) in 2004 based on an accompanying comprehensive review of the scientific evidence:-

http://webarchive.nationalarchives.gov.uk/20140629102627/http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/

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 in line with the terms of the 1999 EU Council Recommendation on limiting exposure of the general public (1999/519/EC):

http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Publichealth/Healthprotection/DH_4089500

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

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 the field. 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 the 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)

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:

http://www.emfs.info/policy/sage/

SAGE issued its First Interim Assessment in 2007, making several recommendations concerning high voltage power lines. Government supported the implantation of low cost options such as optimal phasing to reduce exposure; however it did not support not support the option of creating corridors around power lines 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 here:

http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_107124

The Government also supported calls for providing more information on power frequency electric and magnetic fields, which is available on the PHE web pages (see first link above).

Annex 1

Human health risk assessment (chemical pollutants)

The points below are cross-cutting and should be considered when undertaking a human health risk assessment:

- The promoter should consider including Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES
- Where available, the most recent United Kingdom standards for the appropriate media (e.g. 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, those recommended by the European Union or World Health Organisation can be used
- When assessing the human health risk of a chemical emitted from a facility or operation, the background exposure to the chemical from other sources should be taken into account
- 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[5] is used

[5] Benford D et al. 2010. Application of the margin of exposure approach to substances in food that are genotoxic and carcinogenic. Food Chem Toxicol 48 Suppl 1: S2-24

Thurrock Flexible Generation Plant – proposed development by Thurrock Power Ltd

Royal Mail Group Limited comments on information to be provided in applicant's Environmental Statement

Introduction

Reference the letter from PINS to Royal Mail dated 10 August 2018 requesting Royal Mail's comments on the information that should be provided in Thurrock Power Ltd's Environmental Statement.

Royal Mail's consultants BNP Paribas Real Estate have reviewed the applicant's Scoping Report dated August 2018, scrutinising the proposed development and its potential impacts.

Royal Mail– relevant information

Under section 35 of the Postal Services Act 2011 (the "Act"), Royal Mail has been designated by Ofcom (the independent communications regulator) as a provider of the Universal Postal Service.

Royal Mail is the only such provider in the United Kingdom. Its services are regulated by the Communications Industry Regulator, Ofcom.

In respect of its postal services functions, section 29 of the Act provides that Ofcom's primary regulatory duty is to secure the provision of the Universal Postal Service. Ofcom discharges this duty by imposing regulatory conditions on Royal Mail, requiring it to provide the Universal Postal Service.

By sections 30 and 31 of the Act (read with sections 32 and 33) there is a set of minimum standards for Universal Service Providers, which Ofcom must secure. The conditions imposed by Ofcom reflect those standards. There is, in effect, a statutory obligation on Royal Mail to provide at least one collection from letterboxes and post offices six days a week and one delivery of letters to all 29 million homes and businesses in the UK six days a week (five days a week for parcels). Royal Mail must also provide a range of "end to end" services meeting users' needs, e.g. First Class, Second Class, Special Delivery by 1 pm, International and Redirections services.

Royal Mail is under some of the highest specification performance obligations for quality of service in Europe. Its performance of the Universal Service Provider obligations is in the public interest and should not be affected detrimentally by any statutorily authorised project.

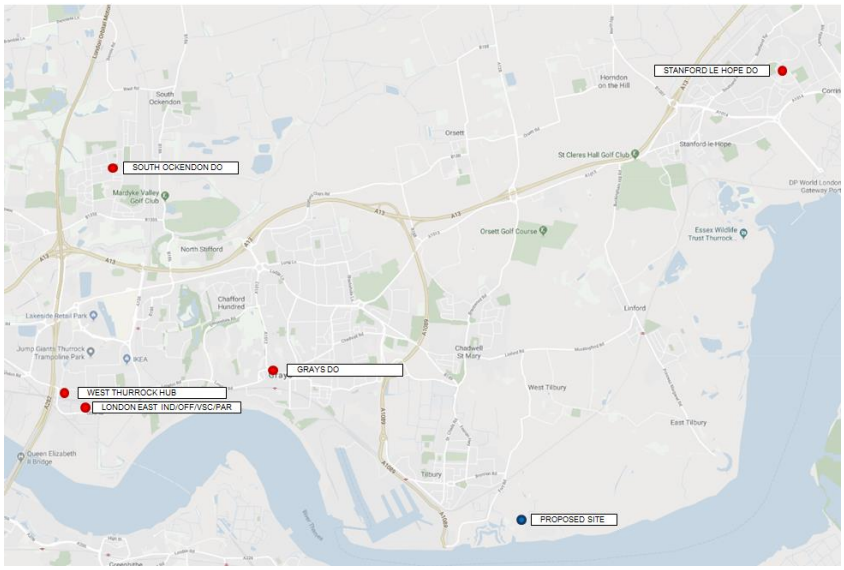
Royal Mail's postal sorting and delivery operations rely heavily on road communications. Royal Mail's ability to provide efficient mail collection, sorting and delivery to the public is sensitive to changes in the capacity of the highway network.

Royal Mail is a major road user nationally. Disruption to the highway network and traffic delays can have direct consequences on Royal Mail's operations, its ability to meet the Universal Service Obligation and comply with the regulatory regime for postal services thereby presenting a significant risk to Royal Mail's business.

Potential impacts of the scheme on Royal Mail

Royal Mail has five operational properties within 8 miles of the proposal site as identified on the schedule and plan below.

GRAYS Delivery Office	HOGG LANE RM17 5QB	4.3 miles
LONDON EAST Offices / Vehicle Service Centre / Parking	OLIVER ROAD RM20 3ED	6.9 miles
WEST THURROCK Mail HUB	UNIT 6B TRADE LINK WESTON AVE RM20 3FJ	7.1 miles
STANFORD LE HOPE Delivery Office	30 ST JOHNS WAY SS17 7LH	7.7 miles
SOUTH OCKENDON Delivery Office	DERRY AVENUE RM15 5DU	7.8 miles



It is relevant to note that Royal Mail is currently preparing to submit a planning application to intensify the existing use of its Oliver Road site in Thurrock, as identified above. The site is increasing in its operational importance to Royal Mail.

The location, nature and scale of the proposed Thurrock Flexible Generation Plant may present risk of construction phase impact / delays to Royal Mail's road based operations on the surrounding road network.

Every day, in exercising its statutory duties Royal Mail vehicles use all of the main roads that may potentially be affected by additional traffic arising from the construction of this proposed Peaking Plant.

Royal Mail therefore wishes to ensure the protection of its future ability to provide an efficient mail sorting and delivery service to the public in accordance with its statutory obligations which may be adversely affected by the construction and operation of this proposed scheme.

Royal Mail's comments on information that should be provided in Thurrock Power Ltd's Environmental Statement

Royal Mail has the following comments / requests:

1. Royal Mail requests that the ES includes information on the needs of major road users (such as Royal Mail) and acknowledges the requirement to ensure that major road users are not disrupted though full consultation at the appropriate time in the DCO and development process.

2. The ES should include detailed information on the construction traffic mitigation measures that are proposed to be implemented, including a draft Construction Traffic Management Plan (CTMP).

3. Royal Mail requests that careful attention is given to the potential for cumulative traffic impact during the construction phase. The Scoping Report should address the potential cumulative traffic effects arising from the construction of Thurrock Flexible Generating Plant together with all other proposed major developments in the area, including the Lower Thames Crossing, the Tilbury2 Port expansion and the proposed thermal generation scheme at Tilbury Power Station.

4. Royal Mail requests that it is fully pre-consulted by Thurrock Power Ltd on any proposed road closures / diversions/ alternative access arrangements, hours of working and the content of the CTMP. The ES should acknowledge the need for this consultation with Royal Mail and other relevant local businesses / occupiers.

Royal Mail is able to supply the applicant with information on its road usage / trips if required.

Should PINS or Thurrock Power Ltd have any queries in relation to the above then in the first instance please contact Holly Trotman *(holly.trotman@royalmail.com)* of Royal Mail's Legal Services Team or Daniel Parry-Jones *(daniel.parry-jones@bnpparibas.com)* of BNP Paribas Real Estate.

Civic Offices, New Road, Grays
Essex, RM17 6SL

Development Management

Applicant: Emma Cottam
The Planning Inspectorate, Temple Quay House, 2 The Square,
Bristol, BS1 6PN

Our Ref: 18/4044/SCO

E-Mail: dm@thurrock.gov.uk

Date: 7 September 2018

Dear Ms Cottam

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

Application by Thurrock Power Ltd (the Applicant) for an Order granting Development Consent for the Thurrock Flexible Generation Plant (the Proposed Development)

Scoping consultation – LPA Response

Your Reference:	**EN010092-000018**
Our Reference:	**18/4044/SCO**
Proposal:	**Planning Inspectorate Consultation - Scoping Report for future Development Consent Order [NSIP] - Proposal: To develop a flexible generation plant using fast start gas engines on land north of Tilbury substation to provide up to 600 MW of electrical generation capacity together with up to 150 MW of battery storage capacity and associated infrastructure**
Location:	**Thurrock Flexible Generation Plant Fort Road Tilbury**

I refer to your letter dated 10 August 2018 regarding the above matter and to your request that the local planning authority (LPA):

- inform the Planning Inspectorate of the information we consider should be provided in the ES; or
- confirm that we do not have any comments.

By way of background information I can confirm that representatives of the applicant have met with Council officers to explain the proposed Thurrock Flexible Generation Plant project and to discuss timelines for the project.

In response to both your letter dated 10 August 2018 and the accompanying EIA Scoping Report the LPA consulted internally within Thurrock Council and I attach responses received from:

- Thurrock Council: Emergency Planner;
- Thurrock Council: Environmental Health;
- Thurrock Council: Highways;
- Thurrock Council: Landscape and Ecology Advisor;
- Thurrock Council: Public Health; and

Scope of the Proposed Environmental Statement

The general purpose of the Scoping Report is to determine, from all the project's likely effects, those that are predominantly significant with respect to impacts on the environment. The contents of the Scoping Report are generally endorsed by the LPA, subject to the comments contained in this letter and of those comments made by the consultees.

The ES must include the information reasonably required to assess the environmental effects of the development and to which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile. The proposed structure of the ES is set out at chapter 6 of the Scoping Report. I consider that this generally accords with the provisions of the Regulations.

Chapter 7 of the Scoping Report provide a list of those environmental topic areas which are "scoped-in" to the ES as follows:

- Landscape and visual resources;
- Archaeology and cultural heritage including marine archaeology where applicable;
- Traffic and transport;
- Land use, agriculture and socio-economics;
- Air quality;
- Onshore ecology;
- Aquatic environment;
- Habitat Regulations Assessment report;
- Noise and vibration;
- Water resources and flood risk, including WFD impacts;
- Geology, hydrogeology and land contamination; and
- Climate change.

I am satisfied that this list of topics will enable a thorough assessment of the likely significant environmental impacts of the proposals but I also request that the comments from the Thurrock Council consultation process enclosed with this response are taken into consideration in the preparation of the Environmental Statements as part of this Council's response to this Scoping application.

I note that paragraph 6.58 of the Scoping Report refer to cumulative impacts and the in-combination impacts with reasonably foreseeable projects in the vicinity of the site, which includes:

- The Tilbury 2 project – current DCO;
- The Lower Thames Crossing – future DCO;
- The Tilbury Green Power Station – currently operational;
- Demolition of Tilbury B Power Station – currently ongoing;
- The Tilbury Energy Centre [Replacement Tilbury Power Station] – future DCO;
- London Distribution Park in Tilbury;
- Thames Enterprise Park in Coryton; and
- Goshen Farm – land raising operation of land used for ash disposal and landfill.

Another future DCO not on the list but should be subject of consideration for cumulative effects is the 'The London Resort' project.

Summary

I trust that the above comments and enclosures are of assistance. The above information is given without prejudice to the LPA's future comments or position in relation to a formal submission pursuant to the 2008 Act.

Yours sincerely

Chris Purvis
Principal Planning Officer (Major Applications)

Civic Offices, New Road, Grays
Essex RM17 6SL

Public Protection

Chris Purvis
Principal Planning Officer
Planning and Development Control
Civic Offices
New Road
Grays
RM17 6SL

29th August 2018

Dear Chris,

Town and Country Planning Act 1990 (as amended)
Application Number: 18/4044/SCO. Thurrock Flexible Generation Plant Fort Road Tilbury Essex.
Proposal: Scoping Report for future Development Consent Order [NSIP] - Proposal: To develop a flexible generation plant using fast start gas engines on land north of Tilbury substation to provide up to 600 MW of electrical generation capacity together with up to 150 MW of battery storage capacity and associated infrastructure | Thurrock Flexible Generation Plant Fort Road Tilbury Essex

Thank you for consulting Thurrock Council Emergency Planning Team on the above application.

We acknowledge the EIA Scoping Report submitted dated July 2018 by RPS Group.

From emergency planning perceptive, two main areas of interest to us in this development were:

- Flood Risk- **Section 8.143-8.162** of the scoping report proposed to consider the effects of flood risk during the construction, operation and decommission phase which will be outlined in the Flood Risk Assessment (FRA).

- Emergency Management Response Plan- **Section 9.5** of the scoping report will considered the off-site impacts.

We conclude that the scoping report document have covered these two areas.

If you have any further question, please email emergency.planning@thurrock.gov.uk
Yours faithfully

Adewale Adesina
Emergency Planning Officer
emergency.planning@thurrock.gov.uk

INTERDEPARTMENTAL MEMORANDUM

From: Environmental Protection Team	To: Planning, Transportation & Public Protection Department Place Directorate
TEL: 01375 652096	FAO Chris Purvis
MY REF: CDP 18/21059/PLACON	
DATE: 24/08/2018	YOUR REF 18/4044/SCO

SUBJECT Planning Inspectorate Consultation - Scoping Report for future Development Consent Order [NSIP] - Proposal: To develop a flexible generation plant using fast start gas engines on land north of Tilbury substation to provide up to 600 MW of electrical generation capacity together with up to 150 MW of battery storage capacity and associated infrastructure

We will limit our comments to those aspects of the scoping document relevant to the Environmental Protection Team namely air quality, noise and vibration and contaminated land

Air quality

We are satisfied with the proposed methodology outlined in the Air quality section of the document and the proposal to scope out the operational traffic air pollutant emissions.

Noise

We are satisfied with the proposed methodology outlined in the noise and vibration section of the document and have no objections to the operational traffic noise and operational vibration being scoped out of the assessment.

Contaminated land

We are satisfied with the proposed methodology outlined in the geology hydrogeology and land contamination section of the document.

Section 3.42 of the document advises that the ES will be accompanied by a code of construction practice (CoCP) and an outline construction environmental management plan (CEMP) any such plans should be agreed with the local authority.

[redacted]

Thurrock Borough Council
Environmental Health Officer
Environmental Protection Team

Highways Response

To:-	**Development Management**
From:	**Highways Development Control**
This matter is being dealt with by:	Julian Howes
Date:	31st August 2018
Application No.	18/4044/SCO
Address:	Thurrock Flexible Generation Plant, Fort Road, Tilbury, Essex,
Proposal:	Planning Inspectorate Consultation - Scoping Report for future Development Consent Order [NSIP] - Proposal: To develop a flexible generation plant using fast start gas engines on land north of Tilbury substation to provide up to 600 MW of electrical generation capacity together with up to 150 MW of battery storage capacity and associated infrastructure

RECOMMENDATION: Further information required

It is noted that the Traffic and Transport chapter of the Environmental Impact Assessment Scoping Report mentions a Transport Assessment, and that a Transport Assessment Scoping Report is to be produced and agreed with Thurrock Council and Highways England. They have also indicated that the most significant impact would be during the construction phase of the development but the document will also need to clarify the operational traffic levels once the development is in operation to ensure that the operational traffic will not have a significant impact on the highway network. The current document is insufficient to make any detailed comments at this stage on their assumptions. Can you advise the applicant that they need to submit the appropriate detailed documents to enable further and more detailed comments to be made. Please note that Highways England will also need to be consulted as this development is likely to impact on their network.

A framework TA should be submitted and agreed with the Highway Authority and Highways England, prior to submission of any ensuing planning application.

With regards to the scope of the TA, assessment of the following roads and junction should be made, in line with DMRB assessment criteria:

i. M25 / A13 - junctions 30 and 31

ii. Tilbury Junction of the A13

iii. A1089 / St. Andrews Road junction (ASDA Roundabout)

iv. Ferry Road and Fort Road

v. A126/Old Dock Approach Road roundabout and slip roads.

vi. The other roads detailed in the Traffic and Transport chapter.

A distribution of traffic is required, particularly at the Tilbury junction of the A13, to determine whether assessment of the A128 Orsett Cock Interchange and the A1014 Stanford Interchange of the A13 are required.

Regards: Julian Howes
Date: 31 August 2018

Thurrock Flexible Generation Plant Fort Road Tilbury Essex – 18/4044/SCO

Planning Inspectorate Consultation - Scoping Report for future Development Consent Order [NSIP] - Proposal: To develop a flexible generation plant using fast start gas engines on land north of Tilbury substation to provide up to 600 MW of electrical generation capacity together with up to 150 MW of battery storage capacity and associated infrastructure

It is understood that the final design has yet to be determined and this will have some effects on the areas of land that will be used and the overall number and height of the structures that will be required. The current layout therefore is considered to be a 'worse-case' in terms of effects.

Landscape and visual

The proposed Landscape and Visual Impact Assessment will be carried out in accordance with the best practice guidance e.g. the Guidelines for Landscape and Visual Impact Assessment 3rd Edition. During an initial meeting potential viewpoints were discuss. It is agreed that these will be finalised with the local authorities prior to commencement of the LVIA.

At present the route to be used for construction traffic has yet to be finalised. There is concern that the option running south and east of Chadwell St Mary using Turnpike Lane is likely to have significant adverse impacts on the characters of historic lanes the adjacent Conservation Area. It is hoped that an alternative route can be identified.

Ecology

The ecology methodology is considered to meet good practice guidance.

The assessment recognises the need to carry out an Appropriate Assessment of the potential effects on the Thames Estuary and Marshes SPA. Consideration will need to be given to potential cumulative impacts arising from other developments within this area.

The Council has undertaken a Local Wildlife Site review which will be adopted shortly. The revised boundary of the Tilbury Power Station and Goshems Farm LWS is attached for information. The Tilbury 2 scheme used this boundary for their assessment.

The land north of the railway identified as exchange land for the loss of Walton's Common has the potential to provide important biodiversity mitigation with scope to incorporate additional invertebrate habitat features. It is hoped that there will be dialogue between representatives of the adjoining proposed developments to see if there can be improved linkages between the various onsite mitigation schemes to maximise their connectivity.

Regards

Steve Plumb

Civic Offices, New Road, Grays
Essex RM17 6SL

Chris Purvis
Planning and Growth Team
Thurrock Council Offices
New Road
Grays
Essex RM17 6SL
Monday 3rd September2018

Dear Chris,

RE - 18/4044/SCO – EIA Scoping Opinion consultation for the development of Thurrock Flexible Generation Plant, Tilbury, Essex

Thank for you consulting Thurrock Council's Public Health Team on the above EIA scoping consultation application.

With regards to this EIA scoping report and any subsequent planning application that will be informed by this consultation, it is felt important that consideration is paid to the potential human health impacts in respect of this proposed development. This relates to the health and wellbeing of any person(s) employed both during construction and operational stages, local residents living in communities within close proximity to the proposed development and the wider community as a whole where impacts may be felt.

It is felt to be a useful starting point, to provide a definition of what is meant by the term 'human health' to support and enable full consideration of the potential health impacts that may arise from this proposed development . This will ensure that the appropriate and adequate mitigation processes can be developed and implemented to reduce such impacts on health.

The World Health Organisation (WHO) defines health as "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmary." This definition encapsulates the 'holistic' and 'whole' person. Health and wellbeing can be affected by a variety of complex and interrelated factors including the built environment and communities that people live in. The definition also focusses on keeping people well. In order to support people to remain well requires acknowledgement of the role that wider determinants of health can play. This includes consideration of issues such as landscape, traffic, congestion, air quality, and how economic factors such as employment can impact on health.

Based on this understanding of health and the information provided in the EIA scoping report document there were a number of areas identified that require further investigation, clarification and inclusion within the EIA and any subsequent planning applications. Although some of these issues have been touched upon within the EIA scoping report, these more broadly relate to how they impact on the environment. It is felt that clearer links to the potential human health impacts need to be included in the scoping of the EIA and later planning application.

The impacts are considered based on their magnitude, duration and reversibility.

Civic Offices, New Road, Grays
Essex RM17 6SL

Air quality and traffic & congestion

Operational transport from staff on the site is estimated to be minimal but we recommend that suitable cycle and walking routes are developed within the site and also on the approach road networks to the site conterminously with other users of these networks. Tilbury station and Tilbury ferry are both within easy reachable distance both by foot and cycle to the proposed site. Use of these modes of travel would encourage physical activity amongst staff groups and reduce road congestion and the potential for a negative impact on air quality. We welcome the inclusion of the idea of individual travel plans which should be encouraged amongst staff.

The report states that over 30 two-way traffic movements an hour as a traffic assessment would be required. This should be modelled on the cumulative effect of the existing vehicle movements and further potential movements of vehicles that might occur for other development in the near vicinity. There is also a concern that the use of the identified road/track during this period of development may result in delays and tailbacks that may result in an increase in emissions which could have a detrimental effect on air quality. Can you further identify how you will reduce the likelihood of emissions? E.g. low carbon vehicles, regulated movements, use of the Thames as a method of delivery etc. during the construction phase as part of the traffic assessment for traffic.

It is highlighted in the document that the developer is aware that there is an AQMA located in Tilbury along Dock Road, Calcutta Road and St Chad's Road. The report states that the development will be designed to meet and, where feasible, better the emissions limits required by its Environmental Permit, and that impacts from both the construction and operational phase will be assessed, including undertaking of a dust impact assessment. These will need to be modelled to understand the potential cumulative effects from other developments in the local area, both current and in the future.

The identification within the LVIA for the use of greening and landscaping with strategic planting will not only support mitigation on air quality, but would look to mitigate the impacts on climate change (which will include issues arising from flooding and managing extremes in weather temperature) and will also benefit local residents and employees in terms of the mental well-being benefits that a green visual landscape would bring. Light pollution will also need to be identified within this, as this could have an effect on well-being through sleep deprivation.

Noise pollution

It is stated that there is the possibility of piling and dredging noise which may affect the population of Tilbury during construction. A cumulative assessment of current noise levels and modelled noise levels from this and other new and emerging development should be undertaken and used as part of the noise impact assessment. Public Health would like to see the noise impact assessment and strategies to alleviate this, as ongoing noise at a significant level can have a detrimental impact on mental health. The high health needs of the Tilbury population could lead to exacerbation to existing conditions such as circulatory disease etc.

Water safety

Public Health would be interested in the strategies that are developed to ensure that there are no potentially unacceptable pollutant leakages that may cause risk to human health and suggest that this is included as part of the HIA.

Civic Offices, New Road, Grays
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Other

The Government believes that from fuel efficiency and climate change perspective waste heat from large power stations should be utilised where possible for community heating and industrial uses." Is it the intention to utilise waste heat to local communities? In Thurrock as a whole 7.4% of the population live in fuel poverty. This equates to 12,215 people across the borough. Tilbury is one of the areas of highest deprivation within the borough so a proportion of people living in fuel poverty are likely to lie within Tilbury. Community heating utilised by waste heat would therefore benefit many local residents and reduce health inequalities that exist in Thurrock. In addition, we would like to request that further information be provided in relation to the interactions between the proposed developments of the Tilbury Energy Centre and the Port of Tilbury (Tilbury 2) and how this may impact on the ability of the proposed development to adequately supply energy to local residents. We are interested in these as it relates to the point outlined above about issues of fuel poverty in the surrounding area.

Whilst we understand that the gas pipe lines will require further permission, once decided upon, we would like this to be captured within the HIA as requiring further response especially as they are classed as a Major Accident Hazard which could lead to risks to human health. We are also concerned about the impact on access to green open space and rights of way.

We would encourage working to explore/secure employment investment from the local population and suggest that TPL provide a skills mix to help identify and develop new skills requirements working with Thurrock Council to develop a skills action plan. This will then allow local colleges and employment agencies to allow them to understand the skills required to enable employment opportunities within local communities. This is positive as employment is related to benefits in relation to health and wellbeing. It will be important to include this within any planning application that follows.

We are pleased that that consideration is being given to the possible future installation of carbon capture storage technology and understand that if this occurs a further planning application would be made around this in the future. We would like this to be captured within the HIA as requiring further response.

We note that the EIA Scoping Report states that a HIA chapter will be undertaken. Although the brief information included appears to contain all of the health determinants we would expect to be included in a HIA we would request that due to the 'likely significant impacts' and the cumulative effects of this and other significant infrastructure to be developed in close proximity to this site that a standalone Health Impact Assessment (HIA) chapter will provide a comprehensive and detailed account of all potential impacts, their likelihood and significance in terms of impact on human health and welcome your confirmation on this. As part of the HIA consideration of the cumulative impacts as this and other developments will be needed to ensure that health impacts are accurately measured and mitigation is sufficient and appropriate.

A HIA chapter would include ward(s) level health profiles of the local area/communities whose health may be impacted by the development. This ward level information is available from Public Health England's "Local Health" website which is available at: http://www.localhealth.org.uk/#l=en;v=map13. Further borough level information is available at Public Health England's Health Profile tool, 'Fingertips' which is available at: https://fingertips.phe.org.uk/. A health profile would enable consideration to be paid to the possible health impacts of the specific population living within Tilbury, and mitigation could be embedded

Civic Offices, New Road, Grays
Essex RM17 6SL

that would help reduce the health inequalities faced by this population. Tilbury is one of the most deprived wards within Thurrock, with the most health needs. This should be fully accounted for in any conclusions drawn in this health assessment.

Of particular interest, we would like to understand more fully how engagement and consultation with the community will feed into the health assessment and the health outcome conclusions made within this report.

We would also like, as part of the socio-economic and amenity element, to touch on the Landscape and visual effects LVIA that is to be undertaken and suggest that consideration be paid to the potentially negative effects to emotional wellbeing and potential decrease in civic pride that could be felt by Thurrock residents through bad visual planning, as well as potential economic effects on the locality by the negativity of visitors from outside the borough to the historical sites and SSI areas. It is suggested that consultation with other developments in agreeing a plan around greening, colours and planting to be undertaken.

We hope that our above comments will be reviewed and included as deemed appropriate within the EIA and any subsequent planning application. If you wish to discuss any of the items raised within this consultation response please do not hesitate to contact us.

Yours Sincerely,

Sue Bradish
Public Health Commissioning Manager

Miles, Billy

From: Priestley, Brian on behalf of Regeneration.Delivery
Sent: 31 August 2018 14:28
To: Development.Management
Subject: RE: Planning Application Consultation. 18/4044/SCO

Categories: Orange Category

Thank you for consulting with the regeneration department about this scoping opinion.

Our response focusses issues relating to the social and economic impact.

Relevant Policy to be included in scope:

The Council's adopted Economic Growth Strategy and the Council's adopted Tilbury Master Plan provide context and details of the Council's approach to promoting economic growth and to regeneration in Tilbury. The policies contained in these adopted policy documents provide context and for the definition of scope for socio-economic impacts of the development

Issues to be included in scope :

The 'Scoping Document' submitted with the application refers to relevant issues. In addition to those identified in this document the following should also be considered in scope;

1. Impact on local employment including;
    a. Skills, linkages to local education programmes and opportunities for pathways in to employment, apprenticeships and training
    b. Addressing unemployment in the local area, Tilbury, and the wider Borough of Thurrock
2. Impact on local businesses and scope for supporting the local economy including;
    a. Supply chains and opportunities to facilitate procurement of services and facilities from the local area, Tilbury, and the wider Borough of Thurrock
3. Broader socio-economic impact on Tilbury and the wider Thurrock Borough through indirect impacts on local businesses and services generated by employees living in the locality and using local services.

General:

This is one of three NSIP's in the locality and so the cumulative impact of these on the local economy should be in scope.

Happy to discuss or provide more detail and clarification.

Kind Regards

Brian

Brian Priestley l Regeneration Programme Manager l Place Directorate thurrock.gov.uk l t +44 (0) 1375 652585 l Thurrock Council, Civic Offices, New Road, Grays, Essex RM17 6SL

An ambitious and collaborative community which is proud of its heritage and excited by its diverse opportunities and future

From: Stephen Vanstone [mailto:Stephen.Vanstone@thls.org]
Sent: 06 September 2018 09:43
To: Thurrock FPG
Cc: Thomas Arculus; Trevor Harris; Mariam Nagdi
Subject: RE: EN010092 - Thurrock Flexible Generation Plant - EIA Scoping Notification and Consultation

FAO - Emma Cottam,

I note that the development area includes an area within the River Thames. Therefore, Trinity House advise that any marine works below the high water mark should be fully assessed within a Marine Navigation Risk Assessment, provided as part of the Environmental Statement.

The Port of London Authority (PLA) should be consulted directly concerning the above, as well as any proposed risk mitigation measures relating to these marine works.

Kind regards,

Steve Vanstone
Navigation Services Officer

Navigation Directorate
Trinity House
Trinity Square
Tower Hill
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