



Thurrock Flexible Generation Plant

**Environmental Statement Volume 2
Chapter 1: Introduction**

Date: April 2020

Environmental Impact Assessment

Environmental Statement

Volume 2

Chapter 1

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Summary

This document introduces the applicant and the Environmental Statement (ES), describing the purpose of the ES and its structure.

Qualifications

This document has been prepared by Anna Gillespie BSc (Hons), MSc, a Consultant who has three years' experience of planning consultancy and environmental impact assessment.

It has been checked by Tom Dearing, a Chartered Environmentalist and full Member of the Institute of Environmental Management and Assessment, who has nine years' experience of environmental impact assessment.

1. Project Overview

1.1 Introduction to the proposed development

- 1.1.1 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 gas-fired electrical generation capacity on a fast response basis, together with up to 150 MW of battery storage capacity.
- 1.1.2 The proposed development is a Nationally Significant Infrastructure Project (NSIP) for which Thurrock Power will submit an application to the Planning Inspectorate (PINS) for development consent.
- 1.1.3 Thurrock Flexible Generation Plant is needed to provide resilience to the electricity grid when that is required due to unplanned outages and intermittent generation from renewable sources, particularly wind power, or short term demand from consumers (typically in the morning and evening, particularly in the winter). It will do so through providing peaking generation capacity from the fast-start gas engines, which will typically run for short periods. The battery storage facility will provide both electricity balancing and frequency management services for the grid.
- 1.1.4 The application boundary and location of the proposed development are shown in Figure 1.1. Further details of its design are provided in Volume 2, Chapter 2: Project Description.
- 1.1.5 This chapter sets out the legislative background and purpose of the Environmental Statement (ES). This ES sets out the Environmental Impact Assessment work undertaken for Thurrock Flexible Generation Plant. The ES accompanies the application for a Development Consent Order (DCO) under Section 32(3) of the Planning Act 2008 and Regulation 17 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as amended.

1.2 The applicant

- 1.2.1 Thurrock Power is a subsidiary of Statera Energy Limited, a private British company that develops, builds and operates flexible electricity generating plant in the UK.
- 1.2.2 Statera Energy was established with the aim of delivering increased flexibility for the UK electricity system to assist in the transition to a low carbon economy in the expectation that renewable energy sources, such as solar and wind, will become the dominant form of generation of the future.

- 1.2.3 Thurrock Power will be a fully integrated developer, owner, and operator of the proposed Thurrock Flexible Generation Plant.

1.3 Project timeline

- 1.3.1 The expected timeline for consultation, decision-making and (if consent is granted) development of Thurrock Flexible Generation Plant is as follows.

Application and examination

- Quarter 2 of 2020 – submission of application with ES to PINS.
- Quarter 3 2020 to Quarter 1 2021 – examination of the application by an Inspector or panel of Inspectors.
- Quarter 2 2021 – determination by the Secretary of State.

Post-consent

- Anticipated in year 2020/2021 – potential advance works (habitat preparation and ecological management).
- From Q2 2021 – construction commences, potentially in phases lasting up to six years in total.

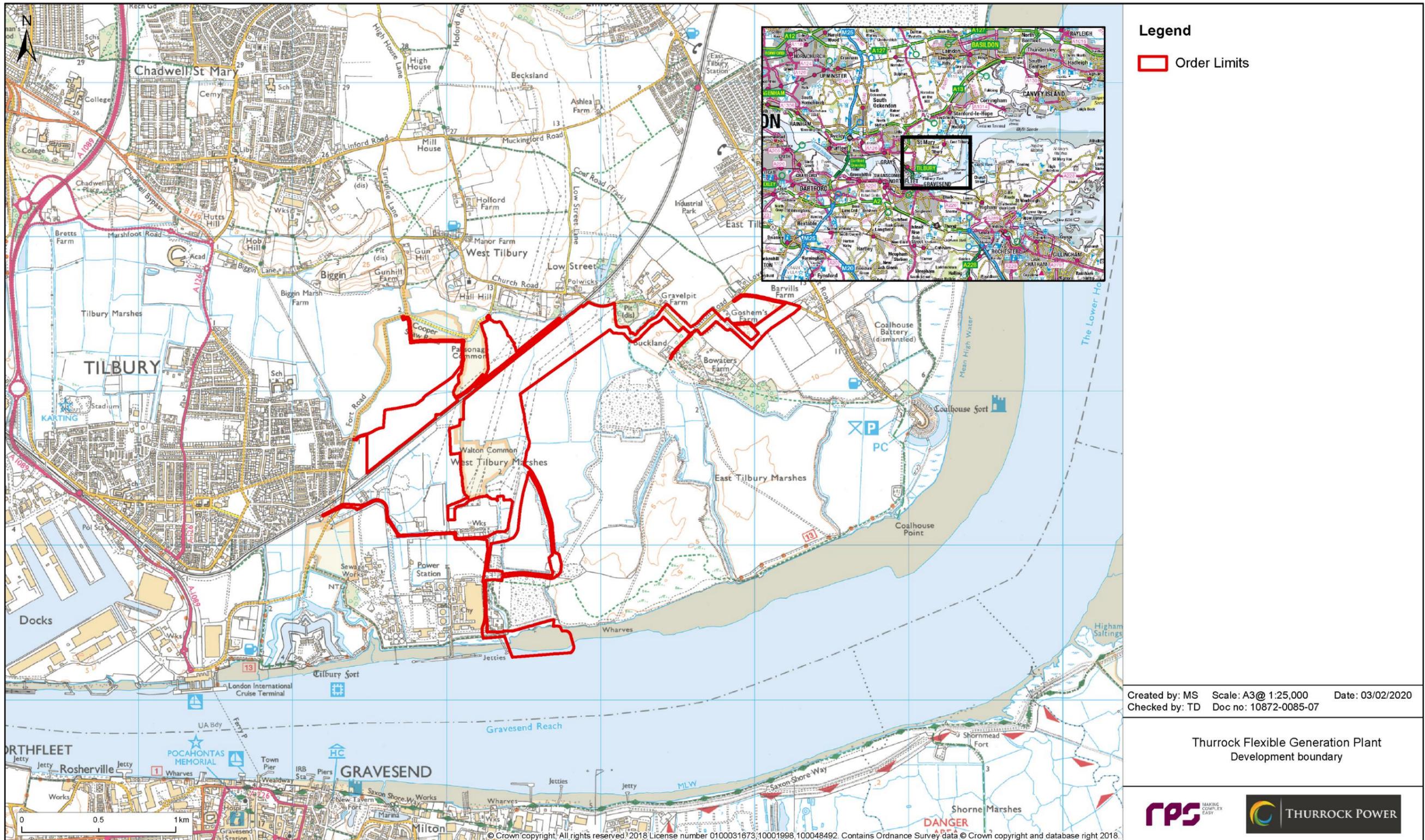


Figure 1.1: Site Location Plan.

2. Purpose and Structure of this Document

2.1 Policy and legislation

- 2.1.1 The planning process for dealing with proposals for NSIPs was established by the Planning Act 2008 (the 2008 Act). This process, as amended by the Localism Act 2011, involves an examination of proposals and includes significant consultation and engagement before a decision is made by the relevant Secretary of State.
- 2.1.2 The 2008 Act, as amended, sets out the thresholds for NSIPs. For the generating stations sector, applications for development consent will be referred to the Secretary of State if the construction or extension of the generating station:
- is in England or Wales;
 - is not an offshore generating station; and
 - has a capacity of more than 50 MW.
- 2.1.3 The proposed development, once operational, would provide up to 600 MW of electrical generation capacity together with up to 150 MW of battery storage capacity.
- 2.1.4 As a result, the throughput of the proposed flexible generation plant exceeds the threshold stated within the 2008 Act and therefore the proposed development constitutes a NSIP, requiring consent from the Secretary of State via a Development Consent Order (DCO), under Section 31 of the Planning Act 2008.
- 2.1.5 Pursuant to Section 104 of the 2008 Act, in considering a DCO the Secretary of State must have regard to any relevant National Policy Statements (NPSs) that are in force. NPSs are documents produced as a consequence of the 2008 Act that have been designated by the Secretary of State following public consultation and scrutiny by the Houses of Parliament.
- 2.1.6 NPSs describe the national case and establish the need for certain types of infrastructure development including energy and electricity networks, as well as identifying potential key issues that should be considered by the examining body and decision maker when considering an application for a DCO.
- 2.1.7 The applicable NPSs are therefore the most important policy documents against which the proposed development will be assessed.

- 2.1.8 The NPSs relevant to Thurrock Flexible Generation Plant are:
- Overarching National Policy Statement for Energy (EN-1) (Department of Energy and Climate Change (DECC), 2011a); and
 - National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2) (DECC, 2011b).
- 2.1.9 Although the DCO application includes connections to the national gas and electricity transmission networks, it does not meet the threshold in Section 1.8 of NPS EN-4 (Gas Supply Infrastructure and Gas and Oil Pipelines) (DECC 2011c) and does not include any above-ground electricity lines that would bring it into the purview of NPS EN-5 (Electricity Networks Infrastructure) (DECC, 2011d) in its own right as set out in Section 1.8 of that document. NPSs EN-1 and EN-2 are considered to be the primary relevant policy.

Overarching National Policy Statement for Energy (NPS EN-1)

- 2.1.10 NPS EN-1 sets out the Government's policy for the delivery of major infrastructure. NPS EN-1, in conjunction with the relevant NPSs (in this case NPS EN-2), will be the primary basis for PINS' decision making.
- 2.1.11 NPS EN-1 identifies that the energy NPSs are likely to contribute positively towards improving the vitality and competitiveness of the UK energy market by providing greater clarity for developers, which should improve the UK's security of energy supply.

National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (NPS EN-2)

- 2.1.12 NPS EN-2, considered together with NPS EN-1, provides the primary basis for decisions on applications for nationally significant fossil fuel electricity generating stations. NPS EN-2 sets out the need and urgency for new energy infrastructure to be consented and built with the objective of contributing to a secure, diverse and affordable energy supply and supporting the Government's policies on sustainable development, in particular by mitigating and adapting to climate change.

2.2 Need for Environmental Impact Assessment

- 2.2.1 Certain categories of development are required by European and UK domestic legislation to be the subject of Environmental Impact Assessment (EIA). The EIA regime in Europe originated from European Council Directive 85/337/EEC, which was amended by Directive 97/11/EC, Directive 2003/35/EC and Directive 2009/31/EC. In 2011, the initial 1985 Directive and its three amendments were codified by Directive

2011/92/EU (the EIA Directive) on the assessment of the effects of certain public and private projects on the environment.

2.2.2 Directive 2014/52/EU, which amends Directive 2011/92/EU, entered into force on 15 May 2014 and required Member States to transpose its requirements into national law by 16 May 2017. On 16 May 2017, The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 entered into force and were subject to minor amendments in 2018.

2.2.3 The purpose of the EIA Directive is to ensure that when an authority giving consent for a particular project makes its decision, it does so in the knowledge of any likely significant effects on the environment. The EIA Directive and EIA Regulations set out a procedure that must be followed for certain types of project before they can be granted development consent. EIA provides for the systematic assessment of a project's likely significant environmental effects for consideration by both the public and the relevant competent authority before a decision is made.

2.2.4 The process of identifying whether or not EIA is required for a development is known as screening. Projects of the type listed in Schedule 1 of the EIA Regulations require EIA in all cases. Projects of the type listed in Schedule 2 may require EIA in certain circumstances.

2.2.5 The proposed development would fall under the following paragraph of Schedule 1 of the EIA Regulations;

2 – (1) Thermal power station and other combustion installations with a heat output of 300 megawatts or more.

2.2.6 As the development falls within Schedule 1 it is considered to be EIA development.

2.3 Purpose of this Environmental Statement

2.3.1 The purpose of this ES is to provide the environmental information that has been gathered and to describe the likely significant environmental effects of Thurrock Flexible Generation Plant.

2.3.2 This ES specifically:

- provides statutory and non-statutory consultees with technical information to enable an understanding of the proposed development;
- provides an outline of the main project alternatives considered for the proposed development and indications of the reasons for the development selection made by Thurrock Power;

- describes the methodology used in the EIA process;
- presents the existing environmental baseline information, established from desktop studies, field surveys and consultation;
- indicates any difficulties encountered during the compilation of the environmental information, including the acknowledgement of any data gaps or deficiencies and confidence in the information gathered;
- presents the potential environmental effects arising from the proposed development, based upon the baseline information and data gathered and the assessment of impacts; and
- puts forward potential mitigation measures that could prevent, minimise, reduce or offset potential negative environmental effects identified.

Structure of this Environmental Statement

2.3.3 This ES sets out the assessment of environmental aspects in separate chapters supported by technical appendices which contain supporting information such as baseline survey results. The ES is published in 6 volumes, as follows.

- Volume 1 – a non-technical summary of the ES
- Volume 2 – introductory chapters (description of the project and alternatives, EIA methodology and consultation)
- Volume 3 – environmental aspect assessment chapters
- Volume 4 – cumulative effects assessment chapters
- Volume 5 – chapters summarising the effects identified in the ES
- Volume 6 – technical appendices

2.3.4 Table 2.1 details the structure of the ES.

2.4 Statutory and public consultation

2.4.1 Under the Planning Act 2008, as amended, the applicant has a duty to consult and publicise the proposed development. Consultation has been undertaken in 2018 and 2019.

2.4.2 In October 2018, a Preliminary Environmental Information Report (PEIR) was published to inform public and statutory consultation as required by section 42 consultation with statutory consultees and public consultation under section 47 under the Planning Act 2008, as amended.

2.4.3 In October to November 2019, further public and statutory consultation has been undertaken concerning changes to the proposed development subsequent to the PEIR publication.

2.4.4 Responses received have been taken into account in preparing the design of the proposed development and in carrying out the EIA. Further detail on the pre-application consultation undertaken is included in Volume 2, Chapter 5: Scoping and Consultation and in the Consultation Report (application document A5.1).

2.5 Document Availability

2.5.1 A Non-Technical Summary (NTS) document has been produced which describes the proposed development, its location and the likely environmental effects in non-technical language. The ES and NTS (and all other application and examination documents) can be viewed and downloaded free of charge from the Planning Inspectorate website: <https://infrastructure.planninginspectorate.gov.uk/projects/>

2.6 Structure of the ES

Table 2.1: Structure of the ES.

Volume	Number	Title
-	-	Contents
-	-	Glossary, Acronyms and Units
1	-	Non-Technical Summary
2	Chapters	
	1	Introduction
	2	Project Description
	3	Consideration of Alternatives
	4	Environmental Impact Assessment Methodology
	5	Scoping and Consultation
3	Chapters	
	6	Landscape and Visual Resources
	7	Historic Environment
	8	Land Use, Agriculture and Socio-Economics
	9	Onshore Ecology
	10	Traffic and Transport
	11	Noise and Vibration

Volume	Number	Title
	12	Air Quality
	13	Human Health
	14	Climate Change
	15	Hydrology and Flood Risk
	16	Geology, Hydrogeology and Ground Conditions
	17	Marine Environment
	4	Chapters
18		Cumulative Effects Assessment Introduction and Screening
19		Landscape and Visual Resources
20		Historic Environment
21		Land Use, Agriculture and Socio-Economics
22		Onshore Ecology
23		Traffic and Transport
24		Noise and Vibration
25		Air Quality
26		Human Health
27		Climate change
28		Hydrology and Flood Risk
29		Geology, Hydrogeology and Ground Conditions
30		Marine Environment
5	Chapters	
	31	Summary of Inter-Related Effects
	32	Summary of Cumulative Effects
	33	Summary of Further Mitigation, Residual Effects and Monitoring
6	Appendices	
	2.1	Mitigation, Enhancement and Monitoring Commitments
	2.2	Accident and Emergency Management

Volume	Number	Title
	4.1	Transboundary Impacts Screening Note
	7.1	Historic Environment Desk-Based Assessment
	7.2	Geoarchaeological Deposit Model Report
	8.1	ALC and Soil Survey Data
	8.2	Common Land
	8.3	Construction Labour Forecasting
	9.1	Ecological Desk Study and Survey Report
	9.2	Third Party Survey Reports
	9.3	Biodiversity Net Gain Assessment
	9.4	Foreshore Wintering Bird Surveys 2019-2020
	10.1	Transport Assessment
	11.1	Baseline Sound Monitoring Report
	11.2	BS4142:2014 Statements of Competence
	11.3	Construction Noise Assessment Methodology and Results
	11.4	Operational Noise Assessment Methodology and Results
	11.5	Standards and Guidance Relevant to Noise and Vibration
	12.1	Assessment of Air Quality Impacts on Ecological Receptors
	12.2	Baseline Air Quality Conditions
	12.3	Stack Height Determination
	12.4	Model Inputs and Outputs
	12.5	Results of Other Scenarios
	12.6	Assessment of Traffic-Related Emissions
	12.7	Assessment of Plume Visibility
	12.8	Further Analysis of Air Quality in Gravesend
	13.1	Health Baseline
	14.1	GHG Calculations
	14.2	Climate Change Risk

Volume	Number	Title
	15.1	Flood Risk Assessment
	15.2	Flood Zones and Model Data
	15.3	Surface Water Abstraction Licences, Discharge Consents and Pollution Incidents
	16.1	Phase 1 Preliminary Risk Assessment
	16.2	Phase 2 Site Investigation Report
	16.3	Team2100 Tilbury Ground Investigations
	17.1	Phase 1 Intertidal Survey Report and Benthic Ecology Desktop Review
	17.2	Hydrodynamic Modelling and Sediment Assessment
	17.3	Water Framework Directive Assessment
	17.4	Third Party Survey Reports

3. References

Department for Environment and Climate Change (2011a) Overarching National Policy Statement for Energy (EN-1). London, The Stationery Office.

Department for Environment and Climate Change (2011b) National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2). London, The Stationery Office.

Department for Environment and Climate Change (2011c) National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). London, The Stationery Office.

Department for Environment and Climate Change (2011d) National Policy Statement for Electricity Networks Infrastructure (EN-5). London, The Stationery Office.

Planning inspectorate (PINS) (2017) Advice Note Seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping. [Online] Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2017/12/Advice-note-7.pdf> [Accessed 10 December 2019]