

Thurrock Council

Local Impact Report

March 2021

Thurrock Power Ltd - Proposed Flexible Electricity Generation Plant

Planning Inspectorate Reference: EN010092

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## Executive Summary

The table below provides a summary of the local impacts:

Material Consideration	Local Impact	Summary of the Impact and any Mitigation
Principle of the Development and the Impact upon Green Belt;	Positive & Negative	<p>Positive as the proposal would meet critical need for electricity demand, security and network resilience along with the locational factors for choosing this site.</p> <p>Negative impact upon the Green Belt as proposal would be 'inappropriate development' and would impact upon the openness of the Green Belt.</p> <p>However, factors put forward demonstrate Very Special Circumstances exist that would outweigh the harm.</p>
Ecology and Nature Conservation;	Positive & Negative	The proposal would result in the loss of habitat and would impact upon protected species at the site, however, it is recognised that the areas to the north and south of the railway line would form new habitats to allow for translocation, net gain, along with improvements for accessing these areas, when compared to the difficult access arrangements to Walton Common, so there would be improvements to Green Infrastructure in the area.
Landscape and Visual Impact;	Negative	The proposal would lead to adverse landscape and visual impacts and consideration is needed for mitigation through careful design in regard to the proposal's impact upon the surrounding landscape and visual receptors.
Heritage Assets;	Negative	<p>Precautionary approach as Negative until more information is proposed as follows:</p> <p>For archaeology further information is required because at present the submitted documents do not provide an appropriate understanding of the potential impact on the below ground archaeological deposits, their extent or significance.</p> <p>For heritage assets further information is required to address inconsistencies within the Historic Environment Desk Based Assessment (ES Vol 6: Appendix 7.1), and there is a need to assess the grade I listed church of St Katherine, grade II listed Old Rectory and the grade II* Church of St James in the ES.</p>

Flood Risk and Hydrology;	Neutral	<p>In terms of flood risk the impact can be minimised through the submission of information through the 'requirements' to mitigate the impact of the development.</p> <p>The Council's Flood Risk Advisor needs a strategy and design for the surface water drainage at the site and this can be secured through the 'requirements', although revisions are required to the relevant surface water drainage 'requirement' (requirement 10).</p>
Geology, Hydrogeology and Ground Conditions;	Neutral	The overall findings of the ES and the views of the Council's Environmental Health Officer for Contaminated Land identify that there are no objections raised to this consideration.
Traffic and Transport;	Neutral	The proposal's impact of the access arrangements and construction route raises no objection, and in terms of traffic impact would raise no conflict with policy. Through the 'requirements' it is recognised that the 'Construction Worker Travel Plan' would be provided to promote sustainable transport.
Air Quality;	Neutral	Subject to mitigation measures being implemented the proposal would not lead to any significant adverse effects upon air quality.
Noise and Vibration;	Neutral	Subject to mitigation measures being implemented the proposal would not lead to any significant adverse effects on receptors sensitive to noise and vibration.
Land Use and Agriculture, and Socio-Economics;	Positive & Negative	Employment creation for the construction and operational periods and improved Common Land areas that are more accessible. The only negative is some loss of agricultural land.
Human Health;	Neutral	Taking into consideration air quality, noise, traffic and the socio-economic benefits the proposal would not lead to any significant adverse effects on human health.
Climate Change;	Negative	The proposal would contribute to climate change using gas for electricity production, however, this is a flexible generating plant so it is recognised that this would not be used all the time. The battery storage would help store electricity and release to the grid when needed.

## **1.0 INTRODUCTION**

- 1.1 This Local Impact Report (LIR) has been prepared by Thurrock Council (TC) in accordance with the requirements of the Planning Act 2008 (the Act) as amended by the Localism Act 2011. The LIR also takes into account the advice set out in the Planning Inspectorate (PINS) Advice Note One: Local Impact Reports (Version 2: April 2012). The content and conclusions of the LIR were presented to the Council's Planning Committee on 11 February 2021, with any relevant revisions after this time being agreed by the Assistant Director of Planning, Transport and Public Protection.
- 1.2 The LIR is part of the Council's response to an application submitted by the Thurrock Power Ltd for a Development Consent Order (DCO) on land directly to the north of formerly Tilbury Power Station site. The DCO would authorise, in summary, the construction and operation of a flexible generation plant comprising of the following:
- Reciprocating engines with electrical output totalling 600MW;
  - Batteries with electrical output of 150MW and storage capacity of up to 600MW;
  - Gas and electricity connections;
  - Creation of temporary and permanent private access routes for construction haul and access in operation, including a causeway for barge deliveries; and
  - Creation of exchange Common Land and habitat creation or enhancement for protection species translocation and biodiversity gain.
- 1.3 The proposed development is considered to be a Nationally Significant Infrastructure Project (NSIP) as the proposals would involve the construction of a generation station with a capacity of more than 50MW as set out in section 15(2) of the Planning Act 2008. Consequently, the proposals qualify as an NSIP for which development consent is required pursuant to section 31 of the 2008 Act.
- 1.4 As the development proposals comprise an NSIP, the application for a DCO has been submitted to the National Infrastructure Planning section of the Planning Inspectorate (acting for the Secretary of State for Communities and Local Government). The application was submitted by Thurrock Power Ltd on 28 February 2020 and accepted for examination by the Secretary of State (SoS) on 24 June 2020. A preliminary meeting took place with all parties on 20 October 2020 and on 2 November 2020 the Inspector decided that more information was required before the examination process can commence and this will now take place from March 2021 onwards.

## **2.0 TERMS OF REFERENCE**

- 2.1 Section 60(3) of the Planning Act 2008 defines a LIR as a “report in writing giving details of the likely impact of the proposed development on the authority’s area (or any part of that area)”. In coming to a decision, the SoS must have regard to any LIRs that are submitted.
- 2.2 The PINS Advice Note One (Local Impact Reports – Version 2 April 2012) provides guidance on the content of a LIR and confirms that the content of the LIR is a matter for the local authority concerned. The PINS Advice Note provides suggested topic headings (site description etc.) and this LIR broadly follows the suggested structure.
- 2.3 This LIR sets out the Council’s existing body of knowledge and evidence on local issues in order to present a robust assessment to the Examining Authority. As suggested by the PINS Advice Note, this LIR includes an evaluated statement of positive, negative and neutral local impacts within a structured document. This LIR also includes the Council’s views on the relative importance of different social, environmental and economic issues and the impact of the scheme on them. Finally, this LIR includes the Council’s views on the DCO articles, requirements and obligations.
- 2.4 For the purposes of this LIR the following environmental, economic and social topics will be considered:
- Principle and of the Development and the Impact upon Green Belt;
  - Ecology and Nature Conservation;
  - Landscape and Visual Impact;
  - Heritage Assets;
  - Flood Risk and Hydrology;
  - Geology, Hydrogeology and Ground Conditions;
  - Traffic and Transport;
  - Air Quality;
  - Noise and Vibration;
  - Land Use and Agriculture, and Socio-Economics;
  - Human Health;
  - Climate Change; and
  - Cumulative Impact;

### 3.0 SITE DESCRIPTION AND CONSTRAINTS

#### Introduction

3.1 The area which is the subject of the DCO and as identified as the “Order Limits” lies wholly within the administrative area of Thurrock Council (TC). The Order Limits extends to a total area of some 90.58 hectares and in total comprises areas for:

- The Main Development Site
- The Marine Area for the causeway and abnormal loads
- The exchanged Common Land and habitat creation area
- The gas and electricity connections

#### Site Location and Setting

3.2 The Order Limits are located to the north and east of the former Tilbury Power Station, north and south of the railway line, south to area of the River Thames, west to Fort Road, east to Station Road and as far east as Barvills Farm. The works below the mean low water line are beyond the administration area of Thurrock Council and are the responsibility of the Marine Management Organisation, Port of London Authority and the Environment Agency. The area between low and high water falls within the responsibility of these agencies but also Thurrock Council.

3.3 The main development site is currently open flat agricultural fields that are crossed by drainage ditches and three overhead power lines with steel lattice electricity pylons that are on the 400 kiloVolt and 275 KiloVolt network. It is immediately to the north of the existing Tilbury Substation and site of the decommissioned Tilbury B coal fired power station (300m away), with the River Thames a further 950m to the south. To the north (between 100m to 200m) is a section of the London, Tilbury and Southend Railway known as the Tilbury Loop, used mainly for commuter passenger services between central/east London and locations in Essex but is also used by freight trains that access the London Gateway Port. Within the main development site and other land within the order limits are areas of registered Common Land.

3.4 In addition to the main development site area for the flexible generation plant, further land is identified within the Order Limits for an underground gas connection, road access routes, a causeway, habitat creation and exchange Common Land.

3.5 In terms of the surrounding area the eastern edge of Tilbury is approximately 750 m west of the main development site, the village of West Tilbury is approximately 1 km to the north and East Tilbury village is approximately 2 km to the east. There are a small number of houses outside these settlements within around 600–800 metres of the main development site. The nearest being:

- Walnut Tree Farm, Havers Lodge and Low Street (580m north east);

- Condovers Cottages (730m north east);
- Polwicks (740m north east);
- St James Church (790m north);
- Byron Gardens (640m west);
- Brennan Road (700m west); and
- Sandhurst Road (730m west).

3.6 The site setting is a mixture of agricultural land with small settlements and light industry to the north and east, crossed by the railway line, but more heavily developed with the power station site, associated overhead power lines, Port of Tilbury and town of Tilbury to the south and west. The landscape is generally flat, with fields typically separated by drainage ditches.

### Site Constraints

3.7 The Order Limits is subject to the following land use planning policy designations as defined by the Core Strategy policies map:

- Land within the Metropolitan Green Belt (large majority of the site);
- Primary Industrial and Commercial Areas (neighbouring the western boundary with Walton Common);
- Local Nature Reserves (along the southern side of the flood defence for the River Thames where the causeway is proposed).

3.8 Some areas within the Order Limits have no land use policy designations within the Core Strategy.

3.9 The nearest ecological designations are Mucking Flats and Marshes SSSI located 0.77km from the site followed by the Thames Estuary and Marshes Special Protection Area (SPA) and Ramsar site located 1.02km from the site.

3.10 There are no heritage assets within the Order Limits. The nearest Scheduled Monuments are Tilbury Fort (970m south west) 'Earthworks near church, West Tilbury' (730m to the north) and Coalhouse Fort (2.35km). The nearest listed buildings are the Church of St James, grade II\* (880m to the north) and Marshalls Cottages in West Tilbury, grade II\* (1.4km to the north). Within the grounds of Tilbury Fort is the grade II\* Officer Barracks. The nearest Conservation Areas are West Tilbury (700m to the north) and East Tilbury (1.7km to the north east).

3.11 The majority of the Order Limit is located in a high risk flood zone, Flood Zone 3, a few areas within Flood Zone 2, and some small areas located in a low risk flood zone, Flood Zone 1.

3.12 Walton Common is Common Land within the Order Limits.



- 3.13 Public Footpath no.146 passes through the site and runs adjacent to the sea wall to the River Thames in a mainly west to east direction. Public Footpath no.200 runs to the east of the Order Limits. National Cycle Route no.13 runs close to the southern part of the Order Limit.

#### Cumulative Impact Sites

- 3.14 The applicant's Environment Statement (ES) process has given consideration to the cumulative impact with other developments and reference to these other sites are within the sections of the assessment of the local impacts. It is considered that the following sites are relevant to consideration of the cumulative impacts of the development:

App Ref	Site Location	Proposal	Status
Application for Development Consent Order (Ref TR03003)	Port of Tilbury and the project referred to a Tilbury 2	The creation of a roll on-roll off port terminal, construction materials and aggregates terminal and associated development	Majority of construction work completed and port partly operational
19/01274/FUL	Tilbury Sewage Treatment works	Short Term Operation Reserve (STOR) electricity generating station comprising 14 no. gas-fired generators with a capacity up to 21 MW	Planning permission granted December 2019
Application for Development Consent Order (Ref TR010032)	Lower Thames Crossing site	Development of a motorway road and tunnel underneath the River Thames approximately 14.5 miles long	Application likely to be submitted to the Planning Inspectorate
16/01232/OUT	East Tilbury/Linford	Planning application for up to 1000 dwellings	Pending consideration – no timeframe for consideration at committee
Application for Development Consent Order	The London Resort	Leisure and entertainment resort including a theme park, hotels, bars, restaurants, business space, training academy, monorail and associated infrastructure works	Live application submitted to the Planning Inspectorate at the end of 2020 currently awaiting acceptance



## **4.0 DESCRIPTION OF THE PROPOSAL**

### Introduction

- 4.1 In summary, the proposal would involve the construction and operation of a flexible generation plant comprising of the following:
- Reciprocating engines with electrical output totalling 600MW;
  - Batteries with electrical output of 150MW and storage capacity of up to 600MW;
  - Gas and electricity connections;
  - Creation of temporary and permanent private access routes for construction haul and access in operation, including a causeway for barge deliveries; and
  - Creation of exchange Common Land and habitat creation or enhancement for protection species translocation and biodiversity gain.
- 4.2 The proposals for which a DCO is sought are described in detail as a series of 14 categorised 'Works' in Schedule 1 of the Order. If approved, the Order would be known as 'The Thurrock Flexible Generation Plant Development Consent Order 202X' and would have the status of secondary legislation as a Statutory Instrument.

### The Zones

- 4.3 The application maps split the Order Limits into different Zones A to J, also including sub zones, and the proposed 14 categorised scheduled 'Works' fall within these zones. Before considering the 'Works' it is important to understand the 'Zones' which are described in the following paragraphs:

#### **Zone A**

- 4.4 The 'main development site' immediately north of Tilbury Substation, within which the principal buildings or structures of the proposed development would be constructed. The gas engines, batteries, electrical switchgear (customer substations), runoff attenuation, control room and parking (up to 30 spaces) would all be within Zone A. This zone also includes land reserved for Carbon Capture Readiness (CCR).

#### **Zone B**

- 4.5 This is the existing National Grid Tilbury Substation. The proposed development would connect to the 275 kV circuit at this substation via underground cables crossing from Zone A into Zone B.

#### **Zone C**

- 4.6 Zone C is a corridor of land south of the railway line in which a permanent access road and underground gas pipeline would be constructed, between Station Road (which is at the north-eastern edge of this zone) and the main development site in Zone A. This would be one of two road accesses to the site, the other being via the new section of the A1089 which has been constructed as part of the Tilbury2 development and is accessed via Zone H. The route of the access road and gas pipeline within this corridor will be defined following detailed design through the 'requirements process', which is similar to the process for submission of information for the discharge of planning conditions. Up to two hectares of Zone C could be used for laydown or temporary construction compounds, if required.

#### **Zone D**

- 4.7 Zone D is split into further sub zones D1, D2 and D3. For D1 and D2 this Zone comprises sections of agricultural fields where the gas pipeline corridor would be located. For Zone D3 this would form the National Grid gas connection location and where the proposed gas compound (AGI) would be constructed. An existing high pressure pipeline crosses into Zone D3.

#### **Zone E**

- 4.8 This Zone north of the railway is currently used as agricultural land but it is proposed to be exchanged Common Land to address the loss of Walton Common through the development. This land would also be subject to a new footbridge connection to Fort Road. A route for access from Zone F2 to Zone E, across the south of Parsonage Common, would be provided for use during work to establish the Common Land and footbridge.

#### **Zone F**

- 4.9 Zone F is currently agricultural land and would be used for habitat creation or enhancement to mitigate for the permanent loss of habitat within Zone A and other areas of the proposed development. It is divided into four sub-zones (F1-4) to accommodate the habitat types proposed. Access routes for establishing and maintaining the habitat creation areas are provided from Cooper Shaw Road and Station Road. Zone F4 is located to the south of the railway line.

#### **Zone G**

- 4.10 This Zone includes all of the infrastructure required for delivery of abnormal loads via roll-on roll-off barge and transport to the main development site (Zone A). It includes the construction and operation of a permanent causeway on the foreshore of the River Thames, the dredging of a berthing pocket to enable barges to access the causeway, a local modification to the existing sea defences, and a haul road from the causeway to Zone A. The proposed haul road would comprise part of the existing private highway infrastructure on the former Tilbury B Power Station site and a new

section of purpose-built road to connect to Zone A. For part of the haul road route, two options are being considered to allow flexibility to determine the preferred option prior to construction due to recent ground disturbance in this area.

### **Zone H**

- 4.11 Zone H comprises an existing private road through the former Tilbury B Power Station site and a re-aligned private road, as consented for the Tilbury2 development, which is proposed to provide the primary access route for construction traffic (with the exception of abnormal loads delivered via barge) from the new section of A1089 public highway being constructed for Tilbury2.

### **Zone I**

- 4.12 This section of public highway at Station Road is subject to a Traffic Regulation Order (TRO) restricting access by vehicles of more than 7.5t in weight and it is proposed that this TRO would be suspended temporarily to allow HGV traffic access for construction of the gas connection compound in Zone D3.

### **Zone J**

- 4.13 A temporary public right of way would be created if necessary in this zone along the existing road (where there is an existing marked recreational route). The temporary footpath would provide a diversionary route for Footpath 200 (FP200) to Station Road if it is necessary for the existing footpath where it crosses Zone D1 to be stopped up temporarily during gas pipeline construction.

### **Proposed Schedule of Works**

- 4.14 As noted above, Schedule 1 (Authorised Development) of the Order provides a written description of a number of Works with reference to a number of Works Plans (document ref. A2.3). These Works are described in greater detail below.

### **Work No. 1 (in Zone A)**

- 4.15 The 'main development site' (Zone A) immediately north of Tilbury Substation, within which the principal buildings or structures of the proposed development would be constructed. The proposed development is an electricity generating station and battery storage facility with a net electrical output of up to 750 MW comprising:
- 4.16 1A – A gas fired electricity generating station with a net rated electrical output of up to 600 MW consisting of –
- a) engine house building(s);
  - b) up to 48 gas reciprocating engines;
  - c) up to 48 exhaust stacks;

- d) up to 48 gas engine exhaust energy recovery systems;
- e) cooling system;
- f) air pollutant control system;
- g) lubricating oil and air pollutant control system reagent storage;
- h) a gas pre-heat, metering and pressure reduction compound; and

4.17 Reference to 'up to' is to provide flexibility and it is understood that the engines would be housed inside buildings/structures up to 20m high. Each engine would have an individual exhaust pipe but these may be grouped together into clusters of two to six exhausts. The maximum height of the stacks would be up to 40m with the final height to be determined by an Environmental Permit application to the Environment Agency. The engines would not run continuously and will be used when there is electricity network demand and this can be for short periods several times a day. The engines once started can reach full power in less than five minutes and provides more flexibility to conventional power stations where turbines are much slower to reach full power production.

4.18 1B – Battery storage facility with a net rated electrical output of up to 150 MW for four hours consisting of –

- i) storage battery houses or containers;
- j) storage inverter containers;
- k) cooling system; and

4.19 The battery storage facility comprises of battery cells, cooling and inverter to converter power outputs and these battery systems would be either housed in a building or in units that look similar to shipping containers stacked two high, in either case up to 10m tall. The battery technology can import or export large amounts of electricity with no time lag and this would help the National Grid balance loads on the electricity grid and maintain the frequency for safe network operation. The batteries can store spare renewable electricity generated during times of low demand. The batteries can store four hours' worth of power at their rated output of 150 megawatts.

4.20 1C – Facilities to serve both 1A and 1B consisting of –

- l) electrical equipment comprising 132 kV and 275 kV substations, switch houses and switch rooms, and auxiliary transformers;
- m) fire suppression system and firewater tank;
- n) an operations, maintenance and storage building;
- o) control room(s);
- p) septic tank or packaged foul treatment plant;
- q) internal roads and parking;
- r) surface water drainage;
- s) surface water runoff attenuation pond(s); and
- t) landscaping.

- 4.21 In the southern part of this site the electrical equipment would appear similar to the existing substation to the south and the connection between them would use underground cables. Also within the main development site internal access roads, car parking, a control room and a drainage system would be created. An area of land would be reserved for carbon capture readiness for potential future uses.

#### **Work No. 2 (in Zones A and F)**

- 4.22 Work No.2 comprises the creation and enhancement of onshore wildlife habitat including topsoil strip, planting, construction of ditches, mounds and banks, and enhancement of retained ditches for ecological benefit; and connection of retained ditches to Work No. 1C surface water drainage (Zones A and F). There are three separate areas: two are adjacent to Parsonage Common (F1 & F2) in agricultural land. Two other strips of land lie to north of the railway line (F3) and south of the railway line (F4).

#### **Work No. 3 (in Zones A and B)**

- 4.23 Work No.3 would be the proposed connection to the existing National Grid Tilbury Substation (Zones A and B). The proposed development would connect to the 275 kV electrical bay at this substation via underground cables crossing from Work No. 1 into Work No. 3. The connection equipment in Tilbury Substation consists of:
- a) civil works – equipment bases, cable trenching, fencing;
  - b) electrical equipment installation – current transformers, voltage transformers, high accuracy metering equipment, circuit breakers, disconnectors and emergency shutoff;
  - c) cable sealing end (where underground high voltage transmission cables join to existing overhead transmission cable) including, base, structure and terminations;
  - d) blockhouse (switch room); and
  - e) control and protection modifications for the re-equipped bay and integration to the site wide systems, including busbar protection.

#### **Work No. 4 (in Zone A, C and D)**

- 4.24 Work No. 4 is an underground high-pressure gas pipeline between Work No. 1 and Work No. 5A and gas pipeline(s) within Work No.1 (Zone A, C and D). It includes a corridor of land south of the railway line in which part of the underground gas pipeline would be constructed (with the final route of the gas pipeline within this corridor would be defined following detailed design), two crossings of Station Road, and a further corridor in agricultural land to Work No. 5. A fenced compound approximately 50m square would be built with access for vehicles off Station Road. The compound would have instrument kiosks, pressure valves and pipe inspection equipment, all no more than 5m high.

#### **Work No. 5 (in Zone D)**

- 4.25 This is a connection point to the gas National Transmission System (Zone D) comprising —
- 4.26 5A – A gas connection compound with landscaping consisting of:
- a) a National Grid Minimum Offtake Connection facility containing remotely operable valve, control and instrumentation kiosk, and electrical supply kiosk;
  - b) a Pipeline Inspection Gauge Trap Facility containing pipeline inspection gauge launching facility, emergency control valve, isolation valve, control and instrumentation kiosk, and electrical supply kiosk; and
- 4.27 5B – If required by the siting of Work 5A, a high-pressure underground gas pipeline between Work 5A(a) and the gas National Transmission System; and
- 4.28 5C – An access track and junction from Station Road with drainage and landscaping.

#### **Work No. 6 (in Zone C)**

- 4.29 Work No.6 is a permanent access road and junction from Station Road with drainage and landscaping within the corridor of the proposed gas pipeline (Zone C). The final route of the access road would be defined following detailed design.

#### **Work No. 7 (in Zone C)**

- 4.30 Work No.7 is a water supply connection to the water main at Station Road within the corridor of the proposed gas pipeline and access road (Zone C).

#### **Work No. 8 (in Zones A and C)**

- 4.31 Work No.8 comprises construction compound(s) and laydown area(s) south of the railway (Zones A and C).

#### **Work No. 9 (Omitted from the Proposal)**

- 4.32 Work No.9 was the proposed creation of saltmarsh habitat immediately downstream of the causeway (Work No. 10) using material dredged for its construction (Zone G). However, since the submission of the application for the DCO the applicant is no longer proposing these works following further discussions with the Environment Agency, Marine Management Organisation, Natural England and the Port of London Authority. Work No.9 has therefore been omitted from the proposal.

#### **Work No. 10 (in Zone G)**



- 4.33 Work No.10 is part of the infrastructure required for delivery of large abnormal indivisible loads (AILs) via roll-on roll-off barge. These abnormal loads would consist of plant such as transformers and gas engine blocks. The causeway would be created to facilitate crane platforms extending from above mean high water springs to the foreshore and a berthing location for barges at the north bank of the Thames (Zone G).
- 4.34 The causeway would be 195m long by 12.5m wide. Working platforms for cranes would be provided at the river end of the causeway and the head of the causeway would meet the base level of the existing sea wall. A flood gate barrier system would be constructed to allow passage of vehicles onto the causeway. The causeway would have 2.5m high palisade security fencing and a gate at the landward end to prevent access onto it from the footpath. The causeway would remain in place as a permanent structure during the proposed development's operating life.

**Work No. 11 (in Zone G)**

- 4.35 Work No.11 comprises part of the infrastructure required for delivery of AILs. It involves modification to the sea wall at the north bank of the River Thames to allow passage for AIL vehicles to access the causeway (Zone G).

**Work No. 12 (in Zones G and H)**

- 4.36 Work No.12 is an access road from the A1089 St Andrew's Road (Zone G and H) for primary access for construction traffic that is not abnormal loads comprising—
- a) repairs to carriageway defects and carriageway widening or realignment for use of existing private roads;
- 4.37 and connecting to 12(a)—
- b) engineering works and construction of new road section with drainage;
  - c) engineering works and construction of new road sections with drainage and landscaping;
  - d) engineering works and construction of new road sections with drainage and landscaping.

**Work No. 13 (in Zone E)**

- 4.38 Work No.13 is north of the railway, includes a footbridge, ground works and fencing for a permissive path between Fort Road and the area of new common land that comprises Work No. 14 (Zone E).

**Work No. 14 (in Zone E)**

- 4.39 Work No. 14 is the area of new common land, north of the railway, proposed in exchange for the loss of the majority of Walton Common (Zone E). It is currently agricultural land. There would be no specific habitat creation in this location, in order to prevent conflict with use as common land, but there would be incidental biodiversity benefits. Landscape planting is also proposed along the southern edge. The new Common Land would be next to Parsonage Common allowing for access from Cooper Shaw Road without crossing the railway.

### **Additional Works**

- 4.40 In addition to the numbered works (1-14) described above, Schedule 1 also describes further development within the Order Limits in connection with the construction of any of those works comprising the Nationally Significant Infrastructure Project or associated development within the Order limits consisting of—
- i) retaining walls, embankments, barriers, parapets, drainage, fencing, culverts and lighting;
  - ii) site preparation works, site clearance (including fencing and demolition of existing structures), earthworks (including soil stripping and storage, site levelling) vegetation clearance and remediation of contamination if present;
  - iii) works to alter the position of apparatus below ground level including mains, sewers, drains and cables and also including below ground structures associated with that apparatus;
  - iv) construction compounds and working sites, storage areas, temporary vehicle parking, ramps and other means of access, internal roads and tracks, construction fencing, perimeter enclosure, security fencing, construction-related buildings, welfare facilities, construction lighting, haulage roads and other buildings, machinery, apparatus, works and conveniences including provision of services and utilities;
  - v) landscaping, planting, tree planting and erection of permanent means of enclosure and boundary facilities including fences and gates, alteration of drains and ditches;
  - vi) alteration of layout of streets to form temporary and permanent accesses, altering the level of any kerb, footway or verge within a street and surface treatments;
  - vii) diversions during construction of existing access routes and subsequent reinstatement of existing routes; and
  - viii) such other works, working sites, storage areas and works of demolition, as may be necessary or expedient for the purposes of, or for purposes ancillary to, the construction of the authorised development,
- 4.41 But only insofar as they do not give rise to any materially new or materially different environmental effects from those assessed in the environmental statement.

### **Summary Table of Zones and Proposed Works**

Zone	Zone Description	Works No.	Extent of Work
A	Main development site immediately north of Tilbury Substation	1	A. Gas fired electricity generation station development; B. Battery storage development; C. Associated infrastructure.
		2	Creation and enhancement of onshore wildlife habitat.
		3	Proposed connection to the existing National Grid Tilbury Substation; A. 275 kV high voltage underground cables; B. National Grid's existing 275/400 kV Tilbury Substation
		4	An underground high-pressure gas pipeline.
		8	Construction compound(s) and laydown area(s).
B	The existing National Grid Tilbury Substation	3	Proposed connection to the existing National Grid Tilbury Substation; A. 275 kV high voltage underground cables; B. National Grid's existing 275/400 kV Tilbury Substation.
C	Corridor of land south of the railway line	4	An underground high-pressure gas pipeline.
		6	Permanent access road and junction from Station Road.
		7	Water supply connection to the water main at Station Road.
		8	Construction compound(s) and laydown area(s).
D	Sections of agricultural fields within which the gas pipeline and National Grid gas connection compound (AGI) will be constructed	4	An underground high-pressure gas pipeline.
		5	Gas Connection Compound.
E	North of the railway is currently used as agricultural land but is proposed to be the area in which	13	North of the railway, includes a footbridge, ground works and fencing for a permissive path between Fort Road and the area of new common land that comprises Work No. 14.

	exchanged Common Land will be provided		
		14	Area of new common land, north of the railway, proposed in exchange for the loss of the majority of Walton Common.
F	Agricultural land that would be used for habitat creation or enhancement to mitigate for the permanent loss of habitat within zone A and other areas of the proposed development	2	Creation and enhancement of onshore wildlife habitat.
G	All of the infrastructure required for delivery of abnormal loads via roll-on roll-off barge and transport to the main development site (zone A).	10	Causeway with crane platforms.
		11	Modification to the sea wall at the north bank of the Thames.
		12	Access road from the A1089 St Andrew's Road.
H	Existing private road through the former Tilbury B Power Station site and a re-aligned private road	12	Access road from the A1089 St Andrew's Road.
I	Public highway at Station Road where existing Traffic Regulation Order will be suspended temporarily to allow HGV traffic access for construction of the gas connection compound in zone D3	n/a	No Works Proposed.
J	A temporary public right of way	n/a	No Works Proposed.

### Construction

- 4.42 The construction process is identified to take one to two years and works could commence later this year. The application seeks flexibility so that the proposal could be built over three phases and up to a 6 year period if necessary. Details of the future construction environmental management plan would be within a number of the requirements as stated in the Order. These include the Code of Construction Practice, Construction Traffic Management Plan, Construction Worker Travel Plan and Landscaping and Ecological Management Plan.
- 4.43 The construction process would involve an estimated 250 full time jobs. Construction would take place Monday to Friday 8am to 6pm and Saturday 8am to 1pm with no planned works on Sundays or Bank Holidays

#### Operation and Maintenance

- 4.44 The facility is predicted to require 4-6 members of staff on site. The main functions would be controlled remotely off site. One major maintenance period and four minor maintenance visits are expected per annum requiring up to 20 staff on site.

#### Decommissioning

- 4.45 The application anticipates the development would have up to a 35 year lifetime. After then either another approval would be needed or the site will be decommissioned.

## 5.0 RELEVANT PLANNING HISTORY

- 5.1 The following details refer to the planning history for the Order Limits and pre submission applications:

Reference	Description	Decision
Draft Statement of Community Consultation (SOCC)	Draft Statement of Community Consultation which was subject to consultation with the Community Development and Equalities Manager	Advice Given 27.07.2018
18/4044/SCO  Scoping for DCO  S42 consultation	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	EIA Required  07.09.2018
18/01649/SCO  PEIR  S42 consultation	Comments required for the Preliminary Environmental Information Report (PEIR) for a future NSIP/DCO for the construction, operation and decommissioning of a gas fired flexible electricity generation plant and battery storage facility, known as the Thurrock Flexible Generation Plant.	Advice Given 07.09.2018
Draft SOCG	Draft SOCG provided November 2018 and response provided	Advice Given 28.11.2018
19/01838/SCO  Additional Info (PEIR update)	Further Consultation to a future Development Consent Order [DCO/NSIP) - Two Gas Fired Electricity Generating Stations (GFEES) at 299.99MW each and a Battery Storage Facility (BSF) at 150MW to be known collectively as Thurrock Power Flexible Generation Plant	Advice Given 13.01.2020

- 5.2 In addition to the above the relevant planning history of Order Limits overlaps or are adjacent to other sites and their relevant history is stated below:

### 5.3 Tilbury Power Station:

Ref.	Description	Decision
50/00299/FUL	Access road	Approved
54/00035/FUL	132 KV substation and 33 KV compound	Approved
16/00186/DML	Demolition of Tilbury B power station and all associated buildings and structures (including remaining structures from Tilbury A power station). The Jetty will not be demolished	Prior Approval granted
16/00848/FUL	Retention of use of land for storage of new motor vehicles for a temporary 5 (five) year period and retrospective planning permission for the laying of hardcore, improvement of concrete hardstanding, re-grading of land and formation of swale to western boundary	Approved
16/01234/FUL	Erection of 2.9m high security fencing.	Approved
17/00560/FUL	Use of land for storage of new motor vehicles for a temporary 5 (five) year period, including the laying of an anchored ground reinforcement paver to parts of the site	Approved

### 5.4 Port of Tilbury, known as 'Tilbury 2' adjacent to and part of former Tilbury Power Station site:

Ref.	Description	Decision
PINS ref TR030003	Application for a Development Consent Order (DCO) authorising, in summary, the construction and operation of a new port terminal with associated development (to be known as Tilbury2) on land formerly comprising part of the Tilbury Power Station site.	Development Consent Granted on 20 February 2019

### 5.5 Whilst still at pre-submission stage the Lower Thames Crossing site is relevant as it is within close proximity to the Order Limits for this application.

Ref.	Description	Decision
PINS ref TR010032	New road crossing connecting Kent, Thurrock and Essex. Approximately 14.5 miles (23km) in length, it will connect to the existing road network from the A2/M2 to the M25 with two tunnels (one southbound and	Application for Development Consent Order expected to be submitted to the

	one northbound) running beneath the River Thames	Planning Inspectorate
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## **6.0 PLANNING POLICY**

### **Context**

- 6.1 Section 104(2) of the Planning Act 2008 states that in deciding the application for a Development Consent Order the Inspector must have regard to any National Policy Statement (NPS) for the development to which the development relates, any Local Impact Report, any matters prescribed in relation to development of the description to which the application relates and any other matters considered important and relevant. The National Policy Statement for Energy, 'EN1', provides the 'Overarching National Policy Statement for Energy', 'EN2' provides guidance for 'Fossil Fuel Electricity Generating Infrastructure' and 'EN4', provides guidance for 'Gas Supply Infrastructure and Gas and Oil Pipelines'. These three national energy specific policy statements are considered in the same policy context as the NPPF and PPGs.
- 6.2 The PINS advice note for the preparation of LIRs refers to the inclusion of relevant development plan policies, supplementary planning guidance, development briefs or approved master plans. The LIR should also include the local authority's appraisal of the proposed development's compliance with local policy and guidance.

### **National Policy**

#### **National Policy Statement for Energy 'EN1'**

- 6.3 The National Policy Statement for Energy, 'EN1', provides the 'Overarching National Policy Statement for Energy' and identifies 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. This includes consideration of specific technologies, including gas supply and storage infrastructure to help meet energy demand.
- 6.4 EN1 recognises the need for new nationally significant energy infrastructure projects (Development Consent Orders) to achieve new energy developments. Paragraph 3.8 of EN1 recognises the need for significant gas infrastructure.
- 6.5 EN1 explains in the 'Assessment Principles' (part 4) section that applications should consider *inter alia* an Environment Statement, Habitat and Species Regulations, alternatives, criteria for 'good design', climate change adaption, grid connection, pollution control and health.
- 6.6 EN1 'Generic Impacts' (part 5) section lists a number of considerations that are relevant to consideration of the application and these are:
- Air quality and emissions
  - Biodiversity and geological conservation

- Civil and military aviation and defence interests
- Coastal change
- Dust, odour, artificial light, smoke, steam and insect infestation
- Flood risk
- Historic environment
- Landscape and visual
- Land use including open space, green infrastructure and Green Belt
- Noise and vibration
- Socio-economic
- Traffic and transport
- Waste management
- Water quality and resources

### **National Policy Statement for Energy, 'EN2'**

- 6.7 The National Policy Statement for Energy, 'EN2', provides guidance for 'Fossil Fuel Electricity Generating Infrastructure' and as the proposal is reliant on gas for electricity production EN2 is relevant. EN2 needs to be read in conjunction with EN1 and the criteria set out above.
- 6.8 The relevant policies and paragraphs from EN2 are set out in 'Part 2' and this identifies that the impacts of fossil fuel generating stations shall need to consider:
- Air quality and emissions
  - Landscape and visual
  - Noise and vibration
  - Release of dust
  - Water quality and resources

### **National Policy Statement for Energy, 'EN4'**

- 6.9 The National Policy Statement for Energy, 'EN4', provides guidance for 'Gas Supply Infrastructure and Gas and Oil Pipelines' and as the proposal is reliant on a gas pipeline for electricity production EN4 is relevant. EN4 needs to be read in conjunction with EN1 and the criteria set out above.

### **National Planning Policy**

#### **National Planning Policy Framework (NPPF)**

- 6.10 The revised NPPF was published on 19 February 2019 and sets out the Government's planning policies.
- 6.11 Paragraph 2 of the Framework confirms the tests in s.38 (6) of the Planning and Compulsory Purchase Act 2004 and s.70 of the Town and Country Planning Act 1990 and that the Framework is a material consideration in planning decisions.

6.12 As part of the planning balance consideration has to be given to the Environmental, Social and Economic objectives as outlined in paragraph 8 of the NPPF with all three needing to be satisfied to achieve sustainable development.

6.13 Paragraph 11 of the Framework expresses a presumption in favour of sustainable development. This paragraph goes on to state that for decision taking this means:

*c) approving development proposals that accord with an up-to-date development plan without delay; or*

*d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out of date<sup>1</sup>, granting permission unless:*

*i) the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed<sup>2</sup>; or*

*ii) any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.*

*<sup>1</sup> This includes, for applications involving the provision of housing, situations where the local planning authority cannot demonstrate a five year supply of deliverable housing sites ...*

*<sup>2</sup> The policies referred to are those in this Framework relating to: habitats sites and/or SSSIs, land designated as Green Belt, Local Green Space, AONBs, National Parks, Heritage Coast, irreplaceable habitats, designated heritage assets and areas at risk of flooding or coastal change.*

6.14 The following headings and content of the NPPF are relevant to the consideration of the current proposals:

- 2. Achieving sustainable development
- 8. Promoting healthy and safe communities
- 9. Promoting sustainable transport
- 11. Making effective use of land
- 12. Achieving well-designed places
- 13. Protecting Green Belt land
- 14. Meeting the challenge of climate change, flooding and coastal change
- 15. Conserving and enhancing the natural environment
- 16. Conserving and enhancing the historic environment

## **Planning Policy Guidance (PPG)**

6.15 In addition to the NPPF the PPG provides suite of further supporting information and guidance to a range of subject areas and of particular relevant to this application are:

- Air quality
- Climate change
- Conserving and enhancing the historic environment
- Design: process and tools
- Effective Use of Land
- Environmental Impact Assessment
- Flood Risk and Coastal Change
- Green Belt
- Historic environment
- Land affected by contamination
- Land Stability
- Light pollution
- Natural Environment
- Noise
- Open space, sports and recreation facilities, public rights of way and local green space
- Planning obligations
- Renewable and low carbon energy
- Transport evidence bases in plan making and decision taking
- Travel plans, transport assessments and statements in decision-taking

### **Local Planning Policy**

#### **The Development Plan**

6.16 The statutory development plan for Thurrock is the Core Strategy and Policies for the Management of Development (referred to herein as the 'Core Strategy'), which was originally adopted by the Council in January 2011 and subsequently amended in 2015 following an examination of a focused review assessing consistency with the NPPF. The Core Strategy is accompanied by a Policies Map. These documents are available on-line at: <https://www.thurrock.gov.uk/current-development-plan>.

6.17 Reference is provided within policies in the Core Strategy to Site Specific Allocations DPD but following the advice of the Planning Inspectorate during 2013 the Council was advised not to progress the Site Specific Allocations DPD due to compliance issues with the then NPPF, and this remains the situation for the Borough.

### **Chapter 3 – The Future of Thurrock Council**

6.18 The majority of the Order Limits are within the Metropolitan Green Belt and this location is not identified within the Core Strategy for any Green Belt land release.

- 6.19 Table 3 (Strategic Spatial Objectives) of the Core Strategy lists a number of Strategic Spatial Objectives including the need to minimise the impact of climate change by supporting the provision of renewable and low carbon energy sources in Thurrock and ensuring that new development incorporates climate change adaptation (SSO17).

Overarching Sustainable Development Policy OSDP1 – Promotion of Sustainable Growth and Regeneration in Thurrock

- 6.20 Following the focused review of the Core Strategy in 2015 policy OSDP1 was added to demonstrate compliance with the NPPF requiring the Council to take a positive approach that *'reflects the presumption in favour of sustainable development contained in the NPPF'*. This overarching policy sets out the Council's commitment to the sustainable growth and regeneration of Thurrock's communities. The policy therefore is consistent with the requirements of paragraph 11 of the NPPF. The policy can be viewed in the 'Core Strategy and Policies for the Management of Development: Focused Review: Consistency with National Planning Policy Framework', which was adopted January 2015.

Core Strategy Chapters 4, 5 and 6 – The Planning Policies

- 6.21 The following policies apply to the proposals:

SPATIAL POLICIES

- CSSP2 (Sustainable Employment Growth)
- CSSP4 (Sustainable Green Belt)
- CSSP5 (Sustainable Greengrid)

THEMATIC POLICIES

- CSTP6 (Strategic Employment Provision)
- CSTP14 (Transport in the Thurrock Urban Area)
- CSTP15 (Transport in Greater Thurrock)
- CSTP16 (National and Regional Transport Networks)
- CSTP17 (Strategic Freight Movement and Access to Ports)
- CSTP18 (Green Infrastructure)
- CSTP19 (Biodiversity)
- CSTP20 (Open Space)
- CSTP21 (Productive Land)
- CSTP22 (Thurrock Design)
- CSTP23 (Thurrock Character and Distinctiveness)
- CSTP24 (Heritage Assets and the Historic Environment)
- CSTP25 (Addressing Climate Change)
- CSTP26 (Renewable or Low-Carbon Energy Generation)
- CSTP27 (Management and Reduction of Flood Risk)

## POLICIES FOR MANAGEMENT OF DEVELOPMENT

- PMD1 (Minimising Pollution and Impacts on Amenity)
- PMD2 (Design and Layout)
- PMD4 (Historic Environment)
- PMD5 (Open Spaces, Outdoor Sports and Recreational Facilities)
- PMD6 (Development in the Green Belt)
- PMD7 (Biodiversity, Geological Conservation and Development)
- PMD8 (Parking Standards)
- PMD9 (Road Network Hierarchy)
- PMD10 (Transport Assessments and Travel Plans)
- PMD15 (Flood Risk Assessment)
- PMD16 (Developer Contributions)

### Spatial Policy – CSSP2: Sustainable Employment Growth

6.22 This policy states that the Council will:

*‘promote and support economic development in the Key Strategic Economic Hubs that seeks to expand upon their existing core sectors and / or provide opportunities in the growth sectors.’*

6.23 The site is outside of Tilbury Town but the policy identifies ‘Core Sectors’ and for Tilbury the ‘Key Strategic Economic Hub’ is described in the policy as port logistics, transport and construction. ‘Growth sectors’ are identified in the policy as business, services, environmental technologies, recycling and energy. The Growth Sector therefore references ‘energy’, however, this policy is generally aimed at the existing urban area and previously developed land as well as the Port of Tilbury. The policy makes reference to Green Belt release to the north of Tilbury rather than land to the east/south east of Tilbury Town where the Order Limits are located. The Green Belt release has already been subject to other development.

6.24 In terms of this policy the operational phase of the development would only involve low levels of employment but the construction phase would lead to potential employment opportunities.

### Spatial Policy CSSP4 – Sustainable Green Belt

6.25 This policy states that the Council will:

*‘maintain the purpose function and open character of the Green Belt in Thurrock’*

6.26 This is a key policy for assessing the proposal’s impact upon the Green Belt.

6.27 Point II of the policy makes reference to Tilbury Marshes and the release of Green Belt land to the north of Tilbury but the policy identifies that the Council will require

management arrangements to be put in place for the remainder of the Tilbury Marshes site that has important biodiversity interest and required mitigation measures to be implemented to replace lost habitat and flood storage areas. Such details would have been identified in adopted Sites Specific Allocations and Policies DPD, however, this DPD which has not progressed following the advice of the Planning Inspectorate (as stated above).

- 6.28 The site would form part of the remainder of the Tilbury Marshes and majority of the site is undeveloped land that is used for agricultural purposes with field boundaries including areas for biodiversity and is located within a high risk flood zone.

#### Spatial Policy CSSP5 – Sustainable Green Grid

- 6.29 The Core Strategy Proposals Map identifies that policy CSSP5 is applicable for certain parts of the site, these areas within the Order Limits include the railway corridor and the land to the south of flood defences to the River Thames, which extends partly into the intertidal zone.
- 6.30 This policy states that the Council and its Partners will deliver a Greengrid Strategy in a series of 8 Greengrid Improvement Zones, which includes Tilbury and East Thurrock/Rural Riverside (south of the flood defences to the River Thames) in point 2 of the policy. The policy identifies that the Greengrid will consider *inter alia* the following:
- Semi-natural green space
  - Promotion and safeguarding of biodiversity and geodiversity
  - Historic Environment and Heritage assets
  - Strategic links and bridging points for Public Rights of Way
  - Flood Risk and water management
  - Mitigation of and adaptation to effects of climate change through the use of natural systems and green infrastructure assets
  - Strategic views
  - Broad landscape management areas

- 6.31 The key relevant part of the proposal in regard to this policy is the proposed causeway area to the land to the south of flood defences to the River Thames, which crosses an existing public footpath (no.146) adjacent to the sea wall to the River Thames in a mainly west to east direction. Map 3 within the Core Strategy also identifies 'Existing Open Space' which is the Common Land within the Order Limits. Part of the land within the Order Limits is within the East and West Tilbury Marshes Natural and Semi-Natural Green Space (NSNGS) as shown on Map 3 within the Core Strategy.

#### Thematic Policy CSTP6 – Strategic Employment Provision

- 6.32 Furthermore to policy CSSP2, which identifies Tilbury is recognised as a 'Key Strategic Economic Hubs', this policy seeks to '*maintain high and stable levels of*

*economic and employment growth*'. As stated above the construction phase of the development would create employment but the operational phase would only lead to low levels of employment.

- 6.33 Zone B within the Order Limits falls within land identified as 'employment land' on the Proposal's Map. The only element of the proposal that would cross this piece of employment land would be for the installation of high voltage cables which would be located underground, so would not impact upon future land uses as sought through the policy.

#### Thematic Policy CSTP14 – Transport in the Thurrock Urban Area

- 6.34 This policy identifies measures to promote the use of sustainable transport modes and is relevant as the route to the site would involve passing through some of Thurrock's urban areas, in particular the part of Tilbury nearest the Port of Tilbury for accessing this site.

#### Thematic Policy CSTP15 – Transport in Greater Thurrock

- 6.35 This policy requires the improvement and opportunities to use a range of transport modes to promote accessibility and movement. It is also relevant as the site falls outside of the urban area.

#### Thematic Policy CSTP16 – National and Regional Transport Networks

- 6.36 This policy states that the Council will work with partners to deliver improvements to national and regional networks. Relevant to this policy is the construction phase and the use of the road network including A1089, A13 and M25 for accessing the site.

#### Thematic Policy CSTP16 – National and Regional Transport Networks

- 6.37 This policy supports the logistics and port sectors and the positive impacts of freight activity in Thurrock. These policies are relevant to proposed construction phase and delivery of equipment, components and materials to the site.

#### Thematic Policy CSTP18 – Green Infrastructure

- 6.38 This policy states that the Council and its Partners will:

*'restore, protect, enhance and where appropriate create its green assets. The Green Infrastructure seeks to address the connectivity between urban and rural areas in the Borough and ensure that such green assets are multi-functional in use'.*

- 6.39 This policy overlaps with policy CSSP5 and the relevant parts of the Order Limits are the proposed causeway location and the public footpath for connectivity, but also the



proposed Common Land exchange area, permissive path to Fort Road and the multiple areas of habitat creation and enhancement as shown on the plans.

#### Thematic Policy CSTP19 – Biodiversity

- 6.40 This policy highlights the broad range of biodiversity interests in Thurrock and encourages development to include measures to contribute positively to biodiversity in the Borough. The Order Limits would not directly impact upon any nearby designated ecological sites but the site is recognised to include areas of habitat mitigation, creation and enhancement as shown on the plans.

#### Thematic Policy CSTP20 – Open Space

- 6.41 This policy identifies that the Council will seek to ensure a diverse range of accessible public open spaces is provided and is relevant to the consideration of the proposed Common Land exchange.

#### Thematic Policy CSTP21 – Productive Land

- 6.42 This policy recognises the importance of food security and will ensure the protection, conservation and enhancement of agriculture, productive land and soil in the Borough, which is relevant as the proposal would involve the loss of agricultural land.

#### Thematic Policy CSTP22 – Thurrock Design

- 6.43 This policy emphasises the importance of high quality design in Thurrock. The Council considers that any DCO should include measures or mechanisms to ensure the detailed design quality of buildings, structures and relevant associated development.

#### Thematic Policy CSTP23 – Thurrock Character and Distinctiveness

- 6.44 This policy explains that the Council will:

*‘protect, manage and enhance the character of Thurrock to ensure improved quality and strengthened sense of place’.*

- 6.45 Thurrock has a varied character and the Order Limits define this area as part of the wider Tilbury Marshes landscape and this is identified in the applicant’s ‘Landscape and Visual Resources’ section of the ES. Historically land to the south was occupied by a former coal fired power station and whilst the power station has now been demolished the switchgear and associated infrastructure remain and therefore this forms part of and influences the landscape character. To the west the new Tilbury 2 development is changing the landscape character further with the associated extended port and portside uses.

#### Thematic Policy CSTEP24 – Heritage Assets and the Historic Environment

- 6.46 This policy sets out a general objective of protecting and enhancing heritage assets. Point 2 of the policy requires all development proposals to appraise options and demonstrate that the final appraisal is the most appropriate for the heritage assets. Point 3 sets the Council's priorities for heritage and enhancement including:

*ii (iv) 'promote public access between Tilbury Fort and Coalhouse Fort through riverside links'.*

- 6.47 The proposed causeway element would interrupt the existing footpath alongside the sea wall. This footpath forms part of Natural England's England Coast Path, the sub-regional Thames Estuary Path and local Two Forts Way that is a coastal path and one that links Tilbury Fort and Coalhouse Fort. The applicant has confirmed that this route would remain open with 60 vehicle movements occurring during construction and a Banksman to manage walkers/vehicles.

#### Thematic Policy CSTEP25 – Addressing Climate Change

- 6.48 This policy requires climate change adaption measures and technology and point iv refers to the need for developers to consider potential effects of climate change and specifically related to this application is the consideration of flood risk given that parts of the Order Limits are located in high risk flood zones on the Tilbury Marshes and in particular the causeway location for delivery of abnormal loads.

#### Thematic Policy CSTEP26 – Renewable or Low-Carbon Energy Generation

- 6.49 This policy encourages opportunities to generate energy from non-fossil fuel and low carbon sources. The policy promotes a range of energy uses such as solar panels, biomass heating, small scale wind turbine, photovoltaic cells, combined heat and power, and other methods.
- 6.50 The policy would not be applicable to the proposal as gas is used as the only fuel source for generating electricity through the gas burning reciprocating engines.

#### Thematic Policy CSTEP27 – Management and Reduction of Flood Risk

- 6.51 This policy requires flood risk management to be implemented and supported through effective land use planning and specifically related to this application is the consideration of flood risk given that parts of the Order Limits are located in high risk flood zones and in particular the causeway location for delivery of abnormal loads.

#### Policies for the Management of Development

#### Policy PMD1 – Minimising Pollution and Impacts on Amenity, Health, Safety and the Natural Environment

6.52 This policy prevents development from being permitted where it would cause or likely to cause unacceptable effects on:

- i. the amenities of the area;*
- ii. the amenity, health or safety of others;*
- iii. the amenity, health or safety of future occupiers of the site; or*
- iv. the natural environment.*

6.53 This takes account of a number of considerations relevant to this application:

- i. Air pollution;*
- ii. Noise pollution;*
- iii. Contaminated land/soil;*
- iv. Odour;*
- v. Light pollution and shadow flicker;*
- vi. Water pollution;*
- vii. Invasion of privacy;*
- viii. Visual intrusion;*
- ix. Loss of light;*
- x. Ground instability;*
- xi. Vibration*

6.54 This policy is relevant for the air quality, noise and vibration, ground conditions and the water pollution considerations.

#### Policy PMD2 – Design and Layout

6.55 This policy requires all design proposals to respond to the sensitivity of the site and its surroundings. Proposals are assessed having regard to certain criteria and for the purposes of this application the criteria relevant to the proposed development is listed below:

- *Character -*
- *Public Amenity space*
- *Accessibility*
- *Safety and Security*
- *Landscape*
- *Energy and Resource use*
- *Layout*

6.56 This policy is relevant for the landscape and visual impact considerations and in regard to the illustrative plans of the proposed development.

#### Policy PMD4 – Historic Environment

- 6.57 This policy ensures that the fabric and setting of heritage assets are appropriately protected and enhanced in accordance with their significance. This policy is therefore relevant to the assessment of impact upon the historic environment. In particular the heritage assets as defined in the 'Site Description and Constraints' section of this report.
- 6.58 This includes the nearest Scheduled Monuments of Tilbury Fort (970m south west) 'Earthworks near church, West Tilbury' (730m to the north) and Coalhouse Fort (2.35km). The nearest listed buildings are the Church of St James, grade II\* (880m to the north), Marshalls Cottages in West Tilbury, grade II\* (1.4km to the north) and the Officer Barracks, grade II\* (within the grounds of Tilbury Fort). The nearest Conservation Areas are West Tilbury (700m to the north) and East Tilbury (1.7km to the north east).

#### Policy PMD5 – Open Spaces, Outdoors Sports and Recreation Facilities

- 6.59 Policy PMD5 is relevant to the proposed recreational offer within the application as part of the replacement Common Land which would allow for increased recreational opportunities to visit this land compared to the current situation with the difficulties of accessing Walton Common. This policy requires integration of new facilities into the design of development schemes.

#### Policy PMD6 – Development in the Green Belt

- 6.60 Policy PMD6 explains that the Council will maintain, protect and enhance the open character of the Green Belt in Thurrock in accordance with the provision of the NPPF. The policy allows for positive enhancement for beneficial use of the Green Belt for providing access to the countryside, opportunities for recreation and biodiversity, which all form part of this application.
- 6.61 The policy applies specific criteria for certain types of development and none of those are relevant to this application.

#### Policy PMD7 – Biodiversity, Geological Conservation and Development

- 6.62 Policy PMD7 requires development proposals to demonstrate that any significant biodiversity habitat or geological interest of recognised local value is retained and enhanced on-site. The Council will seek to achieve net gains in biodiversity where such gains would be possible, with particular reference to the desirability of re-creating priority habitats and the recovery of priority species. This policy is relevant to the consideration of habitat creation and enhancement as proposed through the development.

#### Policy PMD8 – Parking Standards

- 6.63 Policy PMD8 requires all development to comply with the car parking standards. The proposal would create temporary car parking areas for the construction compound and would need parking provision for the operational phase of the development.

#### Policy PMD9 – Road Network Hierarchy

- 6.64 Policy PMD9 permits new accesses to the highway subject to meeting highway safety requirements and the proposal would result in the formation of a new/increased use of an access to the site from Station Road. The consideration of the road hierarchy is also relevant to the construction phase of the development and the route the construction traffic would take to access the site, and the impact this would have upon the local highway network.

#### Policy PMD10 – Transport Assessments and Travel Plans

- 6.65 Policy PMD10 requires Transport Assessments (TA) and Travel Plans to accompany applications. A TA is included within the ES documentation that assesses the impact upon the local highway network from transport from the development, which would be most intensive through the construction phase. The construction phase would also need to be subject to a Travel Plan to promote sustainable modes of transport to construction workers to the site and may be relevant for the operation phase as well.

#### Policy PMD15 – Flood Risk Assessment

- 6.66 Policy PMD15 requires application to be subject to the Sequential Test and to be accompanied by a site specific Flood Risk Assessment, as also required through the NPPF/PPG. Parts of the Order Limits fall within all Environment Agency Flood Risk Zones. The policy also requires that developments incorporate Sustainable Drainage Systems (SUDS). The application's ES includes an assessment flood and hydrology and the policy is therefore relevant to consideration of the application.

#### Policy PMD16 – Developer Contributions

- 6.67 Policy PMD16 is applied to secure planning obligations under s106 of the Town and Country Planning Act 1990 and in accordance with the NPPF and any other relevant guidance. Consideration will be given to need for any planning obligations that can help mitigate the impact of the development, if the development is considered acceptable.

#### Development Plan Proposals Map Policy Designations

- 6.68 The Core Strategy Proposals Map designations for the Zones and Scheduled Work area of the site are referred to in the table below:

Core Strategy Proposals Map Designation and Policies	Zones	Works No.	Comments and Analysis
Green Belt  Policies CSSP4 & PMD6	All zones except B	All except 3	All works except those stated.  The proposal would conflict this designation and policies CSSP4 and PMD6
Primary Industrial and Commercial Areas (west of Walton Common)  Policies CSSP2 & CSPTP6	B	3	Proposed connection to the existing National Grid Tilbury Substation.  The works would be underground so would not cause conflict to any policy compliant future development in this location
Along the southern side of the flood defence for the River Thames  Policies CSSP5 & CSTP18	G	10  11	Causeway with crane platforms; Modification to the sea wall at the north bank of the Thames;  The proposed works would case conflict with policies CSSP5 and CSTP18 through the impact upon the environment and required diversion of the public footpath

### **Thurrock Borough Local Plan – Saved Policies**

- 6.69 The Borough Local Plan (BLP) was adopted in 1997 but only a list of ‘saved policies’ remain. These are referred to the applicant’s Statement of Case (document A8.3), however, having reviewed the BLP policies and the applicant’s Statement of Case it is considered none of the ‘saved policies’ are relevant to this application with the Core Strategy and the NPS/NPPF/PPG providing more up to date planning policies.

### **New Thurrock Local Plan**

- 6.70 In February 2014 the Council embarked on the preparation of a new Local Plan for the Borough. Between February and April 2016 the Council consulted formally on an Issues and Options (Stage 1) document and simultaneously undertook a ‘Call for Sites’ exercise. In December 2018 the Council began consultation on an Issues and

Options (Stage 2 Spatial Options and Sites) document, this consultation has now closed and the responses have been considered and reported to Council. On 23 October 2019 the Council agreed the publication of the Issues and Options 2 Report of Consultation on the Council's website and agreed the approach to preparing a new Local Plan. This remains the latest position.

- 6.71 As an evidence base to the future Local Plan the Council's Strategic Green Belt Assessment Stages 1a and 1b Final Report 2019 (Appendix C) provides the most up to date study. At present this evidence base can only be given very limited weight but for consideration of this application the site area would involve consideration of land Parcels 30, 33 and 34 from this assessment.

### **Other Relevant Local Planning Guidance**

#### **Thurrock Design Guide – Design Strategy SPD (2017)**

- 6.72 In March 2017 the Council launched the Thurrock Design Strategy. The Design Strategy sets out the main design principles to be used by applicants for all new development in Thurrock. The Design Strategy is a supplementary planning document (SPD) which supports policies in the adopted Core Strategy. It is a material consideration in the determination of planning applications and provides detailed guidance on the application of Core Strategy policies, in particular policy PMD2 (Design and Layout).
- 6.73 It is noted from the application that further information regarding the exact detail of the development would need to be secured through the 'requirements' to the DCO, however, the information provided can still be considered and commented upon with regard to the Design Strategy and this is considered in the section below.

### **Other Material Considerations:**

- 6.74 The applicant's Statement of Case makes reference to other material considerations in the form of the following documentation:
- 6.75 'Upgrading Our Energy System, Smart Systems and Flexibility Plan, Ofgem, 2017'. It is understood that this plan refers to the need for a smart and flexible electrical system.
- 6.76 'UK Clean Growth Strategy' is understood to follow the 'Leading on Clean Growth' strategy from October 2019 referring to the Government's legally binding commitment to reach net zero greenhouse gas emissions in 2050, which will require decarbonisation in the power sector.
- 6.77 'Future Energy Scenarios', National Grid, July 2019 report explains that decarbonising energy is fundamental in the transition towards a sustainable future in seeking to reach net zero carbon emissions by 2050.

6.78 Whilst the above documents are identified as material planning considerations it is not considered necessary for the Council to comment upon these documents.



## **7.0 CONSIDERATION OF LOCAL IMPACTS**

- 7.1 The development is considered to be development requiring an Environmental Impact Assessment (EIA), therefore the application has been accompanied by an Environmental Statement (ES). The ES considers the environmental effects of the proposed development during the stages of construction, operation and decommissioning and includes measures either to prevent, reduce or offset any significant adverse effects on the environment. The ES is accompanied by the figures and technical appendices referred to above.
- 7.2 Reference is provided in the assessment to the significant of the effect and this is based on the magnitude of the impact with the importance and sensitivity of the element of the environment. The size of an impact is described in a range from 'negligible', 'low', 'medium' to 'high', or there may be no change (a neutral impact). Taking into account the importance and sensitivity of the receptor, the resulting effect may be described using the following terminology 'substantial', 'major', 'moderate', 'minor' and 'negligible'.
- 7.3 The submitted ES and supporting documentation sets out a wide ranging assessment of the development proposal, its impacts and proposed mitigation measures. Thurrock Council accepts that the chapters of the ES identify the range of issues that are of a local concern to the authority.
- 7.4 The following section sets out the Council's view of the local impacts of the development based on the following material considerations:
- I. Principle of the Development and the Impact upon Green Belt;
  - II. Ecology and Nature Conservation;
  - III. Landscape and Visual Impact;
  - IV. Heritage Assets;
  - V. Flood Risk and Hydrology;
  - VI. Geology, Hydrogeology and Ground Conditions;
  - VII. Traffic and Transport;
  - VIII. Air Quality;
  - IX. Noise and Vibration;
  - X. Land Use and Agriculture, and Socio-Economics;
  - XI. Human Health;
  - XII. Climate Change; and
  - XIII. Conclusion
- 7.5 Consideration of mitigation measures which could address the negative impacts identified in the relevant sections are also addressed.

### **I. Principle of the Development and the Impact upon Green Belt**

- 7.6 National Policy Statements for Energy EN1, EN2 and EN4 highlight the a need for new nationally significant energy projects and the proposal would provide a flexible electricity generating plant for producing electricity when demand is high. It is recognised that the proposal can generate electricity much faster than conventional power stations such as a coal fired and gas fired power stations.
- 7.7 The applicant's Statement of Case Green Belt Statement explains that the South East of England is experiencing greater periods of system risk to the electricity network due to the size of the population and the amount of industry in this part of the country. The applicant explains that there is a need for a more frequent standby facility in South East England than in other parts of the country and demand will only increase, particularly in Thames Gateway and South Essex Housing Market, over the next 10 years.
- 7.8 The applicant explains that the site has been chosen due to its location adjacent to the substation, which was built to serve the former Tilbury B Power Station. The substation still serves the National Grid and this location allows for development to connect to the substation in this location and provide improved capacity for the South East and London area. The location factor forms one of the applicant's factors as a Very Special Circumstance and is assessed in more detail below. Nevertheless, the need for new nationally significant energy projects is not disputed.
- 7.9 With the exception of Zones B, H and the western corridor to Zone G, the rest of and the majority of the site lies within the Green Belt.
- 7.10 With reference to the Green Belt, NPS EN1 reiterates the Government's position on Green Belt policy as also set out in paragraph 133 of the NPPF identifying that *'the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the most important attribute of Green Belts is their openness and their permanence'*. This puts the emphasis on applicants to demonstrate that there are factors leading to 'Very Special Circumstances' for overriding inappropriate development and the loss of openness within the Green Belt.
- 7.11 In terms of the Development Plan, policies CSSP4 and PMD6 apply. Policy CSSP4 identifies that the Council will *'maintain the purpose function and open character of the Green Belt in Thurrock'*, and policy PMD6 states that the Council will *'maintain, protect and enhance the open character of the Green Belt in Thurrock'*. These policies aim to prevent urban sprawl and maintain the essential characteristics of the openness and permanence of the Green Belt and are consistent and are in accordance with the requirements of the NPPF.
- 7.12 In terms of the NPS, NPPF and Core Strategy policies, it is necessary to consider the following key questions:
1. Whether the proposals constitute inappropriate development in the Green Belt;

2. The effect of the proposals on the open nature of the Green Belt and the purposes of including land within it; and
3. Whether the harm to the Green Belt is clearly outweighed by other considerations so as to amount to the Very Special Circumstances necessary to justify inappropriate development.

1. Whether the proposals constitute inappropriate development in the Green Belt

- 7.13 Paragraph 5.10.10 of the NPS EN1 establishes '*a general presumption against inappropriate development*' in the Green Belt and is consistent with paragraph 143 of the NPPF, which defines '*inappropriate development*' as definitional harm to the Green Belt and should not be approved except in Very Special Circumstances. Paragraph 5.10.17 of the NPS EN1 identifies that '*energy infrastructure projects are likely to comprise "inappropriate development"*' and therefore the determining authority will need to assess whether there are Very Special Circumstances to justify inappropriate development as the determining authority '*will attach substantial weight to the harm to the Green Belt when considering any application for such development*'.
- 7.14 Paragraph 145 of the NPPF allows for 'exceptions' for development in the Green Belt, however, all proposed buildings and structures constitute inappropriate development so none of the 'exceptions' set out in paragraph 145 apply.
- 7.15 Paragraph 146 of the NPPF considers that other certain forms of development are not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it. Relevant to this application are:
- (b) engineering operations;*
- (e) material changes in the use of land (such as changes of use for outdoor sport or recreation, or for cemeteries and burial grounds);*
- 7.16 For the purposes of paragraph 146 there are a number of engineering operations, such as a new access road, that are applicable, so (b) applies, and the provision of replacement Common Land, permissive paths and biodiversity creation/enhancement is considered in regard to (e). Furthermore, the NPS EN1 considers that the installation of an underground pipe may be considered as an 'engineering operation' and identifies that the determining authority can attach substantial weight to the harm to the Green Belt when considering any application for such development whilst taking account of linear infrastructure that has no limited or no impact upon the Green Belt.
- 7.17 Policy PMD6 also includes 'exceptions' but none of the 'exceptions' listed in the policy apply to the proposal.

7.18 The table below assesses each of the Zones and Scheduled Works in regard to whether the development is 'inappropriate development' and in regard to the 'exceptions' from paragraph 146 of the NPPF.

Zone	Works No.	Extent of Work	In the Green Belt?	Inappropriate Development? And Any Comments
A	1	A. Gas fired electricity generation station development; B. Battery storage development; and C. Associated infrastructure;	Yes	Yes, these works would have a substantial impact upon the Green Belt. Some elements of 1C are not inappropriate development such as the access road, and drainage system as the NPPF paragraph 146 (b) applies.
	2	Creation and enhancement of onshore wildlife habitat	Yes	No, as this would appear as a natural part of the landscape in the Green Belt. NPPF paragraph 146 (b) applies.
	3	Proposed connection to the existing National Grid Tilbury Substation: A. 275 kV high voltage underground cables; B. National Grid's existing 275/400 kV Tilbury Substation	Yes	No, an engineering operation for Works 3A and NPPF paragraph 146 (b) applies. Construction impacts on the Green Belt would be temporary in nature. Works 3B are not in the Green Belt.
	4	An underground high-pressure gas pipeline	Yes	No, an engineering operation, NPPF paragraph 146 (b) applies. Construction impacts on the Green Belt would be temporary in nature. All these works would be underground so would not impact upon the Green Belt.
	8	Construction compound(s) and laydown area(s)	Yes	Yes, but temporary areas so can be removed when construction is complete.
B	3	Proposed connection to the existing National Grid Tilbury Substation:	No	Zone B constitutes previously developed land outside of the Green Belt.

		A. 275 kV high voltage underground cables, B. National Grid's existing 275/400 kV Tilbury Substation		
C	4	An underground high-pressure gas pipeline	Yes	No, an engineering operation so NPPF paragraph 146 (b) applies. Construction impacts on the Green Belt would be temporary in nature. All these works would be underground so would not impact upon the Green Belt
	6	Permanent access road and junction from Station Road	Yes	No, an engineering operation, NPPF paragraph 146 (b) applies.
	7	Water supply connection to the water main at Station Road	Yes	No, an engineering operation and all underground so would not impact upon the Green Belt.
	8	Construction compound(s) and laydown area(s)	Yes	Yes, but temporary areas so can be removed when construction is complete.
D	4	An underground high-pressure gas pipeline	Yes	No, an engineering operation so NPPF paragraph 146 (b) applies. Construction impacts on the Green Belt would be temporary in nature. All these works would be underground so would not impact upon the Green Belt.
	5	Gas Connection Compound	Yes	Yes, for works 5A as this would involve above ground level development, 5B & 5C - not an engineering operation so NPPF paragraph 146 (b) applies.
E	13	North of the railway, includes a footbridge, ground works and fencing for a permissive path between Fort Road and	Yes	Yes, the footbridge and fencing for a permissive path would have a minor impact compared to other elements of the proposal upon the Green Belt. The

		the area of new common land that comprises Work No. 14		ground works would constitute an engineering operation so NPPF paragraph 146 (b) applies.
	14	Area of new Common Land, north of the railway, proposed in exchange for the loss of the majority of Walton Common	Yes	No, as allowed through NPPF paragraph 146 (e) applies.
F	2	Creation and enhancement of onshore wildlife habitat	Yes	No, as would appear as a natural part of the landscape in the Green Belt. NPPF paragraph 146 (b) applies.
G	10	Causeway with crane platforms	No	On land outside of Green Belt on south side of sea wall.
	11	Modification to the sea wall at the north bank of the Thames	No	On land outside of Green Belt on south side of sea wall.
	12	Access road from the A1089 St Andrew's Road	Yes	No, an engineering operation NPPF paragraph 146 (b) applies.
H	12	Access road from the A1089 St Andrew's Road	Yes	No, an engineering operation NPPF paragraph 146 (b) applies.
I	n/a	No Works Proposed		
J	n/a	No Works Proposed		

Conclusion for this section

7.19 The table above identifies that some parts of the proposed development are compatible with paragraph 146 (b) and (e) of the NPPF, however, the rest of the development within the Green Belt is considered as inappropriate development and therefore would be, by definition, harmful to the Green Belt and contrary to paragraphs 5.10.10 and 5.10.17 of the NPS EN1, paragraph 143 of the NPPF and policy PMD6.

2. The effect of the proposals on the open nature of the Green Belt and the purposes of including land within it; and

7.20 Having assessed the elements of the proposed development as listed in the table above, the next step is to consider the impact of the proposal upon the open nature of the Green Belt and the purposes of including land within it.

- 7.21 The NPS EN1 reiterates the Government's position on Green Belt policy as also set out in paragraph 133 of the NPPF identifying that *'the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the most important attribute of Green Belts is their openness and their permanence'*.
- 7.22 Paragraph 134 of the NPPF sets out the five purposes which the Green Belt serves as follows:
- a. to check the unrestricted sprawl of large built-up areas;*
  - b. to prevent neighbouring towns from merging into one another;*
  - c. to assist in safeguarding the countryside from encroachment;*
  - d. to preserve the setting and special character of historic towns; and*
  - e. to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.*
- 7.23 In response to each of these five purposes of the Green Belt:
- a. to check the unrestricted sprawl of large built-up areas*
- 7.24 The NPPF does not define 'large built up areas' but given the site's location to the north of the former Tilbury B Power Station within areas of undeveloped land forming part of the countryside the site is not, therefore, located immediately adjacent to the existing settlement of Tilbury, which is the nearest built up area. The site is also distant from the neighbouring built up areas of Chadwell St Mary, West Tilbury, Linford and East Tilbury.
- 7.25 The proposed development is an energy development that would not lead to the unrestricted sprawl to the east of Tilbury and its location would not prevent any future urban extensions to the east of Tilbury.
- 7.26 The proposed development does not conflict with this purpose of the Green Belt.
- b. to prevent neighbouring towns from merging into one another*
- 7.27 As stated above Tilbury is the nearest existing settlement and further distant but within the wider area are the neighbouring built up areas of Chadwell St Mary, West Tilbury, Linford and East Tilbury.
- 7.28 The proposed development is an energy development that would not lead to the merging of towns into one another.
- 7.29 The proposed development does not conflict with this purpose of the Green Belt.
- c. to assist in safeguarding the countryside from encroachment*

- 7.30 As already established the proposal would be ‘inappropriate development’ in the Green Belt. The site’s location would occupy a countryside location that is currently used for mainly agricultural purposes but also includes other land uses such as Common Land, although no development exists. The only form of development are the electricity pylons that cross the site. It is noted that Zone A of the site would include the most significant elements of the development in the form of Works 1A, 1B and 1C being the gas fired flexible electricity generation station, the battery storage area and associated infrastructure. Other above ground development would be located in Zone D in the form of Works 5, Works 8 in Zones A and C, in Zone E for Works 13.
- 7.31 In terms of the proposed development in Zone A, which are Works 1A, 1B and 1C, these are the most significant elements of the proposed development, which would be sited within the proximity to existing development in the form of the Tilbury substation and previously developed land to the south in the form of the former Tilbury B Power Station, as well as the railway line to the north. The applicant’s case is that this location is essential for providing a grid connection to the Tilbury substation and it is recognised that efforts have been made by the applicant to locate these Works as close to existing development/non Green Belt land as possible.
- 7.32 The proposed siting of the main development site would be between electricity pylons and adjacent to the substation to the south. Whilst this Zone is located towards the western part of the Green Belt in this location the proposed form and scale of the proposed development, as shown in the illustrative plans, demonstrates that it would have a substantial impact upon the openness of the Green Belt in this location both in spatial and visual terms. The proposal would therefore not assist in safeguarding the countryside from encroachment as this part of the proposal would lead to a further increase of built development to the north and east of the existing Tilbury substation and a continuation of development north east of nearby development that is located to the south and west of the site.
- 7.33 Furthermore, the Council’s Strategic Green Belt Assessment Stages 1a and 1b Final Report 2019 identifies that Zone A falls in Land Parcel 34 and has a ‘major’ importance to the Green Belt with very apparent perception of openness with a rural character.
- 7.34 In terms of the other development:
- 7.35 Works 5 would be a gas connection compound located in Zone D (D3) but it is not clear at present the scale of the development in this location and details would need to be agreed through the ‘requirements’. Furthermore, Strategic Green Belt Assessment Stages 1a and 1b Final Report 2019 identifies that Land Parcel 30 has a ‘major’ importance to the Green Belt and this applies to Zone D (D3) as there is a very apparent perception of openness with a rural character.



- 7.36 Works 8 would be construction compounds in Zones A and C and whilst these construction compounds would inevitably impact upon the openness of the Green Belt they would be temporary in nature and once removed, subject to an agreed restoration scheme, the impact upon the Green Belt could be restored to its current state. The comments above regarding Strategic Green Belt Assessment Stages 1a and 1b Final Report 2019 identifies that Land Parcel 34 would apply here.
- 7.37 In Zone E for Works 13 this would include a number of more low key developments in the form of a footbridge and fencing to a permissive path. The Strategic Green Belt Assessment Stages 1a and 1b Final Report 2019 identifies that Land Parcel 33 has a 'fundamental' importance to the Green Belt being a large area of open expansive marshland/farmland and a 'very apparent' perception of openness with a rural character, although for this Zone the proposal would provide improved access to the countryside with details of fencing and surfacing treatment needing to be agreed through a 'requirement'.
- 7.38 In summary the proposed development individually and cumulatively would impact upon the openness of the Green Belt in this location both in spatial and visual terms, and would not assist in safeguarding the countryside from encroachment.
- 7.39 The proposed development therefore conflicts with this purpose of the Green Belt.

*d. to preserve the setting and special character of historic towns*

- 7.40 The NPPF does not define 'historic town'. Tilbury as the nearest settlement is not an historic town and neither are the neighbouring settlements. West Tilbury, as a village, has a Heritage Asset in the form of a Conservation Area and listed buildings. West Tilbury is located 1km to the north of the site but as a village, and not a town.
- 7.41 The proposal would not cause a conflict with this purpose of the Green Belt.

*e. to assist in urban regeneration, by encouraging the recycling of derelict and other urban land*

- 7.42 This proposed type of development as energy development would lead to likely adverse environment effects during the construction and operational phase of the development and would therefore not be appropriate for a location within an existing settlement and it is not the type of development that would assist in urban regeneration or recycling of derelict urban land.
- 7.43 The proposed development does not conflict with this purpose of the Green Belt.

*Conclusion for this section*

- 7.44 In light of the above analysis, the proposal would be fundamentally contrary to point (c) as it would lead to significant development within the Green Belt which would have

an adverse impact upon the openness of the Green Belt and would fail *‘to assist in safeguarding the countryside from encroachment’*, contrary to paragraph 134 of the NPPF, and policies CSSP4 and PMD6.

3. Whether the harm to the Green Belt is clearly outweighed by other considerations, so as to amount to the Very Special Circumstances necessary to justify the development

7.45 Paragraph 5.10.10 of the NPS EN1 establishes *‘a general presumption against inappropriate development within them. Such development should not be approved except in Very Special Circumstances’*. Paragraph 5.10.17 of the NPS EN1 states, for the determining authority, that *‘Very Special Circumstances will not exist unless the harm by reason of inappropriateness, and any other harm, is outweighed by other considerations’*, which is similar to the requirements of paragraph 144 of the NPPF.

7.46 Neither the NPPF nor the adopted Core Strategy provide guidance as to what can comprise ‘Very Special Circumstances’, either singly or in combination. Some interpretation of Very Special Circumstances has been provided by the Courts and this includes the rarity or uniqueness of a factor may make it very special, but it has also been held that the aggregation of commonplace factors could combine to create Very Special Circumstances (i.e. ‘very special’ is not necessarily to be interpreted as the converse of ‘commonplace’). However, the demonstration of Very Special Circumstances is a ‘high’ test and the circumstances which are relied upon must be genuinely ‘very special’. In considering whether ‘Very Special Circumstances’ exist, factors put forward by an applicant which are generic or capable of being easily on other sites, could be used on different sites leading to a decrease in the openness of the Green Belt should not be accepted. The provisions of Very Special Circumstances which are specific and not easily replicable may help to reduce the risk of such a precedent being created. Mitigation measures designed to reduce the impact of a proposal are generally not capable of being ‘Very Special Circumstances’. Ultimately, whether any particular combination of factors amounts to Very Special Circumstances will be a matter of planning judgment for the decision taker.

7.47 The applicant’s Planning Statement sets out the applicant’s factors for Very Special Circumstances under the following headings:

1. Supporting the growth of renewable energy and low carbon;
2. Addressing a compelling and urgent need for on demand power generation;
3. The role of the application site in the Green Belt;
4. Proximity to high pressure gas and 275kV electricity network connections, site suitability and alternatives; and
5. Improvement of access to common land.

7.48 These are assessed through the ‘consideration’ comments which follow.

1. Supporting the growth of renewable energy and lowering carbon emissions;

- 7.49 The applicant's case is that the proposal would use existing electricity infrastructure in this location and provide immediate electricity generation from start-up which is much faster than conventional power stations and can be used in times of high demand to help ensure electricity security. The flexible generation plant would complement the '*growing mix of renewable electricity generation*'. This would help meet the Government's objective of maintaining a reliable electricity supply. The applicant explains that the proposed gas generating power engines can be up to full power within 5 minutes and the battery storage can provide power immediately on demand from stored electricity. When the proposed gas engines are not in use the system can operate at zero emissions through the battery storage feeding into the grid and can therefore lead to carbon savings. When in use it is stated that the proposed gas engines offer a low carbon system.
- 7.50 The applicant explains that the proposal can help meet the Government's Clean Growth Strategy, 2017, and help to achieve the Government's target of net zero emissions by 2050 as set out in the Climate Change Act 2008.

Consideration:

- 7.51 NPS EN1 recognises the need for new nationally significant energy infrastructure projects (Development Consent Orders) and paragraph 3.8 of EN1 recognises the need for significant gas infrastructure.
- 7.52 The Government has set out the requirement to reduce emissions to help address climate change but this proposed development is not an emission free development and is not a renewable energy development but is instead one that relies upon gas to fuel the gas engines for producing electricity and for storing electricity within the battery storage part of the proposal. Nevertheless NPS EN2 recognises that a fossil fuel generating station can still have a role to play in electricity production and the use of gas is seen as one of the cleaner fossil fuels compared to coal and oil fired power stations.
- 7.53 It is understood that the proposed technology would help compliment renewable energy systems during periods of peak demand and therefore the proposed development can provide electricity when needed as a backup system and would not be needed to run 24 hours a day 7 days a week.
- 7.54 As the proposal is national significant infrastructure project it can help provide essential back up electricity generation in times of high demand in South East England and is a cleaner and more efficient source of electricity production compared to conventional electricity power stations.
- 7.55 For these reasons it is considered that this factor can be afforded significant weight.

2. Addressing a compelling and urgent need for on demand power generation, contributing to energy security and network resilience;

- 7.56 The applicant's case makes reference to the Government's emphasis on the need to achieve security in energy supply with sufficient electricity capacity and the National Grid, through its publication Future Energy Scenarios 2019, recognises the continued need for gas fired generation and electricity storage facilities. The NPS EN1 identifies the critical need for the UK to have a secure and reliable supply of electricity to meet demand at all times and the Clean Growth Strategy 2017 also sets out energy security needs.
- 7.57 The applicant has identified that the established electricity generating stations, such as those used for fossil fuel use and the former power stations such as Tilbury B Power Station have been decommissioned and there is therefore a need to replace lost electricity generation. The applicant states that a total of 4.5-5GW of generation has been disconnected in the London area since the 1970's, with half of this lost since 2017, as the UK seeks to address climate change requirements. Therefore there is a need to replace lost supply for resilience, security and to lower costs for electricity customers.
- 7.58 The applicant explains that the location is a key factor for the proposal for connecting to the grid and to serve areas of high demand.

Consideration:

- 7.59 The applicant's reference to the Government, the NPS EN1, Clean Growth Strategy 2017 and the National Grid's Future Energy Scenarios 2019 publication all support the need for increase electricity generation systems and power station to meet demand and energy security.
- 7.60 There is no disputing this information as there is a compelling need allied to the existing infrastructure in this location, which would be used. Therefore this is factor can be afforded substantial weight.

3. The role of the application site in the Green Belt;

- 7.61 The applicant states the site is on the periphery of the Green Belt and adjacent to other land uses that influence the value of the countryside in this location, but recognises the proposal would be in conflict with one of the five Green Belt purposes, as set out in the NPPF, as it fails to prevent encroachment of development into the open countryside. It is stated that the close proximity to industrial and commercial development on the adjacent site to the west is not typical of open countryside.
- 7.62 The applicant considers that significant weight should be attached to the circumstances of the location this site and its limited impact upon the Green Belt. When harm does occur this is mitigated by the disturbed character of this Green Belt

site and further mitigated by the replacement of common land to another part of the countryside which will benefit from improved access.

- 7.63 The applicant says that other sites were considered and twelve of the sites were located in the Green Belt but this chosen site would cause less harm to the Green Belt than those other sites, all the other sites are located outside of Thurrock's administrative boundary.
- 7.64 Reference is made to policy CSTP26 which encourages low carbon energy schemes at appropriate locations. The applicant considers that the site could be allocated for employment or taken out of the Green Belt as the Council are reviewing Green Belt policy.

Consideration:

- 7.65 As identified earlier in this report in regard to point c) of the five purposes of the Green Belt, it is considered that the proposed development would individually and cumulatively impact upon the openness of the Green Belt in this location both in spatial and visual terms and would not assist in safeguarding the countryside from encroachment. The proposal is therefore in conflict with point c) of paragraph 134 of the NPPF and contrary to this purpose of the Green Belt.
- 7.66 Of particular significance, in terms of the impact, are the proposed works in Zone A which are the proposed gas engine power station and the battery storage development with associated infrastructure. These elements of the proposal represent the most significant forms of development that would have the most impact.
- 7.67 It is recognised that the applicant is seeking to position the main development site as close to the existing Tilbury substation to the south and closest to land uses that are not within the Green Belt. However, the importance of the land within the wider site/Order Limits is recognised as providing an important part of the Green Belt that separates the urban and industrial area of Tilbury to the west from the countryside and reclaimed marshland environment to the east, including this site. The importance of the Green Belt in this location is in the Council's Strategic Green Belt Assessment Stages 1a and 1b Final Report 2019 for Land Parcels 30, 33 and 34. Where the main parts of the development are located in Zone A this is identified in the Council's Strategic Green Belt Assessment Stages 1a and 1b Final Report 2019 as Land Parcel 34 and has 'major' importance to the Green Belt with recognition of its 'very apparent' perception of openness and rural character.
- 7.68 The reference to policy CSTP26 is recognised with point i) of the policy promoting proposals for *inter alia* low-carbon energy schemes at appropriate locations, including but not exclusively to Tilbury, although the policy does not imply that Green Belt sites should be used. The reference to Tilbury would be in regard to other energy producing uses in the urban area such as the former Tilbury B Power Station and the other energy producing uses in Tilbury such as the wind turbines at the Port of Tilbury

and Tilbury Green Power, which is a biomass and energy from waste fuelled power station.

- 7.69 Reference is made to future policy changes or land being taken out of the Green Belt for energy producing uses, however, at this stage the Council does not have a new draft Local Plan so any changes to future local planning policies in Thurrock are at this stage unknown and not relevant to this application.
- 7.70 Given the conflict with point c) of paragraph 134 of the NPPF as the proposed development would impact upon the openness of the Green Belt and would not assist in safeguarding the countryside from encroachment so no weight can be given to this factor in the consideration of whether Very Special Circumstances exist.

4. Proximity to high pressure gas and 275kV electricity network connections, site suitability and alternatives;

- 7.71 The applicant explains that a logical, staged decision making process has been undertaken to arrive at the point of choosing the site for this development. There are a number technical requirements that need to be satisfied for site selection purposes including electrical engineering criteria, economic criteria and regulatory criteria. Any generating station must connect to the electricity grid at a suitable location and for this development the connection must have headroom to accommodate at least 750 MW of capacity, to meet the level of electricity generation from the proposal.
- 7.72 The applicant has considered a regional study of 20 potential locations in and around the London area for the development. A list of sites and the reasons for discounting the sites is provided in the applicant's Statement of Case Green Belt Statement.
- 7.73 From the site selection process the 20 sites were narrowed down to 3 sites with existing substations on the 275 kV network around Greater London. These site were Tilbury, Elstree and Warley.
- 7.74 For the Elstree site there was spare capacity but the applicant's Statement of Case Green Belt Statement states that the site was *'not located on a part of the network that can provide the same value to the National Grid as Tilbury'*. The site was also further from the national transmission system for gas so for these reasons the site was discounted.
- 7.75 For the Warley site there is a need to extend the substation to enable a connection at 275 kV for exporting capacity of more than 150MW, the site was also within 300m of residential properties with limited space to buffer the site due to a neighbouring ancient woodland. The Tilbury site is 600m to the nearest residential properties. The Warley site is located within the London Borough of Havering and has been identified to be of 'paramount' importance to the Green Belt for the purpose of safeguarding the countryside from encroachment, and is would be highly sensitivity to change in terms of the landscape character assessment.

- 7.76 The applicant concludes that for the above reasons the Tilbury site was chosen as it does not have the same constraints, is within the 2km of a connection point to the gas transmission network and in close proximity to the existing Tilbury substation.
- 7.77 Other sites in the Tilbury area were also considered such as sites to the south, which are now subject to the Tilbury2 development and the former Tilbury B Power Station site.

Consideration:

- 7.78 It is recognised that a thorough analysis of other sites have been considered before deciding upon the Tilbury site. It is also recognised that there are number of specific factors that need to be considered before choosing this site for what is a very specialist form of development reliant on the national transmission system for gas and a connection to the National Grid. The gas connection is not too distant from the location and the Tilbury substation is located close to the south of the site so an easy connection can be made to the National Grid. The Tilbury substation also has the benefit of 'headroom' to accommodate the 750MW of electricity that would be generated and exported to the Grid without the need for further development.
- 7.79 The location factor with access to gas and an electricity connection to the Grid is a significant consideration and this factor can therefore be afforded substantial weight as there are a lack of alternative locations for this form of development that is necessary to meet the current and future energy demands.

5. Improvement of access to common land.

- 7.80 The applicant explains that the proposed development would occupy 10 hectares of Walton Common, which is where Zone A is located. To compensate for the permanent loss of Common Land the applicant will provide 11.6 hectares of replacement Common Land to the north of the railway.
- 7.81 The applicant explains that the location of Walton Common is rarely accessed by the public as there is only one point of access through Parsonage Common, which is located to the north of the railway line so pedestrians have to use the railway crossing point. There is no further connecting access from Walton Common.
- 7.82 The proposed replacement Common Land to the north of the railway would be located in the applicant's Zone E and would include additional works for access including a permissive path link from Tilbury to the west where this would link to Fort Road, including a footbridge, which are identified in Zone E. The applicant considers that the location of the replacement Common Land would provide better access for the public for recreational purposes and would allow visual access to the proposed habitat creation and enhancement location in Zone F (F1). The applicant considers this part of the proposal would comply with policy PMD6 as it would provide

enhancement of the beneficial use of the Green Belt and improve visual amenity for users of the Common Land.

- 7.83 The applicant states that if the proposal did not happen that the proposed replacement Common Land to the north of the railway would not take place.

Consideration:

- 7.84 Policy CSTP18 seeks to address connectivity between urban and rural areas within the Borough and PMD6 seeks to improve opportunities to access the countryside for recreation, amenity and biodiversity benefits. It is recognised that Walton Common is poorly accessed at present so the proposed replacement Common Land to the north of the railway would allow for improved access. The proposal would also allow for access to view the neighbouring proposed habitat creation and enhancement area which would have recreation and learning benefits for the public. These improvements are considered to meet the identified benefits stated within policies CSTP18, CSTP19 and PMD7, and as also recognised through paragraph 175 of the NPPF.
- 7.85 There are no exact details about the proposed footbridge, permissive path or proposed ground works, as identified in Works 13 in this Zone E location. Such details would need to be agreed through the DCO requirements.
- 7.86 As the applicant explains these changes would not take place without the proposed development so need to be considered as a positive benefit from the proposal. Nevertheless this needs to be balanced against the amount of development proposed.
- 7.87 It is considered this factor can therefore be afforded moderate weight in the consideration of whether Very Special Circumstances exist.

Summary of Very Special Circumstances

- 7.88 The table below provides a summary of the Very Special Circumstances and the weight that is attributed to them in assessing the planning balance for the whether the principle of the development is acceptable.

<b>Summary of Green Belt Harm and Very Special Circumstances</b>			
<b>Harm</b>	<b>Weight</b>	<b>Factors Promoted as Very Special Circumstances</b>	<b>Weight</b>
Inappropriate Development	Substantial	Supporting the growth of renewable energy and lowering carbon emissions	Significant
Reduction in the openness of the Green Belt		Addressing a critical and urgent need for on demand power generation,	Substantial



		contribution to energy security and network resilience	
		Role of the application site in the Green Belt	No Weight
		Proximity to high pressure gas and 275kV electricity network connections, site suitability and alternatives;	Substantial
		Improvement of access to Common Land	Moderate

#### Conclusion to this section

- 7.89 This Green Belt assessment has identified that the proposed development would result in inappropriate development that is by definition harmful to the Green Belt and would impact upon the openness of the Green Belt in spatial and visual terms, in particular the power generating station as identified in Zone A of the applicant's plans. The proposal would also conflict with the purpose of the Green Belt point c) of paragraph 134 of the NPPF as the development would lead to encroachment into the countryside. The harm associated with this carries substantial weight.
- 7.90 From the factors promoted as Very Special Circumstances consideration of the critical need for electricity demand, security and network resilience along with the locational factors for choosing this site are considered to carry significant and substantial weight.
- 7.91 As ever, in reaching a conclusion on Green Belt issues, a judgement as to the balance between harm and whether the harm is clearly outweighed must be reached. In this case there is harm to the Green Belt with reference to inappropriate development and loss of openness has to be considered against the factors promoted as Very Special Circumstances. Several factors have been promoted by the applicant as 'Very Special Circumstances' and it is important to judge:
- i. the weight to be attributed to these factors;
  - ii. whether the factors are genuinely 'very special' (i.e. site specific) or whether the accumulation of generic factors combine at this location to comprise 'Very Special Circumstances'.
- 7.92 Taking into account all Green Belt considerations and for the reasons explained it is considered that the site presents a unique opportunity for power generation making beneficial use of the existing Tilbury substation and associated electricity pylon infrastructure. There is a clear demand for electricity production and security that is recognised at the national level through the Government's National Policy Statement for Energy EN1. Taking this into account the factors promoted by the applicant are

considered to clearly outweigh the identified harm to the Green Belt through inappropriate development and the adverse impact that would result upon the openness of the Green Belt in this location such that Very Special Circumstances exist. Therefore the principle of the development is considered acceptable.

## **II. Ecology and Nature Conservation**

- 7.93 Similar to the NPPF/PPG section 5.3 of the NPS EN1 sets out the national planning policy for biodiversity requiring applicants to ensure that Environment Statements set out the effects on internationally, nationally and locally designed sites of ecological importance, on protected species and other species identified as being of principal importance. The NPS EN1 requires the applicant to set out the effects of proposal and any mitigation to allow the examining authority to consider in their decision making. NPS EN4 requires consideration to be given to biodiversity for new gas pipeline installations.
- 7.94 Policy CSTP19 (Biodiversity) will encourage measures to contribute positively to the overall biodiversity in the Borough considering safeguarding and enhancing existing ecological designations. In terms of development management, policy PMD7 (Biodiversity, Geological Conservation and Development) requires development proposal to demonstrate that any significant biodiversity habitat or geological interest of recognised local value is retained and enhanced on-site through mitigation. Alongside this policy CSTP18 (Green Infrastructure) seeks to integrate Green Infrastructure for providing better connectivity between urban and rural areas for access but also protection of biodiversity.

### **Statutory designations**

- 7.95 The site/Order Limits are not located within any international or national ecological designation sites. The applicant's ES identifies that the nearest is Mucking Flats and Marshes SSSI located 0.77km from the site followed by the Thames Estuary and Marshes Special Protection Area (SPA) and Ramsar site located 1.02km from the site. It is noted that the examining authority will be the competent authority for the Habitat Regulations Assessment (HRA).
- 7.96 The Council's Landscape and Ecology Advisor has reviewed the amended HRA and this has incorporated the results of additional winter bird surveys and the changes to the construction, operation and de-commissioning of the causeway. It considers that the mudflats adjacent to the site are functionally linked land but the numbers of species of qualifying interest are relatively low. It is agreed that the loss of mudflat would not be significant. There is potential to cause significant disturbance to four species of qualifying interest during construction, operation and de-commissioning without appropriate avoidance and mitigation. The effects are influenced in particular by the timings of works. These can be controlled through the Code of Construction Practice (requirement 5). Subject to the avoidance and mitigation measures being followed TC agrees with the HRA conclusions.

### Non statutory designations

- 7.97 The site/Order Limits includes non-statutory sites in the form of two Local Wildlife Sites (LWS) and these are the Low Street Pit, an area of regionally important Thames terrace gravels that support diverse invertebrate fauna and Goshems Farm which supports populations of Stinking Goosefoot and Hornet Robberfly. Within a 1km distance from the site are a number of further Local Wildlife Sites, the largest of which is the Tilbury Marshes at 39.8 hectares supporting a number of nationally scarce plants and habitats for invertebrates.
- 7.98 The Council's Landscape and Ecology Advisor identifies that in the draft Local Wildlife Site review completed in 2017 part of the site was proposed to be included in a Local Wildlife Site. This proposed designation has been acknowledged in the ES.

### Protected Habitats and Species

- 7.99 The ES explains that a range of site specific surveys were undertaken in 2017, 2018 and 2019 and these included habitat and vegetation surveys in consultation with Natural England. The surveys identified that protected species may be present including invertebrates, eels, Great Crested Newts, reptiles, breeding and winter birds, water vole, bats, otter and badgers. The habitats include arable farming land, former grazing marsh, grassland and ditches.

### Assessment of the Potential Impacts

- 7.100 The ES concludes that there are '*not likely to be any significant adverse effects on the ecological designation sites*' but as the site is close to the Thames Estuary and Marshes Special Protection Area and Ramsar site the Council's Landscape and Ecology Advisor considers that the proposed causeway could result in the loss of a small area of suitable habitat for the Avocet bird and other qualifying species when the causeway is constructed, which would be a negative impact. However, these impacts are not considered significant and further details about this part of the development would need to be agreed through the requirements, which identifies the proposed decommissioning of the causeway, although for ecological reasons the causeway should be removed following completion of the delivery of AIL.
- 7.101 Although the study area occupies a large land take not all of the land is within the site subject to development. The main part of the development site is Zone A and Works 1 involving the development of the flexible generating station and battery storage would have the largest land take and would impact upon ecology/biodiversity. The ES identifies that this land is a mixture of arable farming and former grazing marsh which has been '*degraded and little botanical or breeding bird value*'. Other land within the site is crossed by gas pipelines and access roads. The ES reports that the main part of the development site has populations of adder, grass snake, common lizard and slow worms. A site containing four species of reptile meets Froglife's

criteria for being considered a Key Reptile Site. Water voles have also been reported in ditches. Eighteen species of birds with conservation concern are breeding within the survey area, the survey area is much larger than the site area.

- 7.102 In assessing the impact the ES considers the permanent loss of grassland and ditch habitat in the main part of the development site (Zone A) would impact upon invertebrates reptiles and water voles and is assessed to have a '*moderate adverse effect*' that is considered '*significant*'. However, the proposed flexible generating plant has been designed to retain some grassland and ditches at the boundary of the site in Zone A, and create a new area of habitat to the north and south of the railway in Zones E and F which are Works 2. The new habitat would allow for relocation of protected species and the ES concludes that this would provide a biodiversity net gain of just under 10% to mitigate the impact.
- 7.103 The Council's Landscape and Ecology Advisor identifies that the scheme would result in the loss of a significant part of Walton Common which includes remnant coastal grazing marsh, a habitat of principal importance, so this would be a negative impact. An Illustrative Landscape Plan and an Outline Ecological Management Plan has been produced and this shows new ponds either side of main buildings however these have been designed for managing surface water drainage at attenuation ponds, nonetheless they could provide habitats although have not been included in the ecological mitigation considerations. The Council's Landscape and Ecology Advisor does not object in principle but the requirements would need to agree a detailed landscape plan and ecological management plan.
- 7.104 The ES identifies that the proposal would have an impact of temporary disturbance to onshore species and a temporary loss of habitat during the construction of the development, which is '*not considered to be significant*'. The construction of the causeway would result in the loss of foreshore habitat for wintering birds and disturbance through barge deliveries. The ES considers that it would have the potential for a '*significant adverse effect*' on Avocets and to prevent this the construction of the causeway would not take place in November-March to avoid this impact. The causeway location is likely to impact upon the marine environment and affect sediment flows and saltmarsh in the intertidal zone within the Thurrock's administrative boundary, however, it is noted that the loss of intertidal mud is considered to be a '*negligible to minor effect*' and '*not significant*'. The Council's Landscape and Ecology Advisor considers the construction and use of the causeway results in loss of saltmarsh, mudflat and would provide a risk of water contamination affecting SPA so mitigation would be necessary. It is understood that Environment Agency, Marine Management Organisation, Natural England and Port of London Authority all shared similar concerns.
- 7.105 The proposal would give rise to noise and air pollution emissions but these are '*not predicted to be significant*' in terms of impact upon areas of sensitive habitat. There is a need to understand the impact of lighting on nearby ecology but it is noted that

lighting for the construction and operational phases can be controlled through the 'requirements' as set out in the Order.

- 7.106 The proposal would provide mitigation through habitat creation in Zones E and F, new and replacement planting, translocation (where necessary) on going monitoring. The application includes details through an 'Outline Ecological Management Plan' and 'Biodiversity Net Gain' document along with information explain the mitigation. This can be secured through the 'requirements' to the Order with specific requirements identified as a 'Landscaping and Ecological Management Plan' (requirement 14) and 'Bird Monitoring' (requirement 19).

### Conclusion to this section

- 7.107 In terms of policy, the proposal provides the necessary information to comply with the requirements of the NPS EN1 by setting out the effects of proposal and considering and identifying mitigation. It is recognised that the proposal would result in some loss a habitat and would impact upon protected species at the site, however, it is recognised that the areas to the north and south of the railway line would form new habitats to allow for translocation and increased biodiversity net gain, which would accord with policies CSTP19 (Biodiversity) and PMD7 (Biodiversity, Geological Conservation and Development). Access improvements when compared to the difficult access arrangements to Walton Common, would achieve improvements to Green Infrastructure in the area in regard to policy CSTP18 (Green Infrastructure).

### **III. Landscape and Visual Impact**

- 7.108 NPS EN1 recognises that the landscape and visual effects of energy project will vary on a case by case basis according to the type of development, location and landscape setting. NPS EN2 considers that the main structures for generating stations are large and their impact on the surrounding landscape and visual amenity needs to be considered. NPS EN2 recognises it is not possible to eliminate visual impacts associated with generation stations but expects applicants to mitigate by reducing the visual impact as far as reasonably practicable, including external finishes and colour. NPS EN4 requires consideration to be given to landscape and visual impacts for new gas pipeline installations. The NPPF paragraph 170 refers to valued landscapes and maintaining the character of the undeveloped coast, and paragraph 180 refers to the need to retain tranquillity and amenity value. The PPG on Green Belt allows the visual aspect of the impact of a development to have on the openness of the Green Belt.
- 7.109 Policy CSTP22 (Thurrock Design) is a design policy but requires development proposals to understand respond positively to their local context, whether urban or rural. Policy CSTP23 (Thurrock Character and Distinctiveness) protects, manages and enhances the character of Thurrock considering a number of locations where character is a key issue and in this of this location criteria *x Rural Landscapes* and *xi Green Belt* are both relevant. Policy PMD2 (Design and Layout) is another design

policy requiring development proposal to consider criteria and relevant to this application are *i) Character* and *viii) Landscape*.

#### Landscape Character Areas

- 7.110 The site lies within the Greater Thames Estuary National Character Area (NCA 81) which is recognised for its low lying coastal landscape with open grazing pastures and drained, ploughed arable land protect from floods by seal walls.
- 7.111 From the Council's Landscape Character Assessment (LCA), which is the Thurrock Landscape Capacity Study 2005, the site is located within the Tilbury Marshes Character Area (LCA 5) which is similar to the above description as it is an open and exposed landscape dominated by the sky with few settlements. The area is influenced to a degree from Tilbury to the west with its roads, industry and port buildings along with the Tilbury Power Station, a building complex that has since been demolished since the Landscape Character Assessment was produced.

#### Assessment of the Potential Impacts

- 7.112 The ES baseline study has considered 34 viewpoints (some beyond Thurrock) taking photographs of each viewpoint and using wire line modelling and photomontages (for selected viewpoints) to consider the Zone of Theoretical Visibility (ZTV) to demonstrate the impact of the proposed development.
- 7.113 The main development area in Zone A and Works 1 would consist of the flexible generating plant, battery storage and associated infrastructure. Works 1 would include large spanning buildings up to 20m high to house the gas reciprocating engines and up to 48 exhaust stacks that would be up to 43m high. The battery storage buildings are similarly large spanning buildings up to 10m high. Elsewhere within the development a gas connection compound (Works 5) within Zone D would impact upon the landscape as would, to a lesser extent, the pipeline corridors (in construction phase) and access road. The applicant's Design Principles Statement provides visualisations to show how the proposed flexible generating plant would appear, although it is recognised that the actual details will be considered and determined through the 'requirements' as stated in the Order.
- 7.114 In terms of the impact upon landscape character the ES considers the proposal would be located in a dynamic landscape that is undergoing rapid change. The location of the main development area would be situated on a small area of land immediately to the north of Tilbury Substation. Although in part an area of mown grassland, it has two sets of high voltage power lines crossing it and another immediately to the east. The ES considers that there would be a '*minor adverse*' effect on Greater Thames Estuary National Character Area and a '*moderate adverse*' effect on Tilbury Marshes Character Area, neither of which are '*significant*'.

7.115 The most relevant viewpoints (VP) in Thurrock where the impact would be most noticeable are listed in the table below:

VP	Location	ES view and Comments on the Visual Impact
3	View south east from public open space to the south of Chadwell St Mary	<p>People using the Public Open Space and residents of Thames View are considered to have a high sensitivity, to the proposed Thurrock Flexible Generation Plant. The magnitude of impact on views will be minor. The effects experienced by these receptors will be moderate adverse which are not significant.</p> <p>It is considered that due to the distance from the site and the prevalence of other largescale commercial, port and infrastructure development within the field of view that this assessment is appropriate.</p>
6	View south from the junction of Gun Hill lane, Cooper Shaw Road and Fort Road	<p>Road users will have a low sensitivity to the proposed Thurrock Flexible Generation Plant facility. The effects on people travelling along these roads is considered to be minor adverse, which is not significant.</p> <p>People using the small strips of Access Land on either side of the roads will have a high sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be moderate. The effect experienced by these pedestrian users will be moderate adverse, which is not significant.</p> <p>At this location the stacks will be the most prominent features. These will be viewed in combination with existing pylons and electricity infrastructure. These large vertical structures will lessen the significance of the proposed scheme. The extent of visual harm will be influenced by the final design of the buildings and height of the stacks.</p>
7	View south from the graveyard of St James' Church West Tilbury	<p>People visiting the graveyard at St. James' Church will have a high sensitivity to the proposed Thurrock Flexible Generation Plant. However, the impact magnitude will be moderate. The effect experienced by these receptors will be moderate adverse, which is not significant.</p> <p>At this location the stacks will be the most prominent features. These will be viewed in combination with existing pylons and electricity infrastructure. These</p>

		existing large vertical structures will lessen the significance of the proposed scheme. The extent of visual harm will be influenced by the final design of the buildings and height of the stacks, particularly as the stacks are shown to be above the skyline of the Kent Downs AONB to the rear of the view.
8	View south west from junction of Station Road and farm track to the south of the railway line	<p>This is primarily a view experienced by road users, who will have a low sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be moderate. The effect experienced at this location will be minor adverse, which is not significant.</p> <p>At this location the stacks will be the most prominent features. These will be viewed in combination with existing pylons and electricity infrastructure. These large vertical structures will lessen the significance of the proposed scheme. The extent of visual harm will be influenced by the final design of the buildings and height of the stacks. The proposed Lower Thames Crossing would cross the railway on a viaduct at this point.</p>
9	View east to south east from Fort Road to east of Tilbury	<p>Road users will have a low sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be moderate. The effect on people travelling along this road is judged to be minor adverse, which is not significant.</p> <p>Pedestrian receptors using the bridge will have a high sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be moderate. The development will be prominent but in the context of the existing industrial river side development and presence of overhead cables and pylons, the change is not major. The effects experienced by these pedestrian users will be moderate adverse, which are not significant.</p> <p>At this location the stacks will be the most prominent features. These will be viewed in combination with existing pylons and electricity infrastructure. These large vertical structures will lessen the significance of the proposed scheme. The extent of visual harm will be influenced by the final design of the buildings and height of the stacks.</p>



11	View east from Fort Road bridge over railway	<p>Road users will have a low sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be moderate. The effect on people travelling along this road is judged to be minor adverse, which is not significant.</p> <p>The stacks will be the most prominent features from this viewpoint. At present there is limited pedestrian traffic using this route. It is agreed that the effects even on walkers in this location would not be significant.</p>
14	View north east from Byway 98 to south of Tilbury Fort	<p>People using this PRow byway will have a high sensitivity to the proposed Thurrock Flexible Generation Plant. However, the magnitude of impact will be minor from this distance and location. The effect experienced by people at this location will be moderate adverse, which is not significant.</p> <p>The site is approximately 1.5km away and would be viewed across the Tilbury 2 development. It is agreed that the effects would be minor adverse</p>
15	View north, north west from the Thames Estuary Path/Two Forts Way	<p>This view is representative of a short section of the path, on or beyond the land raising operations to the screening of Zone A by the buildings of Tilbury substation and the concatenation of wires and pylons, there are slightly elevated views, with no vegetation across open farmland to the proposed development in Zone A. The high sensitivity receptors will experience minor impact magnitude, resulting in a moderate adverse effect for the duration of the operation of the facility, which is not significant.</p> <p>At this location the stacks will be the most prominent features. These will be viewed in combination with existing pylons and electricity infrastructure. These large vertical structures will lessen the significance of the proposed scheme. The extent of visual harm will be influenced by the final design of the buildings and height of the stacks.</p>
30	View north west and west from the edge of the open space adjacent to	<p>People using the open space adjacent to the car park at Coalhouse Fort are considered to be high sensitivity receptors. The impact magnitude for this location is considered to be negligible. The effect is judged to be minor adverse, which is not significant.</p>

	Coalhouse Fort public car park	It is agreed that views from this location would be limited and therefore the effect would be minor adverse.
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- 7.116 The ES considers the visual impacts to be complex and it's probably easier to consider the impact of the development upon views from certain directions and from sensitive receptor locations.
- 7.117 Views from north of the proposed development and north of the railway line are across arable farmland crossed by pylons and overhead power lines towards Tilbury Substation, Tilbury2 port and beyond to higher land in north Kent. Most views of the flexible generation plant are considered in the ES to not be significant from this direction but there will be certain views from elevated positions and close views from the access land that would experience '*moderate adverse*' effects. However, the ES considers these effects are '*not significant*' given the existing industrial landscape context.
- 7.118 Views west towards the flexible generation plant from Coalhouse Fort are limited and no significant effect is predicted due to distance and screening vegetation. Views from the Thames Estuary Path, also known as Two First Way, are limited save for a short section due to higher elevation and lack of vegetation. The context of the view would remain that of the Tilbury Substation and extensive power lines, therefore the ES considers these to be a '*moderate effect*' on the view from this direction is considered '*not significant*'.
- 7.119 For receptors from sections of Common Land such as Parsonage Common the views are close. Views from Tilbury Fort are limited due to intervening infrastructure such as the sewage treatment works. Views from residential properties on the hillside to the north across the site are more limited including views from properties nearest Fort Road, which do not face towards the site as they address the streetscene they front. The construction and future decommissioning process would result in temporary changes to views. The proposal would impact on the background noise levels so the relative levels of tranquillity in parts of the site would change closest to the flexible generating plant.
- 7.120 There is a need to understand the impact of lighting on the landscape but it is noted that lighting for the construction and operational phases can be controlled through the 'requirements' as set out in the Order. The noise section of this report consider the impact upon tranquillity in this location.
- 7.121 The applicant's Arboricultural Assessment has identified a total of 152 individual and 32 groups of trees. None of the trees are subject to TPO's. The proposal would involve the likely removal of a number of trees but only two are category B (moderate value) trees. To compensate for the loss of trees replacement trees could be planted and secured through the 'requirements' to the Order. Existing trees close to the

development will be subject to trees protection measures which are identified in the Arboricultural Assessment's Preliminary Tree Retention / Removal and Protection Plan.

- 7.122 In terms of the cumulative impact the Lower Thames Crossing would result in future landscape and visual changes and the current development of the Tilbury 2 port is already having a slight change to the area.
- 7.123 Overall, the ES concludes that there are not any likely to be any '*significant adverse effects*' on landscape character and visual resources.
- 7.124 The Council's Landscape and Ecology Advisor identifies that that this low lying largely flat marshland landscape could be subject to significant landscape effects alone and in combination with other developments in the area from buildings between 12.5m and 15.8m high and 48 exhaust stacks that would be up to 40m high. As the designs have yet to be finalised the choice of materials used in construction will affect the overall visual effects of the scheme. It is noted that the Design Principles Statement has set out measures that will address potential visual effects.
- 7.125 To mitigate the impacts of the development the Order includes 'requirements' and during the construction phase the 'Code of Construction Practice (requirement 5)' would retain existing trees within the Order Limits with protection measures. For the operational phase various 'requirements' will allow for consideration of the detailed design of the development through (requirement 4) and landscaping details through (requirement 14).

#### Conclusion to this section

- 7.126 The applicant's ES concludes that there is not likely to be any significant adverse effects on landscape character and visual resources. However, in the absence of the detailed design of the development the precise impact is not known and the Council's Landscape and Ecology Advisor recognises the scale and height of the development would impact upon the landscape character and visual appearance of the area. Helpfully the photomontages provide an illustrative impact and it is recognised that the main part of the development would be sited in a location nearest the existing Tilbury Substation and between two lines of pylons to attempt to reduce its impact and cluster development alongside this existing infrastructure.
- 7.127 Notwithstanding this the proposed development would have an impact upon the Greater Thames Estuary National Character Area and more so on the more localised Tilbury Marshes Character Area. In policy terms without a final designed building it is not possible to precisely confirm whether the proposal would comply with policies CSTP22 (Thurrock Design), PMD2 (Design and Layout) and the Thurrock Design Strategy (SPD) as the design is more about functionality than responding to the local context, although a colour palette of materials can help lessen the appearance of built form upon the landscape. The proposal would erode some of the rural landscape in

this location and impact upon the Green Belt so would not protect or enhance in regard to policy CSTP23 (Thurrock Character and Distinctiveness).

- 7.128 In regard to the NPPF while this landscape is not a high status landscape such as a National Park or Area of Outstanding Natural Beauty it has its own landscape qualities but these are not considered significant when compared to those 'valued landscapes' in regard to paragraph 170 of NPPF and paragraph 5.9.9 of the NPS EN1.
- 7.129 As submitted the proposal would lead to negative adverse landscape and visual impacts although these would not be significant. Nevertheless consideration is needed for mitigation through careful design in regard to the proposal's impact upon the surrounding environment.

#### **IV. Heritage Assets**

- 7.130 Section 5.8 of the NPS EN1 recognises that energy infrastructure has the potential to result in adverse impacts on the historic environment and applicants are required to provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance.
- 7.131 Paragraph 189 of the NPPF notes that in determining applications local planning authorities should require an applicant to provide a description of the significance of any heritage assets affected and the contribution of their setting to that significance. Paragraph 193 of the NPPF advises that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance. Paragraph 196 of the NPPF advises that where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use. The PPG also provides guidance on the historic environment.
- 7.132 CSTP24 (Heritage Assets and the Historic Environment) states that the Council will preserve or enhance the historic environment through a number of considerations, and for proposed development application will be required to consider and appraise development options in terms of what is most appropriate for the heritage asset and its setting.
- 7.133 PMD4 (Historic Environment) ensures that the fabric and setting of heritage assets are appropriately protected and enhanced in accordance with their significance. This policy is therefore relevant to the assessment of impact upon the historic environment. In particular the heritage assets as defined in the 'Site Description and Constraints' section of this report.

## Assessment of the Potential Impacts

7.134 There are no heritage assets within the Order Limits. The nearest Scheduled Monuments are Tilbury Fort (970m south west) 'Earthworks near church, West Tilbury' (730m to the north) and Coalhouse Fort (2.35km). The nearest listed buildings are the Church of St James, Grade II\* (880m to the north), Marshalls Cottages in West Tilbury, Grade II\* (1.4km to the north) and the Officers Barracks, grade II\* in the grounds of Tilbury Fort. The nearest Conservation Areas are West Tilbury (700m to the north) and East Tilbury (1.7km to the north east).

7.135 The ES has assessed the impact upon the historic environment in two ways: firstly, the potential for construction work to disturb archaeological features, and secondly the potential for the development to affect the setting of heritage assets primarily due to being visible from them, or affecting the historic landscape.

### *Archaeology*

7.136 The ES explains that a geo-physical survey of the main site was carried out to identify features below ground that could have archaeological significance and this has led to borehole investigations and the development of a geo-archaeological deposit model.

7.137 The ES identifies that there is evidence of prehistoric and Romano-British activity in the form of landscape reclamation and management (drainage channels), and the potential for possible industrial activity (salt production) and settlement, as well as anti-glider ditches dating to WWII within the main development site. There is also the potential to discover additional Palaeolithic and/or Mesolithic material during construction of the flexible generation plant, and low to moderate potential for archaeological assets dating from prehistoric to Post Medieval periods in the marine and intertidal zone affected by construction of the causeway.

7.138 Further updated heritage information has been provided since the submission of the application advising that additional geophysical survey work (detailed gradiometer survey) has been undertaken with further analysis ongoing. The applicant is relying on using information prepared by Highways England from their archaeological evaluation for the DCO for the Lower Thames Crossing project. This comprises borehole and trial trenching data on a small part of the eastern side of this project.

7.139 The ES concludes that there is a potential '*moderate to major adverse effect*' on buried archaeological remains, if present, is predicted prior to mitigation, which would be significant.

7.140 In order to mitigate this effect, the applicant has stated that a written scheme of archaeological investigation for works in both the onshore and marine environment would be provided through the 'requirements' of the Order which includes provision

for archaeological investigation. With the implementation of this mitigation, the ES considers that residual effect would change to '*minor adverse*', which is '*not significant*'.

- 7.141 The Council's Historic Environment Advisor for Archaeology explains that the proposed development lies in a highly sensitive area of archaeological potential. The development is situated on the former grazing marsh of the Thames with elements of the scheme extending onto the gravel terrace to the north. The gravel terrace is known to have been occupied from the Mesolithic through to the modern day.
- 7.142 The Council's Historic Environment Advisor for Archaeology has commented that further information is required because at present the submitted documents fail to provide a full understanding of the significance of the below ground archaeology and therefore do not provide an understanding of the potential impact on the below ground archaeological deposits, their extent or significance. Although the document states that the Written Scheme of Investigation (WSI) has been agreed with the Thurrock Historic Environment advisers this is incorrect. This was submitted in February 2020 at which time the applicant was informed that much of the work described in the WSI should be undertaken to inform the DCO process rather than post consent. Section 2.5 within chapter 7 identifies the problems with this submission. Discussions between the applicant and the Council are continuing and it is understood that a written scheme of investigation will be submitted at Deadline 2. The lack of intrusive fieldwork has resulted in a lack of understanding of the impact of the development on the below ground archaeological deposits. Additional information in the form of geophysical survey has been submitted since the Inspector's preliminary meeting in October 2020 and this is an improvement upon the lack of information previously provided. However, the geophysical survey in association with the trial trenching undertaken for the LTC in a small section of this development area does show the importance of using both methods with a large settlement identified on the edge of the salt marsh. The lack of trial trenching within this application means that an appropriate understanding of the impact of the historic environment or the impact of the development is unclear. These matters will need further consideration and TC would welcome further discussions with the applicant's team.
- 7.143 Furthermore, it is noted that the Relevant Representation from Historic England has identified the same concerns regarding the need for a full detailed assessment as there has been no field assessment and therefore the ES does not fully address the impact upon the significant of asset. There are on going discussions with the applicant's archaeological advisers, but this is to ensure that if given approval both the trial trenching assessment and any follow on excavation is secured within the Written Scheme of Investigation. This unfortunately means that the Inspector is not provided the full information on the historic environment impact of the proposal in making their decision.

- 7.144 For Scheduled Monuments, Tilbury Fort is predicted to be subject to a '*minor to moderate adverse*' effect that the ES considers to be significant '*at the lowest end of the scale*'. The ES considers this area to have industrial landscape and the changes to the setting of the fort are considered '*slight*' due to the limited views of the proposed development, and due to other developments in between such as the sewage works and the recent Tilbury 2 development. It is however recognised in the ES that there would be a '*significant effect*' due to the high sensitivity of the fort and its setting.
- 7.145 The designated Earthworks located 800m to the north of Zone A are likely to be early medieval date and ES considers the proposal would lead to a '*minor adverse*' effect, which is '*not significant*'.
- 7.146 The proposed development lies within the wider landscape setting of Coalhouse Fort and the ES considers the flexible generation plant would have no direct physical impact and therefore the potential impact is limited to an effects on its setting from the western and south western parts of the schedule area. The ES considers the significant of effect to be '*minor adverse*', which is '*not significant*'.
- 7.147 The West Tilbury Conservation Area is the nearest Conservation Area to the site and the proposal would lead to '*moderate adverse effects*' on the setting of the West Tilbury Conservation Area, which are considered to be significant. The ES considers that '*given the existing industrialisation of the conservation area's locale, only a slight reduction to the setting's contributions to the assets' importance is predicted*'. The significance of the effect is determined to be '*medium to high sensitivity*' of this asset. For East Tilbury Conservation Area, which is further distant, the impact is considered as '*minor adverse*' and '*not significant*'.
- 7.148 In terms of listed buildings, the Church of St Mary is Grade I listed, Chadwell House and Sleepers Farm which are both Grade II listed are located to the north west of the site and would be subject to '*minor adverse*' effects which are not significant given the distance they are from the site. Buckland is a Grade II listed building to the east of site that would be subject t to '*minor adverse*' effects which are '*not significant*'.
- 7.149 In terms of historic landscape this includes the Scheduled earthworks at West Tilbury, the Grade II listed West Tilbury Hall, Conservation Area and Grade II\* St James' Church. The ES considers the sensitivity of the historic landscape is considered to be medium and the magnitude of impact is deemed to be minor. The significance of effect during construction will therefore be '*minor adverse*', which is '*not significant*'.
- 7.150 It is noted that the 'Environmental Statement: Historic Environment Settings Analysis' submitted at Deadline C supersedes the conclusions of ES Chapter 7: Historic Environment. The table in Appendix 1 of this Settings Analysis explains that most of the assets affected are 'minor adverse (not significant)' other than West Tilbury Conservation Area which is 'moderate adverse (significant)' and six listed buildings which are 'negligible (not significant)' (barn to north of West Tilbury Hall, Biggin Farmhouse, Sunspan, Chadwell House, Sleepers Farmhouse, and Worlds End Inn).



All effects are considered to result in 'less than substantial harm' when translated into NPPF policy. St James' Church could also be 'moderate adverse' but still less than substantial. In summary all 'minor adverse' or 'negligible' apart from West Tilbury CA, but all 'less than substantial' harm.

- 7.151 There are no mitigation measures proposed for addressing the impact upon Heritage Assets, although the Settings Analysis report notes that, where possible, the visual impact of the proposed development will be improved through detailed design, external treatments and landscaping (paragraph 5.6).
- 7.152 The Council's Historic Environment Advisor for Built Heritage Assets was concerned that there were inconsistencies within the Historic Environment Desk Based Assessment (ES Vol 6: Appendix 7.1) and the Environmental Statement (ES), in some instances the assessment was not robust enough (limited in its assessment of setting, as per Historic England's GPA3 guidance document) as well as lacking in information such as visualisations from key heritage assets. A further 'Settings Analysis' report was submitted at Deadline C to provide additional information on the scoping in and scoping out of heritage assets and additional assessment of the settings of the scoped in heritage assets and the effects of the proposal. This report addresses the concerns regarding inconsistencies. However, the descriptions of setting and the assessments of the contribution of setting to importance is brief (Appendix 1) and is not considered to fully consider the GPA3 guidance document which includes comprehensive lists of the attributes of setting (including functional relationships with other heritage assets) and the attributes of development affecting setting. In addition, the assessment of the significance of the grade II listed Buckland in the ES Chapter (4.2.174 onwards) is still lacking and inconsistent with other assessments as it does not include a consideration of heritage values
- 7.153 Furthermore, the Council's Historic Environment Advisor for Built Heritage Assets had concerns that the heritage assets assessed in the ES Chapter did not marry up with those set out at section 4.7 of the Historic Environment Desk Based Assessment (ES Vol 6: Appendix 7.1), specifically the grade II\* Church of St James in West Tilbury. The 'Settings Analysis' report has now provided an individual assessment of St James' Church rather than assessing it as part of West Tilbury Conservation Area. However, it is considered that the 'minor adverse' effect attributed to St James' Church is inconsistent with the 'moderate adverse' effect for West Tilbury Conservation Area of which the church is a key element. The church tower, along with the trees around the churchyard, is noted as an important silhouette and landmark from all directions in the description of West Tilbury Conservation Area (Appendix 1, Settings Analysis).
- 7.154 The grade I listed church of St Katherine and grade II listed Old Rectory are not assessed in the ES or the Settings Analysis report, however, following discussions with the applicant's heritage consultants, additional viewpoints and photowirelines from St Katherine's Church have been prepared and it is understood that these will be submitted at Deadline D.



7.155 The 'Settings Analysis' report addresses some previous concerns raised by the Council's Historic Environment Advisor for Built Heritage Assets in regards to visualisations, including cross-referencing the LVIA viewpoints, photomontages and photowirelines with the assessment of setting. However, a viewpoint/photomontage/photowireline has not been included for Bowaters Farm Battery which does have a connection with the wider landscape with the Site forming part of its setting. An additional plate has been included within the Settings Analysis report, however it only shows the heritage asset itself and does not allow for an assessment of how the visual aspects of its setting contributes to significance. Following a meeting with the applicant's heritage consultants, additional field work was carried out to assess any potential viewpoints from Bowaters Farm Battery. It is understood that additional information will be submitted at Deadline D although the overgrown nature of the scheduled monument inhibited any meaningful views towards Zone A of the Site. This is unfortunate as, should the monument be cleared of vegetation, it is considered that there could be a greater effect.

#### *Cumulative Impact*

7.156 The cumulative impact assessment has considered other developments including potential urban expansion of Linford and East Tilbury, demolition of Tilbury Power Station, Tilbury 2 and the Lower Thames Crossing. The ES predicts that there would be no material contribution by Thurrock Flexible Generation Plant to any significant residual adverse effects.

#### Conclusion to this section

7.157 The applicant considers that the level of significance predicted does not transpose into 'substantial' harm in the terms of the NPPF and all adverse effects on designated heritage assets identified in the ES chapter represent 'less than substantial' harm in terms of the NPPF. Paragraph 196 states that *"Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use."* The applicant considers that the public benefits that arise from delivery of the development are sufficient to offset any harm to heritage assets.

7.158 Before a conclusion can be reached TC requires further information, as set out above, to meet the requirements of the Council's Historic Environment Advisor for Archaeology and Historic Environment Advisor for Built Heritage Assets to fully understand the local impact and to assess in regard to policies CSTP24 (Heritage Assets and the Historic Environment), PMD4 (Historic Environment), the NPS EN1, and the relevant paragraphs of the NPPF/PPG.

#### **V. Flood Risk and Hydrology**

- 7.159 Section 5.7 of the NPS EN1 sets out that all sources of flooding are taken into account to avoid inappropriate development in areas at risk of flooding and to direct development away from areas at highest risk. Where energy infrastructure is, exceptionally, necessary in such areas, the policy aims to make it safe it without increasing flood risk elsewhere. The NPS EN1 seeks applicants to prepare Flood Risk Assessments (FRA) that help allow the SoS to determine an application having regard to the Sequential Test (and Exception Test where applicable), national and local flood strategies, sustainable drainage systems, and flood resilient and resistant measures. This approach follows the NPPF as set out in paragraphs 155 to 165, and the guidance contained in the 'Flood Risk and Coastal Change' PPG. NPS EN4 requires consideration to be given to water quality and resources for new gas pipeline installations.
- 7.160 There are two policies from the Core Strategy that are relevant. These are policies CSTP27 (Management and Reduction of Flood Risk) and PMD15 (Flood Risk Assessment).
- 7.161 Policy CSTP27 requires flood risk management to be implemented and supported through effective land use planning and specifically related to this application is the consideration of flood risk given that parts of the Order Limits are located in high risk flood zones on the Tilbury Marshes and in particular the causeway location for delivery of abnormal loads.
- 7.162 Policy PMD15 requires applications to be subject to Sequential Test and be accompany by a site specific Flood Risk Assessment, as also required through the NPPF/PPG, to demonstrate that the development would be 'safe' and that surface water run off would not pose a risk to flooding. Parts of the Order Limit fall within all Environment Agency Flood Zones and therefore this policy is relevant to the assessment of the application. The policy requires that developments incorporate Sustainable Drainage Systems (SUDS).

#### Assessment of the Potential Impacts

- 7.163 The site is low lying reclaimed marshland forming part of the River Thames's catchment. The FRA explains that the ground level range from 1.23m AOD to 1.55m AOD with localised areas of elevated land between 1.6m AOD and 1.8 AOD. The majority of the proposed development is located within Flood Zones 2 and 3a, which are the medium and high risk flood zones. The FRA assesses a range of flooding sources with tidal flooding and surface water flooding identified as the two most likely sources of flooding for this site. However, the site and the wider area are protected by existing flood defences that in the form of the tidal defence provides for a 1 in 1000 year flood event taking into account climate change. The ES has identified that the main development area is currently drained by a complex network of buried land drains. Many of the surface water channels are privately owned and maintained but some are managed by the Environment Agency.

- 7.164 The FRA identifies that the proposed power station plant is 'Essential' Infrastructure' based upon the PPG 'Table 2 - Flood Risk Vulnerability Classification' but the PPG states that *'Essential utility infrastructure which has to be located in a flood risk area for operational reasons, including electricity generating power stations and grid and primary substations; and water treatment works that need to remain operational in times of flood'*. The proposed power station does not have to be located in a high risk flood zone as it is not dependent on tidal waters for cooling purposes as can be the case with other power stations such as Bradwell and Sizewell further along the coast. This information will need to be considered for the 'Sequential Test'. In addition the 'Exception Test' will need to be applied as part of the development site falls within Flood Zone 3a as identified in PPG's 'Table 3 – Flood Risk Vulnerability and Flood Zone Compatibility'. Before considering the Exception Test for the road, the whole proposal needs to be subject of the Sequential Test.
- 7.165 In applying the Sequential Test consideration needs to be given to other locations.
- 7.166 For the Sequential Test, the site is mainly allocated within the Green Belt based on the CS Proposals Map. However, through Green Belt Assessment the applicant has put forward factors as Very Special Circumstances for choosing this site for the development. Factor 4 presents the applicant's case for the proposed development's proximity to high pressure gas and 275kV electricity network connections, site suitability and alternatives. Both the infrastructure requirements for high pressure gas and the 275kV electricity network connections are fundamental requirements for the development, which seeks to connect to the Tilbury substation infrastructure that was originally built for the former Tilbury Power Station. The applicant's information demonstrates that 20 sites were originally considered and these were narrowed down to 3 sites with existing substations on the 275 kV network around Greater London. These site were Tilbury, Elstree and Warley. For the reasons stated in the Green Belt assessment Tilbury is the chosen site. It is considered that this information would appear to demonstrate that the Sequential Test is met but ultimately this is for the examining authority to decide.
- 7.167 The PPG advises that the Exception Test *'is a method to demonstrate and help ensure that flood risk to people and property will be managed satisfactorily, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available'*. There are two parts to the Exception Test, which require the development to provide 'wider sustainability benefits that outweigh flood risk', and that the development would be 'safe for its lifetime'.
- 7.168 For the first part of the Exception Test (wider sustainability benefits), and similarly to the points raised in the Sequential Test, the proposal needs to be located with connections to the high pressure gas and the 275kV electricity network as this infrastructure represents a more sustainable approach compared to need to building a new substation and associated infrastructure including pylons, potentially in the Green Belt. The proposal would maintain electricity provision when required.

Nevertheless it is for the examining authority to decide whether the first part of the Exception Test is met.

- 7.169 The second part of the Exception Test requires the development to be safe. The applicant's Flood Risk Assessment [FRA] advises on the baseline conditions, as set out above, and identifies that the site benefits from flood protection from an extensive and maintained tidal flood defence system for a 1 in 1000 year. In addition the FRA identifies flood mitigation and protection options such as raising the development platform for gas engines and battery units, using flood resistant and resilient materials and having a flood evacuation plan. The Environment Agency consultation response to the DCO dated 15 February 2021 confirms that the Environment Agency are 'satisfied' subject to further information to be provided through the 'requirements', which, if implemented, would appear to satisfy the second part of the Exception Test.
- 7.170 The Council's Strategic Flood Risk Assessment (SFRA) modelling of a potential breach in the tidal defences in a 1 in 1,000 year event indicates that the flood depth at the power station could be 2.45 m above Ordnance Survey datum (AOD), to which an additional 0.39 m depth has been added to account for worst-case sea level rise projections (total of 2.84m). This resulting depth would be greater than the expected finished site level for building bases in Zone A at 0.84m AOD so additional flood resilience measures would be critical and these include raising of the gas engines and battery units above the worst case flood levels. It should be noted that failure of the tidal defence is highly unlikely given it protects over 5,000 local residents to Tilbury and the Environment Agency is working to replace existing flood defences in the future.
- 7.171 The Council's Emergency Planner requires the Flood Warning and Evacuation Plan to provide further information including details of safe refuge when evacuation is not feasible, and actions for contractors and staff to take, in the event local defence system is breached or overtopped. Such measures could be dealt with through the 'requirements' to the Order and note the addition of 'requirement 11' to secure this.
- 7.172 In terms of surface water flooding, the FRA identifies that a new surface water drainage system will be designed with surface water collected through permeable areas such as gravelled areas, unbound stone access roads and hardstandings, and through impermeable surfaces such as a roof areas aiding gravity system through gutters and downpipes connected to a surface water attenuation system. The FRA explains that surface water run-off will be collected and discharged to a below ground gravity to the local surface water drainage network. The Council's Flood Risk Advisor has advised that a revised strategy and design approach is required through the 'requirements' to secure the drainage calculations and discharge rates; details of drainage installations; drainage details such as the amount of impermeable areas; surface water flow paths; and what happens at decommissioning stage to the installed drainage. These matters can be secured through the 'surface water drainage scheme' (requirement 10).

- 7.173 In assessing the impacts and effects of the development the ES identifies a potential increase in flood risk due to increased run off from impermeable surfaces and therefore drainage design will need to incorporate the necessary run off attenuation and storage as recommended by the FRA. However, the ES concludes that '*no significant adverse effects*' due to flooding is expected and there would be '*no significant effect on watercourse*' from the gas pipeline route or construction access roads that cross existing watercourses.
- 7.174 The ES recognises the need for good practice measures during the construction activity and safe storage of materials on site to avoid contamination of the hydrology environment. Such mitigation details for all points raised can be agreed through the 'Code of Construction Practice' (requirement 5). It is also recognised that the part of the sea wall will be removed and replaced with a barrier for the deliveries of AIL at the proposed causeway. It is considered that causeway should be removed following delivery of the AIL and the sea wall restored, which the Environment Agency will be requiring. During operation, any potentially polluting materials will be stored in accordance with the Environmental Permit and regulatory requirements, including secondary containment to capture and leaks. No significant adverse effects on surface water contamination from runoff are predicted.

#### Conclusion to this section

- 7.175 In summary, there would be a neutral impact as there is a need to ensure the additional/revised 'requirements' suggested by the Environment Agency are secured along with the strategy and design of the future surface water drainage approach at the site, which the Council's Flood Risk Advisor requires. The information can be provided to an amended version of 'requirement 10' (surface water drainage details).
- 7.176 The additional information through the requirements is necessary to ensure the local impact is assessed to be acceptable with regard to policies CSTP27 (Management and Reduction of Flood Risk) and PMD15 (Flood Risk Assessment) as well as the guidance within the NPS EN1, NPPF and PPG.

### **VI. Geology, Hydrogeology and Ground Conditions**

- 7.177 Various paragraphs of section 5.3 of the NPS EN1 refer to geological conservation importance, ground conditions and hydrogeology requiring applicants to assess the risk to the environment from a development. NPS EN4 requires consideration to be given to soil and geology for new gas pipeline installations. The NPPF refers to ground conditions and pollution in paragraph 178 requiring decision makers to take account of '*ground conditions and any risks arising from land instability and contamination*'.
- 7.178 Policy PMD1 (Minimising Pollution and Impacts on Amenity) considers the impact upon amenity in the terms of the location, health of others, occupiers and the natural environment from contaminated land/soil, water pollution and ground instability.

## Assessment of the Potential Impacts

- 7.179 The ES explains that baseline information about the ground conditions was viewed using the British Geological Survey mapping, Environment Agency data, pollution records and the history of land uses in the local area. A site walkover was undertaken in 2018. As the land is reclaimed marshland the majority of the geology with the site is alluvium over sand and gravel. The evidence shows that the site has been historically used for agricultural use and is not considered to be subject to any sources of contamination, aside from fly-tipping of waste on Parsonage Common. The ES recognises that in the wider area there are possible sources of contamination from previous land uses such as the former Tilbury Power Station, historic landfills and former brickworks in the Low Street area but it is recognised by the Council that this would not affect construction work for the proposed development.
- 7.180 As a result the ES assesses that the potential for construction work including excavation and piling to mobilise any existing contamination and impact on human health, groundwater or surface waters is considered to be '*low*' and '*no significant adverse effect*' is predicted. The impact from the operational phase and the decommissioning phase would be '*negligible to minor adverse*'. The 'requirement' for the Code of Construction Practice (requirement 5) would be a mechanism for dealing with any unexpected contamination, and would also ensure measures for the management of construction activity and safe storage of materials on site to avoid any ground or water contamination.
- 7.181 The Council's Environmental Health Officer for Contaminated Land has no objections subject to the recommendations set out in the Phase 2 Site Investigation Report, (October 2019) being implemented. These will require:
1. A watching brief on the site, and particularly during the groundwork stage, for unexpected contamination with details including a risk assessment remediation strategy to be submitted to the Council;
  2. All potable water pipework shall comply with the Water Supply Regulations; and,
  3. Any imported material on to site should be validated before disposition.
  4. If piling is required on site the Environment Agency should be consulted with regard to the type of piles required and their installation to avoid mobilisation of potential contaminants into the underlying aquifers.
- 7.182 To mitigate the impacts of the development the Order includes 'requirements' and during the construction phase the 'Code of Construction Practice' (requirement 5) will ensure construction work best practices are undertaken and the Contained Land and Groundwater (requirement 12) would deal with contamination of land or groundwater if discovered during construction. Substances used in the operation phase will be managed by an Environmental Permit, outside the scope of the Order.

### Conclusion to this section

- 7.183 In summary, based on the overall findings of the ES and the views of the Council's Environmental Health Officer for Contaminated Land there are no objections raised to the local impact.
- 7.184 Taking this into account it is considered that the proposal's impact upon amenity in terms of location, health of others, occupiers and the natural environment from contaminated land/soil, water pollution and ground instability is acceptable. This is considered in regard policy PMD1 (Minimising Pollution and Impacts on Amenity) and subject to the necessary mitigation measures being implemented and agreed where necessary through the requirements of the Order.

### **VII. Traffic and Transport**

- 7.185 Section 5.13 of the NPS EN1 recognises that traffic and transport can have a variety of impacts on surrounding transport infrastructure and connecting transport networks, such as increasing congestion. Additional traffic and transport can lead to environment impacts in terms of noise, disturbance and emissions. The NPS EN1 requires the applicant's ES to include a transport assessment and where appropriate a travel plan. The examining authority will consider the impacts and mitigation measures.
- 7.186 Chapter 9 of the NPPF promotes sustainable transport and through paragraph 102 requires transport issues to be considered at the earliest stage of development proposals. Paragraph 108 requires development proposals to explore opportunities to promote sustainable transport, safe and suitable access, and any significant impacts from the development on the transport network to be mitigated. The PPG advise on the requirement for transport evidence to be considered in decision making and advises on travel plans and transport assessments.
- 7.187 Policy CSTP14 (Transport in the Thurrock Urban Area) is relevant as the route to the site would involve passing through some of Thurrock's urban areas, in particular the part of Tilbury nearest the Port of Tilbury for accessing this site. The policy identifies measures to promote the use of sustainable transport modes. Policy CSTP15 (Transport in Greater Thurrock) is also relevant as the site falls outside of the urban area. This policy requires improvement and opportunities to use a range of transport modes to promote accessibility and movement.
- 7.188 Policy PMD9 (Road Network Hierarchy) is relevant to new or increased use of existing accesses and a hierarchical approach to road types in the Borough.
- 7.189 Policy CSTP16 (National and Regional Transport Networks) states that the Council will work with partners to deliver improvements to national and regional networks. Relevant to this policy is the construction phase and the use of the road network including A1089, A13 and M25. Policy CSTP17 (Strategic Freight Movement and



Access to Ports) supports the logistics and port sectors and the positive impacts of freight activity in Thurrock. These policies are relevant to proposed construction phase and delivery of equipment, components and materials to the site.

- 7.190 The proposal will require parking to be provided for the construction phase, operational phase and decommissioning phase so policy PMD8 (Parking Standards) is relevant and applies the Council's draft parking standards.
- 7.191 Policy PMD10 (Transport Assessments and Travel Plans) requires Transport Assessments, Transport Statements, and Travel Plans to accompany applications.

### Assessment of the Potential Impacts

#### *Access and Construction Routes*

- 7.192 The applicant's documents show that primary access to the site would be via the Tilbury 2 route adjacent to the Fort Road Bridge to the western part of the site and a second access would be formed from Station Road to provide access to the eastern part of the site. Both accesses would allow access to the main development area of the site in Zone A for both the construction and operational phase.
- 7.193 The ES explains that the primary daily construction vehicle route to the site would be from the A13 south on the A1089 Dock Approach Road, A1089 St Andrews Road and A1089 Ferry Road, then routing east onto the Tilbury 2 road and into the RWE and Tilbury 2 access. The Council's Highways Officer identifies that the majority of the route until the boundary at Tilbury Port is part of the Strategic Highway Network (A1089T) but after that St Andrews Road to Fort Road forms the local highways network.
- 7.194 The secondary access point from Station Road and the route to it from St Andrews Road would all be within the local highways network. The ES explains that the secondary access road would only be used in exceptional circumstances as it is not intended to be the construction vehicle route to the site. The Council's Highways Officer recognises that this secondary route follows country lane roads with varying widths and hedgerows.

#### *Traffic Generation and Highway Impact*

- 7.195 The ES explains that *'during construction, the proposed development is estimated to require on average 40 heavy goods vehicles (HGVs) per day (80 two-way trips) or a peak of 160 two-way HGV trips per day. On average 250 construction staff, peaking at 350, are expected to be required. Use of coaches and minibuses is proposed for construction staff. This would equate to around 70 daily car movements 36 minibus and four coach movements for the peak construction workforce'*. The ES assesses that the average and peak traffic generated by the development during the



construction period would be below the threshold in transport assessment guidance at which any significant effects are likely for the majority of section of road assessed.

7.196 The Council's Highways Officer comments *'that in order for this route to be acceptable for the construction phase of the development, mitigation measures are required to reduce the harm on the network and the surrounding area. Firstly, a protective provision for the applicant to fund remediation works for any road deformation on the local highway network and this will need to require the applicant to:*

- 1. Undertake a baseline road condition surveys prior to commencement of works*
- 2. Undertake further road condition surveys every 4 weeks for the duration of construction traffic utilising the route should be secured.*

*To avoid any doubt on the extents, the following roads are suggested:*

- (a) St. Andrew's Road - boundary of Highways England Asset to Fort Road (including spur road)*
- (b) Fort Road - from St. Andrew's Road to Coopers Shaw Road*
- (c) Coopers Shaw Road - from fort Road to Station Road*
- (d) Station Road - from Fort Road to site entrance*

7.197 The Council's Highways Officer also requires *'protective provision to temporarily close Gun Hill and Church Road for all traffic should be made to ensure that all traffic entering and leaving the site do not by-pass the prescribed route and rat-run through West tilbury village. This can be in the form of Temporary road closure notice and appropriate hard barrier measures at the junction points with Fort Road and Coopers Shaw Road, with light measures at the other extents'*. This can either be implemented by the applicant or funding providing the Council to secure the necessary road closure notices and traffic management measures. It is noted that the 'requirements' include a Construction Traffic Management Plan to be approved, which is essential for the construction phase of the development.

7.198 The Relevant Representation from Highways England has raised concerns over the impact upon the 'Asda roundabout' junction if HGVs collect material from the Port of Tilbury to take to the site. This is because construction vehicles would leave the Port of Tilbury heading north using the A1089 St Andrew's Road and would then need to make a U-turn manoeuvre around the roundabout to head to the site on the A1089, and Highways England has concerns about the safety and frequency of these U-Turns. Therefore Highways England is concerned to ensure that any potential operational and safety issues that may arise from the use construction traffic on the SRN are appropriately monitored and mitigated.

7.199 The ES explains that the delivery of abnormal loads would be via sixty barges over the construction period using the causeway and road constructed (Zone G) to access the main development site (Zone A). This route through the site and wholly within private landownership would not involve any abnormal loads needing to use the road

network. The Council's Highways Officer seeks '*protective provision be included for the applicant to ensure that the pedestrian and cycle links along the river frontage are not prejudiced both during the construction phase and during the operation phase*'. Also, if a situation were to occur that required abnormal load vehicles to use the highway network the Council's Highways Officer considers that these should be restricted to outside the peak hours of the Port so to not affect the link and junction capacities.

- 7.200 To construct the gas pipeline route the ES confirms that the route would cross Station Road in East Tilbury in two locations and the road would have to be closed and a local diversion put in place. The ES states the method and diversion route would be agreed with the Council as the Local Highway Authority.
- 7.201 During the operation phase the ES explains that traffic generation would be very low as the flexible generation plant requires a workforce of only around 4-6 full time employees on site and up to 20 additional workers during annual maintenance periods.
- 7.202 In terms of cumulative impact, the ES confirmed that the proposal would use the existing road network and therefore the ES has taken into account existing vehicle movements and in particular the traffic generator that is the Port of Tilbury and the Tilbury 2 development. In terms of potential future developments within the area the Lower Thames Crossing proposal is expected to be submitted by Highways England to the Planning Inspectorate as an application for a Development Consent Order; and the London Resort application for a Development Consent Order has recently been submitted to the Planning Inspectorate and the proposal would include car and coach parking for visitors at the Port of Tilbury and further mitigation at the 'Asda roundabout junction'. Highways England have commented on the physical overlap of the proposal particularly with regard to high-pressure gas pipeline route and access roads, but also the cumulative effects assessment. Highways England do not object to this proposal but recognise the need for reaching an agreement with the applicant on protective provisions.
- 7.203 Overall, for traffic generation and highway impact the ES concludes that there would be '*no significant adverse effects due to construction traffic*' and '*no significant effect*' is predicted during operation phase as the level of traffic would be small and irregular.

#### *Parking and Travel Plan*

- 7.204 The plans submitted with the application do not show details of parking provision for the development as this would form part of the 'detailed design requirement' of the Order. Given the size of the site and the likely limited number of persons on site it is considered that there would be adequate space for on site parking provision during the operation phase. During the construction phase there would be between 250-350 persons on site and a 'Construction Worker Travel Plan' would be agreed as a 'requirement' of the Order. In addition, separately to this application, the Council are

dealing with a planning application seeking temporary planning permission for a temporary car park for 200 cars and associated security and welfare facilities at the Arena Essex site, Arterial Road, Purfleet (ref 20/01285/FUL). The intention of that application is the construction vehicles park at the site and a private bus service would operate to take workers to and from the site during the construction hours.

### *Footpath Impact*

- 7.205 The proposed causeway element would interrupt the existing footpath FP146 alongside the sea wall. This footpath forms part of Natural England's England Coast Path, the sub-regional Thames Estuary Path and local Two Forts Way that is a coastal path and one that links Tilbury Fort and Coalhouse Fort. The applicant has confirmed that this route would remain open with 60 vehicle movements occurring during construction and a Banksman to manage walkers/vehicles
- 7.206 The proposal would impact upon footpath FP200 but a temporary public right of way would be created if necessary in zone J along the existing road (where there is an existing marked recreational route). The temporary footpath would provide a diversionary route for Footpath 200 to Station Road if it is necessary for the existing footpath where it crosses Zone D1 to be stopped up temporarily during gas pipeline construction.
- 7.207 There are no objections raised to the impact upon these footpaths.

### Conclusion to this section

- 7.208 In summary, and following consultation with the Council's Highways Officer and having regard to the Relevant Representation from Highways England, TC has no objections subject to the comments raised by the Council's Highways Officer which require the applicant to provide more detailed mitigation measures and protective provisions.
- 7.209 Taking this into account the local impact has been assessed with regard to the guidance contained within the NPS EN1 and the relevant paragraphs (102 & 109) of Chapter 9 of the NPPF and subject to mitigation would not conflict with these policies.
- 7.210 In terms of local planning policies, the proposal's impact of the access arrangements and construction route raises no objection with regard to policy PMD9 (Road Network Hierarchy), and in terms of traffic impact would raise no conflict with policies CSTP14 (Transport in the Thurrock Urban Area), CSTP15 (Transport in Greater Thurrock), CSTP16 (National and Regional Transport Networks), CSTP17 (Strategic Freight Movement and Access to Ports) or PMD10 (Transport Assessments and Travel Plans). Through the 'requirements' it is recognised that a 'Construction Traffic Management Plan' (requirement 6) and a 'Construction Worker Travel Plan' (requirement 7) would be provided to promote sustainable transport with regard

PMD10 (Transport Assessments and Travel Plans) and in regard to parking considerations for policy PMD8 (Parking Standards).

### **VIII. Air Quality**

- 7.211 NPS EN1 recognises that infrastructure development can have adverse effects on air quality through the construction, operational and decommissioning phases that can affect health, protected species and habitats, and/or the wider countryside. Air pollutants derive from exhaust stacks, in regard to this development, but also from the construction process. NPS EN2 recognises that generating stations lead to emissions of carbon dioxide, sulphur oxides and nitrogen oxides and Environmental Permits from the Environment agency would be required for emission to be regulated in accordance with the Large Combustion Plant Directive (LCPD) and the Industrial Emissions Directive (IED). Paragraph 181 of the NPPF recognises that opportunities to mitigate impacts should be identified, such as traffic and travel management.
- 7.212 Policy PMD1 (Minimising Pollution and Impacts on Amenity) consider the impact upon amenity in the terms of the location, health of others, occupiers and the natural environment from air pollution.

#### **Assessment of the Potential Impacts**

- 7.213 The site is not within an Air Quality Management Area as the nearest is 1.8km away. The applicant's air quality monitoring includes 47 receptor sites (not all are in Thurrock) and the results show that background concentrations of nitrogen dioxide in the area around the development site as within the relevant health based air quality objectives.
- 7.214 The main pollutant emitted from the power generating plant would be nitrogen dioxide from the gas engine exhausts but the ES confirms that these would comply with the emission limits for nitrogen dioxide set by the Industrial Emissions Directive (IED). The exhaust stacks have been designed to be 40m high to allow for dispersal of pollutants at the emission limits.
- 7.215 The majority of residential and other sensitive receptor locations modelled through the ES work identify that '*no significant effect is predicted*' but for the long term average there are two receptor locations affected at Walnut Free Farm and West Street where a '*moderate adverse effect is predicted*' from nitrogen dioxide. For short term average concentrations nine existing receptors are predicted to experience '*moderate adverse*' impacts. The ES considers that the total nitrogen dioxide concentration is predicted to remain within the relevant air quality objectives at all but one modelled receptor, at West Street which is predicted to exceed the air quality objective with or without the development in 2022 and this is due to traffic emissions.

- 7.216 The applicant explains in the ES that predictions are based on a maximum case prediction with up to 48 individual exhaust stacks but the applicant will use a process to treat exhaust gas to reduce the nitrogen dioxide emissions below the limits.
- 7.217 The Council's Environmental Health Air Quality Officer has studied the dispersal modelling for the power generating plant and the exhaust stack heights for 40m high stacks. It is recognised that one receptor is above the annual mean air quality objective (9) West Street, but this is not in Thurrock, and is in Gravesham Authority.
- 7.218 In terms of the annual mean air quality objective for NO<sub>2</sub> the Council's Environmental Health Air Quality Officer does not have any concerns for air quality resulting from the operational side of this development. The modelled results for the short-term hourly mean objective for NO<sub>2</sub> indicate that there will likely be no breaches this objective. The overall impact is considered '*minor adverse*' as there are no potential breaches of the air quality objectives at any of the receptor locations. It is mentioned that further reductions could be achieved by aggregation of Stacks using Selective Catalytic Reduction (SCR) reducing NO<sub>x</sub> emissions further and potentially "halving" any NO<sub>x</sub>/NO<sub>2</sub> emissions from the stacks, if financially viable then this measure would be very much supported by Thurrock Council.
- 7.219 Other air pollutants from the proposal would involve the construction process which the applicant proposes to be mitigated through a Code of Construction Practice, which is offered as one of the requirements as set out in the Order.
- 7.220 During the construction/decommissioning and less so during the operation phase would be air pollution emissions from vehicles, particular construction vehicles to and from the site. The ES has reviewed the impact upon the road network and identifies that '*no significant adverse effect is predicted*'. The Council's Environmental Health Air Quality Officer recognises that the proposed development is likely to result in a significant uplift in the number of Heavy Goods Vehicles (HGV's) along various routes leading to the site, however, taking into account the modelling it is considered that there will not likely be any significant impact in terms of any significant air pollution arising from construction related vehicle movements in relation to this development
- 7.221 In terms of nitrogen deposition upon sensitive ecological habitats the ES states that '*no significant air quality effects on designated habitats are expected to arise due to the proposed development*'.
- 7.222 In terms of the cumulative impact, the Council's Environmental Health Air Quality Officer advises that there are various large scale operations have been included in a cumulative impact assessment for the Thurrock Power Plant, including schemes such as Tilbury2 and Tilbury Green Power. The long and short term modelling has been reviewed and there are three receptors in Thurrock. However the Council's Environmental Health Air Quality Officer has taken into account that the modelled scenario is considered 'conservative' overall and likely not real future case, any further mitigation measures as suggested before by using SCR would be

recommended. If it falls under Best Available Techniques (BAT), and is deemed economically and environmentally viable and beneficial.

#### Conclusion to this section

- 7.223 In summary, based on the overall findings of ES and the Council's Environmental Health Air Quality Officer has no objection to this development as long as all appropriate mitigation measures are undertaken for limiting dust during the construction phase. Also it is recommended that additional mitigation is needed on the power plant operational side in terms of adopting the use of SCR if it is feasible to further limit any emissions of NO<sub>2</sub> from this development.
- 7.224 Taking this into account the local impact is assessed with regard to policy PMD1 (Minimising Pollution and Impacts on Amenity) and it is consider the proposal's impact upon amenity in the terms of the location, health of others, occupiers and the natural environment from air pollution is acceptable, having regard to the policy and subject to the necessary mitigation measures being implemented and agreed where through the requirements section of the Order. It is noted that the requirements include 'Code of Construction Practice' (requirement 5) for the operational phase and outside of the scope of the Order an Environmental Permit.

#### **IX. Noise and Vibration**

- 7.225 NPS EN1 recognises that excessive noise can have wide ranging impacts on the quality of human life, health and enjoyment of areas as well as adverse impacts upon wildlife and biodiversity. NPS EN2 recognises that generating stations can lead to noise and vibration impacts from gas and steam turbines, and air cooled condensers. Both NPS EN1 and NPS NE2 recognise the need for mitigation such as enclosing plant and machinery in noise reducing buildings and considering the layout of the development away from noise sensitive receptors. NPS EN4 requires consideration to be given to noise and vibration for new gas pipeline installations.
- 7.226 Paragraph 180 of the NPPF requires the consideration of the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, and in particular the need to mitigate and reduce noise from development and to protect tranquil areas. The PPG provides general guidance on noise policy and assessment methods following the Noise Policy Statement for England and British Standards. The World Health Organisation (WHO) guidance is also necessary for consideration.
- 7.227 Policy PMD1 (Minimising Pollution and Impacts on Amenity) consider the impact upon amenity in the terms of the location, health of others, occupiers and the natural environment from noise pollution.

#### Assessment of the Potential Impacts

- 7.228 The applicant's ES recognises that existing background noise levels in this location are mostly influenced by the sound of local and distant traffic, and in some locations the sound of metal recycling, industrial sound from the Port of Tilbury and passing trains.
- 7.229 The ES identifies that baseline noise levels were monitored in February 2018 at seven locations considered to be the nearest noise sensitive receptors around the proposed development. The noise measuring took place for a week including the weekend. The seven locations were Byron Gardens, Buckland, Walnut Tree Farm, St James Church, Tilbury Fort, Sandhurst Road and Goshem's Farm.
- 7.230 The noise generating sources from the operational phase of the development would be in Zone A and would be from the gas engines in the power generating plant as well as their cooling fans and exhaust systems. The battery storage cooling system would also produce noise along with gas metering equipment and substation components.
- 7.231 The applicant proposes designed-in mitigation to reduce noise levels. With the mitigation in place the ES identifies that a '*moderate adverse effect*' at the most affected residential receptors in the vicinity of Buckland is predicted. The ES considers this would not be intrusive as the 39dB baseline ambient noise level would increase by +4 dB to 43 dB during the night-time. The Council's Environmental Health Officer for Noise considers that a change to +3 dB is the minimum that most people can perceive and exceeds the WHO free-field external level of 42 dB for Buckland, which would be moderately impacted, but agrees with the findings that this would not be cause a significant effect. For other sensitive receptors, including the impact upon background noise levels and tranquillity, the ES considers the impact to be '*negligible*' or to have a '*minor effect*'. The ES assessment is based on both the change in noise levels and absolute sound levels during the day and night. The ES concludes that the sound from the *facility* '*would not result in any adverse impact on the quality of life of residents*' and the noise effects would be '*not significant*' during operation.
- 7.232 During the operation period to the proposal would not lead to any significant traffic impact for the site and the surrounding area.
- 7.233 The construction phase would be subject to the Code of Construction Practice (requirement 5) and is similar to a Construction Environmental Management Plan. The Code of Construction Practice would apply best practice measures to reduce noise during construction and the details will be submitted for approval as a 'requirement' of the Order. The main noise sources during the construction would be from the works, plant use, piling, horizontal drilling (for the gas pipeline) and traffic. These are all temporary effects and the ES identifies that the impact is not considered to cause '*significant effects*' due to the distance to residences. The future decommissioning of the development would result in broadly the same impacts as the construction phase. The Council's Environmental Health Officer for Noise raises



no objection as the construction work and future decommissioning work along with the traffic generated would not cause any significant impact.

- 7.234 The cumulative impact considers the development in conjunction with the current Tilbury 2 development and the future Lower Thames Crossing development (if permitted). The ES assesses the cumulative impact for the construction phase, operational phase and decommissioning phase of the development and considers that the cumulative impact would not contribute to any meaningful effects' and therefore no further mitigation, other than that proposed is required for cumulative impact considerations.

#### Conclusion to this section

- 7.235 In summary, based on the overall findings of ES and following consultation with the Council's Environmental Health Officer for Noise, the proposal would not lead to any significant adverse effects on receptors sensitive to noise and vibration.
- 7.236 Taking this into account the local impact is considered acceptable in regard to the proposal's impact upon amenity in terms of location, health of others, occupiers and the natural environment, having regard to the policy PMD1 and the need for mitigation to be agreed through the 'requirements' of the Order. The requirements identify the need for a 'Code of Construction Practice' (requirement 5) for the construction phase and for the operational phase and outside of the scope of the Order an Environmental Permit.

### **X. Land Use, Agriculture, and Socio-Economics**

- 7.237 NPS EN1 through section 5.10 recognises that energy infrastructure projects can have direct effects on existing land uses, and for this location the predominant land use is agricultural land use and an area of common land. Paragraph 5.12.6 requires consideration to be given to the potential socio-economic impacts of new energy infrastructure. The PPG includes guidance on the need to protect and enhance valued soils and to take into account the economic and other benefits of the best and most versatile agricultural land.
- 7.238 Policy CSTP20 (Open Space) identifies that the Council will seek to ensure a diverse range of accessible public open spaces is provided, and policy PMD5 (Open Spaces, Outdoor Sports and Recreational Facilities) requires new development to provide open spaces, which would relate to the provision of common land through the application. Policy CSTP21 (Productive Land) recognises the importance of food security and will ensure the protection, conservation and enhancement of agriculture, productive land and soil in the Borough, which is relevant to this application.

#### Assessment of the Potential Impacts



7.239 The ES identifies that the agricultural land within the site is grade 3 agricultural land within the Agricultural Land Classification (ALC) and the majority of the soils in the site are clayey with areas of loamy material, gravel and sand. Grades 1 to 3 are the referred to as the 'Best and Most Versatile' land and policy CSTP21 states that *'development of the best and most versatile land will not be supported except in exceptional circumstances'*. The policy goes on to state that *'developers would need to demonstrate that'*:

- i. there is no suitable site in a sustainable location on land of poorer agricultural quality; or*
- ii. alternative sites have greater value for their landscape, biodiversity, amenity, heritage or natural resources or are subject to other constraints such as flooding.*

7.240 The ES explains that the majority of the land affected by the proposed development forms part of a single large arable based family farm holding and comprises of lower quality agricultural land for the majority of the site but there is an area of around 1.15 hectares of higher quality agricultural land that would be permanently affected. The ES scores the loss of this agricultural land and the impact upon the farm holdings as *'negligible to minor adverse effects'*, which is *'not significant'*.

7.241 A large area of land is shown within the red line area (Order Limits) but the approach of zoning the site helps identify where proposed built elements of the development are to be located. Not all of the site is being developed and Works 1 is the main development area in Zone A, and this occupies land that is partly Common Land and partly an agricultural field parcel. Only half of the existing agricultural field would be lost as a result of the main development area. Other areas of the development would appear to result in a partial loss of agricultural field parcels to elements of the development such as the permanent access road in Zone C and the access road for the construction purposes in Zone G. The laying of gas pipelines underground would result in temporary disturbance of agricultural land but once installed the land above the pipeline would appear to be useable for agricultural purposes.

7.242 In terms of applying policy CSTP21 the Green Belt assessment has already identified the reasons for choosing this site and the lack of alternatives for this type of facility.

7.243 The proposal would result in the complete loss of Walton Common which is 10.10 hectares of Common Land within Zone A but the proposal includes the provision of new/replacement Common Land to the north of the railway line within Zone E of the site. This would provide Common Land that is more accessible than Walton Common and therefore more beneficial in regard to policies CSTP18, CSTP20 and PMD5. The ES considers that the permanent effects are considered to be *'minor beneficial'*. There would also be some temporary loss of common land through the laying of the gas pipeline but as a temporary operation this does not raise any objection.

- 7.244 Other land uses affected include the permanent loss of access to sand and gravel deposits for an area of land 0.25 hectares in size, and the temporary stopping up impact upon footpath FP200. The ES considers there to be '*no significant effects*' on public rights of way and in terms of mitigation the 'Code of Construction Practice' (requirement 5) would deal with a short term diversion to public footpath FP200.
- 7.245 The ES estimates than an average of 250 full time construction jobs would be created over the construction period and additional jobs would be created during this phase. This would result in a '*minor to moderate benefit*' to the area. During the operation period the applicant does not expect there to be any staff based full time at the site other than when routine maintenance is being carried out, so the effect is considered to be '*negligible*'.

#### Conclusion to this section

- 7.246 In summary, the proposal would result in the permanent and temporary loss of agricultural land. The permanent loss of part of an existing agricultural field to the main development area does not raise any objections. The proposed replacement Common Land would be more accessible than the existing Walton Common so this would be a benefit. There are no objections raised to other land use affected. The proposal would result in socio-economic benefits during the construction period.
- 7.247 Taking this into account the local impact is assessed to be acceptable with regard to policies CSTP18 (Green Infrastructure), CSTP20 (Open Space) and PMD5 (Open Spaces, Outdoor Sports and Recreational Facilities), and in regard to Common Land exchange and access. A negative impact would result from the permanent and temporary loss of agricultural land having regard to policy CSTP21 (Productive Land). The socio-economic benefits would be considered alongside paragraph 5.12.6 of the NPS EN1.

### **XI. Human Health**

- 7.248 The NPS EN1 does not have a specific section on human health but it is covered in other sections in regard to pollution impact. The NPPF includes a chapter on promoting health and safe communities.
- 7.249 Policy PMD1 (Minimising Pollution and Impacts on Amenity) considers the impact upon amenity in the terms of the location, health of others, occupiers and the natural environment from various forms of pollution including air, noise, contamination, odour, light, water, visual intrusion, loss of light and vibration.

#### Assessment of the Potential Impacts

- 7.250 The applicant's ES considers the likely significant effects of the development on people's physical, mental and social wellbeing. The ES has gathered baseline information from various sources including the NHS, health profiles by Public Health

England and the Joint Strategic Needs Assessment development by local public health teams to assess the impact. The baseline information considers life expectancy and physical health, mental health, lifestyle, deprivation, socio-economic, ward level baseline information and climate change. The proposal would impact upon air pollution and noise, traffic levels which can affect road safety, access from footpaths, common land and landscape amenity.

- 7.251 For air quality, the ES considers that a change in exposure to air pollution at sensitive locations such as residential areas and schools is considered by the ES to be '*minor*' and '*no significant adverse effect*' on health are predicted.
- 7.252 For noise, the ES considers the noise level during construction and operation is not predicted to lead to annoyance or sleep disturbance that could cause a significant adverse health effect.
- 7.253 For traffic impacts, the ES considers that the construction traffic flows would not be significant compared to existing road traffic and access routes. The construction phase is intending to use the trunk road network where possible. The ES determines that '*no significant adverse effect*' on health due to road safety or creation of barriers to pedestrians or cyclists is predicted.
- 7.254 For the socio-economic, the ES considers construction employment generation is estimated to average 250 full-time equivalent jobs and this has the potential for a '*beneficial effect*' on health on an individual level.
- 7.255 The ES considers and it is agreed that the exchanged Common Land would offer improved access to public access, with a slight improvement to accessibility as crossing the railway is no longer required. Therefore, the ES considers that '*no adverse effect*' on health and wellbeing due to changes in green space available for exercise and recreation is predicted.
- 7.256 The Council's Public Health Officer has noise concerns and the associated health impact of noise on local residents, which appears to be underestimated in relation to the existing population as local residents already experience higher rates of long-term conditions. This is recognised in Tilbury from existing industrial and port side uses within a closer distance to sensitive receptors than the application site. The Council's Environmental Health Officer for Noise considers that the proposal would not lead to any significant adverse effects on receptors sensitive to noise and vibration and for this reasons it is considered that there are no objections raised to noise impact upon human health.

#### Conclusion to this section

- 7.257 In summary, following consultation with the Council's Public Health Officer and the Council's Environmental Health Officer for Noise, it is considered that the proposal would not lead to any significant adverse effects on human health.

7.258 Taking this into account it is considered that the proposal's impact upon amenity in terms of location, health of others, occupiers and the natural environment from air quality, noise and traffic is acceptable in regard to the policy PMD1 (Minimising Pollution and Impacts on Amenity). Similarly, as the socio-economic benefits would be considered acceptable with regard to paragraph 5.12.6 of the NPS EN1. Where necessary mitigation measures will need to be implemented and agreed through the 'requirements' of the Order and in this instance the 'Code of Construction Practice' (requirement 5) would appoint a local community liaison officer during the construction phase of the development.

## **XII. Climate Change**

7.259 The NPS EN1 requires applicants within their ES's to undertake assessments of carbon dioxide emissions and consider climate change adaption. Chapter 14 of the NPPF requires the planning system to meet the challenge of climate change through the transition a low carbon future. There is also a section on climate change in the PPG.

7.260 Policy CSTP25 (Addressing Climate Change) requires climate change adaption measures and technology to be considered in any development proposal. These include the reduction of emissions, renewable and low carbon technologies.

### **Assessment of the Potential Impacts**

7.261 The applicant's ES identifies that the total emissions over the 35 year operating lifetime of the flexible generation plant would be the equivalent of 46 million tonnes of carbon dioxide. The battery storage facility has the benefit of storing electricity for a period of time. From the construction phase the ES advises that the greenhouse gas emission are estimated to be less than 1% of the total and would have '*very minor effects*' compared to the operational impact.

7.262 The proposal is not renewable or low carbon technology and would introduce emissions so would be contrary to the requirements of policy CSTP25 but it is recognised that the proposal would provide an on demand type of facility for when electricity is needed so would not run 24 hours a day like a traditional power station.

7.263 In terms of mitigation the 'Code of Construction Practice' (requirement 5) would deal with the use of electricity on site for construction.

## **XIII. Conclusions**

### **Summary of Local Impacts**

7.264 The table below provides a conclusion as summary of the local impacts based on the analysis of the material considerations.

Material Consideration	Local Impact	Summary of the Impact and any Mitigation
Principle of the Development and the Impact upon Green Belt;	Positive & Negative	<p>Positive as the proposal would meet critical need for electricity demand, security and network resilience along with the locational factors for choosing this site.</p> <p>Negative impact upon the Green Belt as proposal would be 'inappropriate development' and would impact upon the openness of the Green Belt.</p> <p>However, factors put forward demonstrate Very Special Circumstances exist that would outweigh the harm.</p>
Ecology and Nature Conservation;	Positive & Negative	The proposal would result in the loss of habitat and would impact upon protected species at the site, however, it is recognised that the areas to the north and south of the railway line would form new habitats to allow for translocation, net gain, along with improvements for accessing these areas, when compared to the difficult access arrangements to Walton Common, so there would be improvements to Green Infrastructure in the area.
Landscape and Visual Impact;	Negative	The proposal would lead to adverse landscape and visual impacts and consideration is needed for mitigation through careful design in regard to the proposal's impact upon the surrounding landscape and visual receptors.
Heritage Assets;	Negative	<p>Precautionary approach as Negative until more information is proposed as follows:</p> <p>For archaeology further information is required because at present the submitted documents do not provide an appropriate understanding of the potential impact on the below ground archaeological deposits, their extent or significance.</p> <p>For heritage assets further information is required to address inconsistencies within the Historic Environment Desk Based Assessment (ES Vol 6: Appendix 7.1), and there is a need to assess the grade I listed church of St Katherine, grade II listed Old Rectory and the grade II* Church of St James in the ES.</p>

Flood Risk and Hydrology;	Neutral	<p>In terms of flood risk the impact can be minimised through the submission of information through the 'requirements' to mitigate the impact of the development.</p> <p>The Council's Flood Risk Advisor needs a strategy and design for the surface water drainage at the site and this can be secured through the 'requirements', although revisions are required to the relevant surface water drainage 'requirement' (requirement 10).</p>
Geology, Hydrogeology and Ground Conditions;	Neutral	The overall findings of the ES and the views of the Council's Environmental Health Officer for Contaminated Land identify that there are no objections raised to this consideration.
Traffic and Transport;	Neutral	The proposal's impact of the access arrangements and construction route raises no objection, and in terms of traffic impact would raise no conflict with policy. Through the 'requirements' it is recognised that the 'Construction Worker Travel Plan' would be provided to promote sustainable transport.
Air Quality;	Neutral	Subject to mitigation measures being implemented the proposal would not lead to any significant adverse effects upon air quality.
Noise and Vibration;	Neutral	Subject to mitigation measures being implemented the proposal would not lead to any significant adverse effects on receptors sensitive to noise and vibration.
Land Use and Agriculture, and Socio-Economics;	Positive & Negative	Employment creation for the construction and operational periods and improved Common Land areas that are more accessible. The only negative is some loss of agricultural land.
Human Health;	Neutral	Taking into consideration air quality, noise, traffic and the socio-economic benefits the proposal would not lead to any significant adverse effects on human health.
Climate Change;	Negative	The proposal would contribute to climate change using gas for electricity production, however, this is a flexible generating plant so it is recognised that this would not be used all the time. The battery storage

		would help store electricity and release to the grid when needed.
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### Summary of Economic, Social and Environmental Impacts

7.265 The table below provides a summary of the Economic, Social and Environmental Impacts:

Economic	<ul style="list-style-type: none"> <li>• The need for electricity demand, security and network resilience along with the locational factors for choosing this site</li> <li>• Job creation for the construction/future decommissioning and operational phases with a range of jobs involved. Jobs would include direct and indirect jobs for the construction/future decommissioning. Opportunity for specialist technical jobs for the operational phase.</li> <li>• Construction Phase could use local labour sources and local materials that would benefit the local economy for Thurrock.</li> </ul>
Social	<ul style="list-style-type: none"> <li>• Job creation and social benefits for employees</li> <li>• Access to exchanged Common Land and access to new ecology and nature conservation areas could provide leisure, recreation and educational benefits</li> </ul>
Environment	<ul style="list-style-type: none"> <li>• Impact upon the Green Belt</li> <li>• Landscape and Visual Impact</li> <li>• Impact upon Heritage Assets but more information required</li> <li>• Impact upon Flood Risk and Surface Water Drainage but more information is required</li> <li>• Ecology and Nature Conservation – loss of habitat and the need to translocate protected species but recognise the proposal would provide new ecology areas for habitats, net biodiversity gain and access improvements</li> <li>• Impacts on Ground Conditions, Air Quality, Noise and Vibration can be mitigated for environmental reasons and for human health reasons</li> <li>• Some loss of agricultural land</li> <li>• Use of a fossil fuel for electricity production would contribute to climate change</li> </ul>

### Summary of the Green Belt Impact alongside any Other Material Considerations

7.266 The table below provides a summary of the Green Belt Harm, Any Other Harm and the Very Special Circumstances and the weight that is attributed to them in assessing the planning balance. A precautionary approach has been taken in regard to the consideration of the heritage assets as following the Council's internal consultation process further information shall need to be submitted which may result in a change to this table in the future.

<b>Summary of Green Belt Harm, Any Other Harm and Very Special Circumstances</b>			
<b>Harm</b>	<b>Weight</b>	<b>Factors Promoted as Very Special Circumstances</b>	<b>Weight</b>
Inappropriate Development	Substantial	Supporting the growth of renewable energy and lowering carbon emissions	Significant
Reduction in the openness of the Green Belt	Substantial	Addressing a critical and urgent need for on demand power generation, contribution to energy security and network resilience	Substantial
Landscape and Visual Impact	Significant	Role of the application site in the Green Belt	No Weight
Heritage Assets – more information needed	Significant	Proximity to high pressure gas and 275kV electricity network connections, site suitability and alternatives;	Substantial
		Improvement of access to Common Land	Moderate

7.267 Taking into account all Green Belt considerations and for the reasons explained it is considered that this proposed development is unique and in this location it would make beneficial use of the existing Tilbury substation and associated electricity pylon infrastructure. There is a clear demand for electricity production and security that is recognised at the national level through the Government's National Policy Statement for Energy EN1. Taking this into account the factors promoted by the applicant are considered to clearly outweigh the identified harm to the Green Belt through inappropriate development and the adverse impact that would result upon the openness of the Green Belt in this location such that Very Special Circumstances exist. Therefore the principle of the development is acceptable.

#### Overall Conclusion

7.268 Overall the local impact of the development is assessed in the above three tables which identify that there are the positive, negative and neutral impacts for the relevant material planning considerations of this application. The proposed development



would also have positive and negative impacts upon the economic, social and environmental roles. On balance the proposed development would be acceptable subject to the mitigation measures identified in the requirements to the Order and through planning obligations being agreed with the applicant through a section 106 legal agreement.

## **8.0 CONSIDERATION OF ARTICLES AND REQUIREMENTS OF THE DRAFT ORDER**

### Schedule 2, Part 1

- 8.1 With regard to the 'requirements' as set out Schedule 2, Part 1 of the Order there are generally no objections raised to the 'requirements' as set out in the schedule apart from those points listed below:
- 8.2 That all 'requirements' include the relevant wording to require the submission of information 'in writing' as this seems to be missing for a large number of the 'requirements'. Perhaps a new 'requirement' requiring notices and notification to be provided in writing would also assist.
- 8.3 'Requirement 5' (Code of Construction Practice). In addition to the information stated in the Outline Code of Construction Practice further information shall be needed as to whether any piling operations are required, details of any temporary hoardings/security measures/hardstandings, and contact details or site managers including community liaison for dealing with any complaints.
- 8.4 'Requirement 6' (Construction Traffic Management Plan). It is unclear why Royal Mail need to be a consultee to this requirement. In addition to the details stated in the Outline Construction Traffic Management Plan the requirement should include road condition surveys before and after construction has been completed.
- 8.5 'Requirement 10' (Surface and Foul Water Drainage) requires revised wording for the strategy and design of the surface water drainage to be provided as its currently lacking information. It is also noted that the Environment Agency are seeking additional information through this 'requirement' as well.
- 8.6 'Requirement 11' (Flood Evacuation Plan) is not precisely worded in terms of the NPPF test as the draft plan should be submitted for approval and no part of the authorised development shall be occupied until this has been approved. There should be additional wording at the end of sentence two of 11 (1) such as 'shall be made available for inspection by all users of the site and shall be displayed in a visible location all times thereafter'.
- 8.7 'Requirement 13' (Archaeology), given the Council's position on archaeology this 'requirement' may need to be amended in the future.
- 8.8 'Requirement 14' (Landscaping and Ecological Management Plan), the LEMP needs to include wording to refer to the final design of features such as the big ponds in Zone A, which need to be naturalistic features, and the LEMP should be required the details to be approved prior to commencement.
- 8.9 'Requirement 16' (Operational Noise) should include measures to deal with mitigation in the event of the Council being informed of a noise complaint.

- 8.10 'Requirement 17' (Review of access for abnormal indivisible loads) should include wording to allow for a 'before and after survey' in access routes to allow for the undertaking of repairs from any damaged caused, especially if any routing involves the public highway.
- 8.11 'Requirement 18' (Causeway Decommissioning Plan) should be amended to require removal of the causeway after the construction of the development has been completed, the wording should be revised to ensure the causeway and associated works are removed prior to first operational use of the power station. This is for ecological and visual amenity reasons but also in light of the recent announcement of the Thames Freeport, in case this land is needed in the future for alternative uses.
- 8.12 Given the content of Article 35 – felling or lopping of trees and removal of hedgerows – a requirement should be included for such removal at certain times of the year to avoid nesting birds and these works shall need to be agreed along with monitoring measures in the interests of protecting birds.
- 8.13 An additional 'requirement' should be included requiring information to be submitted to allow for the future decommissioning process with details to be submitted to and approved by the Council.
- 8.14 TC reserves the right to provide any further input into these throughout the application process.

#### Schedule 2, Part 2

- 8.15 TC has no objection to the proposed procedure for the discharge of requirements set out by Part 2 (23) to (28). However, in the interests of clarity and consistency with the provisions of Town and Country Planning legislation (referring to applications for the approval of details reserved by planning conditions) it is suggested that consideration could be given to adding the following wording:
- 'The requirements of Schedule 2, Part 1 shall be deemed to be conditions subject to which a planning permission was granted under section 70 of the 1990 Act and, accordingly, they shall be subject to the provisions of that Act and all associated legislation.'*
- 8.16 This suggested addition would have the benefit of allowing the applicant to use existing convenient on-line systems for the submission and approval of details reserved by planning conditions.
- 8.17 Furthermore, in regard to Schedule 2, Part 2 (23) it is respectfully requested that the 5 week period referred to be amended to 8 weeks to coincide with the process for discharging the 'requirement' as there will be a need for consultation, which for Schedule 2, Part 2 (25) (1) should also be 21 days rather than 10 days. This approach

was accepted by the examining authority for the Development Consent Order for the Port of Tilbury – Tilbury 2 development so would represent consistency for decision making timeframes for the Council. Should this change be considered unacceptable it is noted that Schedule 2, Part 2 (23) (b) does allow for a longer period in writing to be agreed by the undertaker and relevant planning authority. It should also be noted that the

## **9.0 PLANNING OBLIGATIONS**

- 9.1 A Community Infrastructure Levy is (CIL) being developed by TC alongside the preparation of a new Local Plan. Until the CIL is prepared TC seeks developer contributions in accordance with Policy PMD16 (Developer Contributions) of the current Core Strategy. Policy PMD16 sets TC's policy context for securing planning obligations under s106 of the Town and Country Planning Act 1990 and in accordance with the NPPF. Through the use of s106 agreements, TC will seek to ensure that development:
- i. appropriately contributes to the delivery of strategic infrastructure;
  - ii. meets the reasonable costs of new infrastructure made necessary by development;
  - iii. mitigates or compensates for any significant loss of amenity or resource; and
  - iv. provides for the ongoing maintenance of facilities provided as a result of new development.
- 9.2 The range of matters that may be covered by obligations as described by PMD16 include vocational training in employment, employment of local residents, sustainable public transport, accessibility and travel planning, pedestrian and cycling infrastructure, transport information, maintenance payments for existing transport infrastructure and preservation and enhancement of the historic environment.
- 9.3 TC uses an Infrastructure Requirement List which identifies development scenarios on an area by area basis. This list was used as the basis to provide the applicant with a schedule of potential infrastructure requirements last year.
- 9.4 Currently the application does not include any proposed draft heads of terms for a s106 agreement and therefore TC would welcome the opportunity to discuss s106 contributions, which taking into account the assessment of the application may include:
- 1) A financial contribution to the Council for any Highway Works;
  - 2) Promotion and implementation of an Employment and Skills Strategy during construction and operation of the development; and
  - 3) Any other obligations are considered necessary to make the development acceptable in planning terms, are directly related to the development and are fairly and reasonably related in scale and kind to the development in accordance with paragraph 204 of the NPPF.