

The Great Grid Upgrade

Norwich to Tilbury

Norwich to Tilbury

Guide to Interacting with Our Consultation Plans

June 2023

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nationalgrid

1. Guide to interacting with our consultation plans

1.1 Introduction

- 1.1.1 This document has been produced by National Grid to provide guidance on interacting with our latest consultation plans during the non-statutory consultation on Norwich to Tilbury. Here we use the term “non-statutory consultation” to help distinguish this phase of the Project engagement with subsequent phases involving statutory consultation processes. For the remainder of this document we will for ease simply refer to “consultation”.
- 1.1.2 The consultation runs from 27 June until 21 August 2023.
- 1.1.3 To help to explain and visualise the emerging proposals for the Project, we have prepared a series of plans. This guide provides more detail about the plans that are available and what is shown on each plan.

1.2 What are the consultation plans?

- 1.2.1 National Grid has prepared a series of plans to support the consultation, to help people understand the emerging proposals and how they may be affected.
- 1.2.2 Whilst the plans illustrate many aspects of the Project, they do not explain the rationale for the design. This can be found in the Design Development Report which has been published to accompany the consultation.
- 1.2.3 **In accordance with normal practice, it should be noted that all plans and drawings published in support of the consultation are based on typical and indicative designs. They have been produced to give respondents to the consultation a general understanding of the Project and to help inform feedback. The designs are likely to change in response to consultation feedback (including feedback from this and future consultation), ongoing design, surveys and environmental assessment. The application for development consent will contain an updated design (and accompanying set of plans), although it should be noted that even at that stage flexibility will be retained through Limits of Deviation (described below).**

1.3 List of plans and drawings

1.3.1 The plans and drawings published to support our consultation are listed below:

Table 1.1 List of Plans

Title	Description
Master Key Plan	Allows the user to locate the Project and shows the whole 2023 preferred draft alignment and substation locations. Also shows section sheet indexes and local authority boundaries.
Proposed Alignment Plans (by section)	<p>These plans provide a detailed overview of the current proposals, divided over 37 sheets across eight sections at 1:5,000 scale. 1:5,000 scale has been used to provide the specific location of permanent assets while also providing as much context of the surrounding area as possible.</p> <p>A key plan is also included for each section of the Project to help users quickly locate an area or section of interest along the length of the proposed development.</p> <p>The plans are ordered from north (existing Norwich Main Substation) to south (existing Tilbury Substation).</p> <p>The plans include the 2023 preferred draft alignment as currently envisaged (encompassing indicative locations for pylons, overhead lines, underground cables and Cable Sealing End (CSE) compounds). Only a line for the proposed underground cable alignment is shown on these plans, the construction swathe for the proposed underground cable swathe will be larger than currently shown.</p> <p>The plans do not include construction work areas or enabling works, these will be shown at the statutory consultation. The plans also include the Indicative Substation Zones at the proposed East Anglia Connection Node (EACN) substation as well as the existing Norwich Main, Bramford and Tilbury Substations again with refined details at these locations being presented at the statutory consultation.</p>
Constraints Plans	<p>These plans provide a detailed overview of the current proposals as per the Proposed Alignment Plans, divided over 37 sheets at 1:5,000 scale.</p> <p>The plans show the current proposals for the Project and some of the environmental and heritage constraints surrounding the 2023 preferred draft alignment. Only constraints that are discernable at this scale are shown on these plans, The constraints shown include:</p> <ul data-bbox="512 1771 1299 2056" style="list-style-type: none">• Listed buildings;• Flood Zone 3;• CRoW - conclusive registered common land/access land;• Registered Park and Gardens;• County Wildlife Sites (cover Norfolk and Suffolk) Local Wildlife Sites (cover Essex) (both designations have the same level of protection);• Scheduled Monuments;

Title	Description
	<ul style="list-style-type: none"> • Conservation Areas; • National Grid pipelines and sites; • Existing 400kV overhead lines; • Existing 132kV overhead lines; • Sites of Special Scientific Interest (SSSI); • Proposed Thames Estuary SSSI notification project; • Ancient Woodland; • Area of Outstanding Natural Beauty (AONB); and • Special Areas of Conservation (SAC).

1.4 What do the plans show?

Sections

1.4.1 The Project has been subdivided into eight sections, within each section there is an overhead line route with its route specific pylon numbering sequence; (RG, JC, and TB) as set out below. Every overhead line route in the country has a unique identifying numbering sequence for ease of reference. As the Project currently has three individual routes there is a sequence for each so that these can be referenced by the public when providing feedback:

- Section A – South Norfolk (RG);
- Section B – Mid Suffolk (RG and JC);
- Section C – Babergh and Tendering (JC and TB);
- Section D – Colchester (TB);
- Section E – Braintree (TB);
- Section F – Chelmsford (TB);
- Section G – Basildon and Brentwood (TB); and
- Section H – Thurrock (TB).

The 2023 preferred draft alignment

1.4.2 Certain consultation plans use the term 2023 preferred draft alignment when describing the route.

1.4.3 The draft alignment is a concept used to help communicate the potential route of the Project and has been developed as a result of consultation feedback, ongoing engineering design and environmental assessment work to date. It encompasses indicative locations for overhead lines, underground cables, Cable Sealing End (CSE) compounds, the EACN substation and existing substations at Norwich, Bramford and Tilbury.

1.4.4 The 2023 preferred draft alignment shown on these consultation plans is subject to consultation feedback and ongoing design development.

- 1.4.5 Moving forwards, National Grid will not be seeking approval, through the development consent order process, for a specific alignment (including fixed pylon locations). Approval will instead be sought to construct and operate the Project within parameters, known as limits of deviation (LoD).
- 1.4.6 LoD are a common feature of Nationally Significant Infrastructure Projects (NSIPs). They ensure an appropriate and necessary degree of flexibility during detailed design and construction to take account of unforeseen circumstances or localised constraints, such as unsuitable ground conditions which may require a pylon to be moved slightly for geotechnical reasons.
- 1.4.7 LoD (as well as draft Order limits, access and construction work areas and mitigation requirements) will be shown at future Project stages once the specific alignment has been developed further.
- 1.4.8 The proposed Bramford to Twinstead Reinforcement is shown on our consultation plans and therefore some sheets show not only Norwich to Tilbury but also Bramford to Twinstead (See sheets: Section B, Sheet 8; and Section C, Sheet 1). Bramford to Twinstead is being shown as per the DCO application on the assumption that the project is granted consent. Note the whole of Bramford to Twinstead is not shown on our consultation plans, only in the proximity of Bramford Substation where Norwich to Tilbury and Bramford to Twinstead proposals converge, this includes a section of distribution network operator owned 132 kV overhead line which is to be removed as part of the Bramford to Twinstead Reinforcement.

2023 preferred draft alignment underground cables

- 1.4.9 Only an indicative line for the proposed route of the underground cables is shown on our consultation plans, the construction swathe for the proposed underground cables will be larger than currently shown.
- 1.4.10 There are four sections of underground cable shown on our plans where the underground cable is shown to 'split', these sections are within the AONB, at Black Brook (west of the A12), at Great Horkesley and at Tilbury. All split sections shown are proposed to have underground cables installed, not one or the other.

AONB:

- 1.4.11 As the proposed underground cable route passes through the Dedham Vale AONB, it must cross the River Stour at a proposed location to the west of Stratford St Mary. At this location there are existing constraints in the form of a Source Protection Zone, an existing high-pressure gas pipeline and various ponds in between. The 2023 preferred draft alignment has therefore had to be 'split' to utilise two corridors to avoid these constraints.

Black Brook (West of the A12):

- 1.4.12 The proposed crossing location of Black Brook is heavily constrained. There is a reservoir to the east of the crossing point and farm buildings to the west. A residential property is located within the underground cable route that needs to be avoided. Other route alignments have been considered but there are no reasonable alternatives within or in the near vicinity of the preferred corridor. Due to the presence of these constraints the

proposed underground cable route must be ‘split’ either side of the existing residential property to provide sufficient space for the required underground cables.

Great Horkesley:

- 1.4.13 As the proposed underground cable route passes London Road to the west of Great Horkesley, due to the presence of existing constraints such as existing waterbodies, priority habitat and properties it has not been possible to identify a suitable location with sufficient width for the required underground cable construction corridor. The 2023 preferred draft alignment has therefore been ‘split’ to utilise two corridors to provide sufficient space to install the required underground cables.

Tilbury:

- 1.4.14 The proposed underground cable route must cross the existing railway line to the north of Tilbury substation near to Cooper Shaw Road. Due to the presence of existing overhead line pylons, it has not been possible to identify one corridor wide enough for the required trenchless installation. The 2023 preferred draft alignment has therefore been ‘split’ either side of existing overhead line pylons to enable the crossing of the railway line.

Other Key Features:

- 1.4.15 Other key features shown on the consultation plans and drawings are summarised in the following table:



















Table 1.2 Key Features

















Key Features	Overview
CSE compound	Compounds containing equipment needed to transfer transmission circuits between underground cables and overhead lines.
Indicative substation zones	Proposed substation zone of influence. Where existing, extended or new substations may be positioned. Defined substation boundaries to be presented at later rounds of consultation.
East Anglia Connection Node (EACN) substation	Proposed location of the East Anglia Connection Node (EACN) substation for the Project that we are seeking consultation feedback on.
Gantries	An overhead bridge-like structure supporting electrical equipment. A transition point from overhead line equipment to equipment in a substation or CSE compound.
Overhead lines	Conductors (wires) carrying electric current, strung from pylon to pylon.
2023 preferred draft alignment	This term is used to help communicate the potential alignment of the Project within the plans. It is the design as shown on the Proposed Alignment Plans, which has been developed through an iterative design process including engineering and environmental inputs alongside feedback received through consultation.
Pylons	Structures that support the overhead line (conductors). There are two types of lattice pylons; suspension, where the conductors are simply suspended from the tower and tension (angle), where the overhead line changes direction.

Key Features	Overview
Substation	Substations are used to control the flow of power through the electricity system. They are also used to change (or transform) the voltage from a higher to lower voltage to allow it to be transmitted to local homes and businesses
Underground cabling	An insulated conductor carrying electric current designed for underground installation.

1.5 Symbology

Table 1.3 Plan Legend Symbology

Plan Title	Legend Entry	Symbol
Common symbols – found across all plans	Local authority boundary	
	Preferred draft alignment overhead line	
	Preferred draft alignment underground cable	
Common symbols – found on multiple plans	Sheet index (on key plans)	
	Sheet index (on alignment plans)	
	Section boundary & local authority	
	Section boundary	
	Preferred draft alignment pylon position	
	Preferred draft alignment gantry position	
	Preferred draft indicative cable sealing end compound outline	
	Indicative substation zone (existing & proposed)	
Master key plans	Indicative substation zone (existing & proposed)	
Bramford to Twinstead reinforcement sections	Proposed indicative overhead line	
	Proposed indicative pylon position	
	Proposed indicative gantry position	
Constraint plans – environmental constraints	Listed buildings Grade I	
	Listed buildings Grade II	
	Listed buildings Grade II*	

Plan Title	Legend Entry	Symbol
	Scheduled monument	
	Conservation area	
	Registered parks and garden	
	CRoW – conclusive registered common land/access land	
	Areas of outstanding natural beauty	
	Special areas of conservation	
	Sites of special scientific interest	
	Thames estuary site of special scientific interest notification project	
	Ancient woodland	
	Wildlife site designation: County wildlife sites (cover Norfolk and Suffolk) Local wildlife sites (cover Essex)	
	Flood zone 3	
Constraint plans – existing utilities	National grid 275/400 kV overhead line	
	UKPN 132 kV overhead line	
	National Grid underground cable	
	National Grid gas pipeline	
	National Grid gas site	

1.6 How can I view the consultation plans?

1.6.1 Our plans are available to view and download on our website: (www.nationalgrid.com/norwich-to-tilbury) or in paper copy on request (a printing charge may be incurred). An interactive map is also available on our website and will also be available to view at our consultation events.

1.7 How can I provide feedback using the consultation plans?

1.7.1 Your views are important to us and will help shape our plans as our project develops further. We welcome your feedback on all aspects of our design, including any geographical areas of interest.

1.7.2 You can provide your feedback through the following channels:

- Online: Fill in our feedback form online at: www.nationalgrid.com/norwich-to-tilbury.
- In paper copy: Visit us at one of our events to collect a paper copy feedback form, which can be completed and handed to the team. You can also collect a feedback form at a deposit location, or request one by telephone or email.
- By email: You can send your comments or scanned electronic copies of our feedback questionnaire to contact@n-t.nationalgrid.com.
- By post: You can send your paper copy questionnaire or comments to: FREEPOST N TO T (please write this in capitals and you do not need a stamp).

1.7.3 You can use the consultation plans to identify geographical areas of interest along with the proposed new infrastructure in each section. You can then provide your feedback in the relevant section of the feedback questionnaire.

1.7.4 If you have any questions about the Project or require assistance with interacting with our consultation plans, please contact us using the details below:

- Email: contact@n-t.nationalgrid.com
- Freephone: 0800 151 0992

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