



NATIONAL GRID  
(NORWICH TO TILBURY)  
S.42 CONSULTATION TILBURY 400kV SUBSTATION PROPOSED SITE LAYOUT DRAWING  
SECTION H, SHEET 1 OF 1

**Legend**

- Draft order limits
- - - Underground cable construction swathe (including cable construction haul road)
- Underground cable swathe centreline
- Substation boundary
- Temporary construction compound
- Approximate exclusion zone for existing overhead lines (refer to note 12)
- Permanent substation access route
- Temporary substation haul road
- Temporary surface water attenuation drainage pond
- Temporary drainage outfall alignment
- Outfall location
- Existing pylons to be retained

**Notes**

1. This drawing is scaled at paper size A0, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.
2. These plans show the draft Order Limits. Due to the need for future flexibility, National Grid will be applying for Order Limits and Limits of Deviation within its Development Consent Order, within which any potential permanent infrastructure would be sited. Further information is provided in National Grid's 'Guide to Interacting with our Consultation Plans' document.
3. This drawing is to be read in conjunction with the Consultation Plans and Construction Access Plans.
4. This drawing is produced for development and consultation purposes only, further work is required to validate the design for construction.
5. Tilbury Substation is located at UK grid reference 566156, 176174. The design is work in progress and is relevant to the project stage at the time of issue. All further design development require further site information and engagement with relevant third parties. The detailed design shall be in accordance with relevant national design standards, as well as NG technical specifications.
7. Access to the substation for construction and operation will be via the port roads (as per the existing substation). Where permanent and temporary access routes use the same alignment, only permanent routes are shown within this drawing.
8. Due to anticipated ground conditions and settlement tolerances of the GIB equipment, it is expected that some of the proposed substation apparatus will be installed on piled foundations. Clearance to overhead lines will need to be considered during the works, especially during piling.
9. The substation layout has been assessed by vehicle tracking. It is anticipated that a girder trailer can be used to deliver the transformers and shunt reactors to their positions within the substation. The detailed layout of the substation is excluded for clarity at this stage.
10. There are no proposals to extend the existing site. However the fence line may be altered locally to suit security requirements (e.g. to include elements of the cable alignment).
11. Typical unconstrained cable construction swathe width will be 120m. Due to constraints around Tilbury, such as the Thurrock power generation site and existing OHL, a 120m swathe will not consistently be achieved. Alternative spatial arrangements have been considered, including phased installation, reduced cable spacing, removal of the haul road width and separate temporary soil storage.
12. The proposed cable alignment to the north of Tilbury substation requires work under existing OHL, which cannot be avoided. Exclusion zones are only shown where these define works boundaries.
13. The full scheme is represented within the draft Order Limits, however some design information has been omitted for clarity of the drawings.

**Drainage Notes:**

1. For both temporary and permanent drainage design the location, size and type of attenuation ponds is currently based on preliminary OS terrain 5 topographical data (vertical design accuracy to 2m) and desktop ground information. The drainage design for project has considered the anticipated worst case where possible, allowing for sufficient construction space to accommodate potential change, however the extent of potential change cannot be confirmed at this stage.
2. Pond levels, drainage pipelines, discharge points and local ground conditions will need to be confirmed to allow for a more accurate design. This will follow at later design stages upon receipt of adequate survey information.
3. Drainage design criteria is based on the requirements of local planning policy. Stakeholder engagement regarding the design criteria for drainage features is ongoing. The layouts will be reviewed and updated as necessary in subsequent design stages.
4. No allowances for potential existing field or land drainage has been made at this time. This will need to be considered following receipt of landowner information on existing drainage.
5. Filter drains have not been shown as they have not been designed at this stage. The proposed drainage attenuation/infiltration volumes do not consider attenuation through filter drains.
6. Cable swathe west of access road to discharge into existing culvert with no restriction to flow as per current pre-development conditions. Attenuation basin with controlled discharge may not be feasible in this area owing to spatial constraints provided by adjacent overhead lines.

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Issue	Date	Remarks	Drawn	Checked	Approved
A	April 2024	For statutory consultation	TL	CK	MI

Title

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National Grid Drawing Reference  
AENC-NG-ENG-DWG-0006

Scale	Sheet Size	Sheet	Issue
1:1500	A0	SHEET 1 OF 1	A

