

# Norwich to Tilbury

## Volume 6: Environmental Statement

Document: 6.13.F8 Environmental Statement Figure 13.8 - ZTV of Proposed 400kV Overhead Line by Project Section (heat mapping/number of structures theoretically visible version)

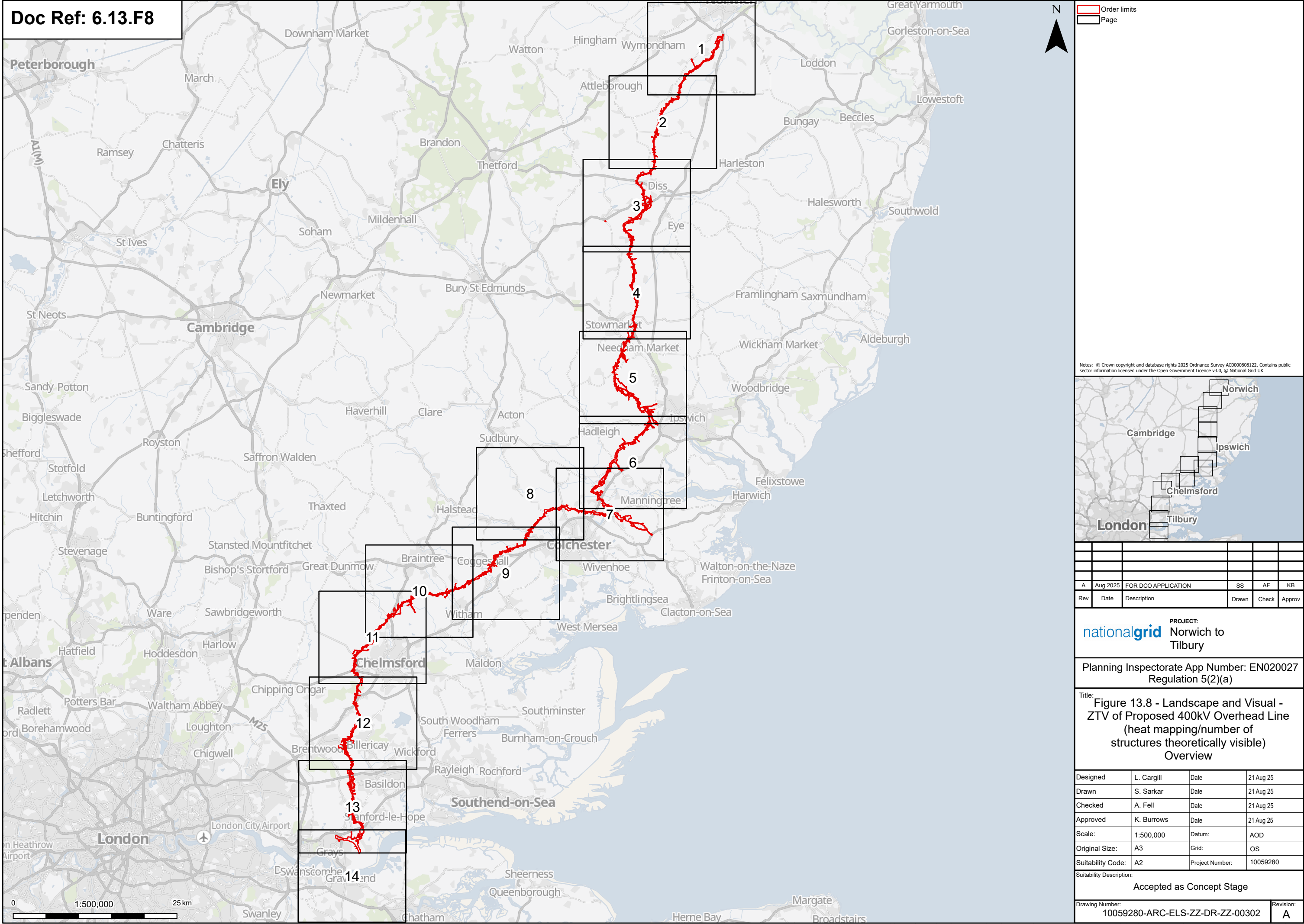
Final Issue A

August 2025

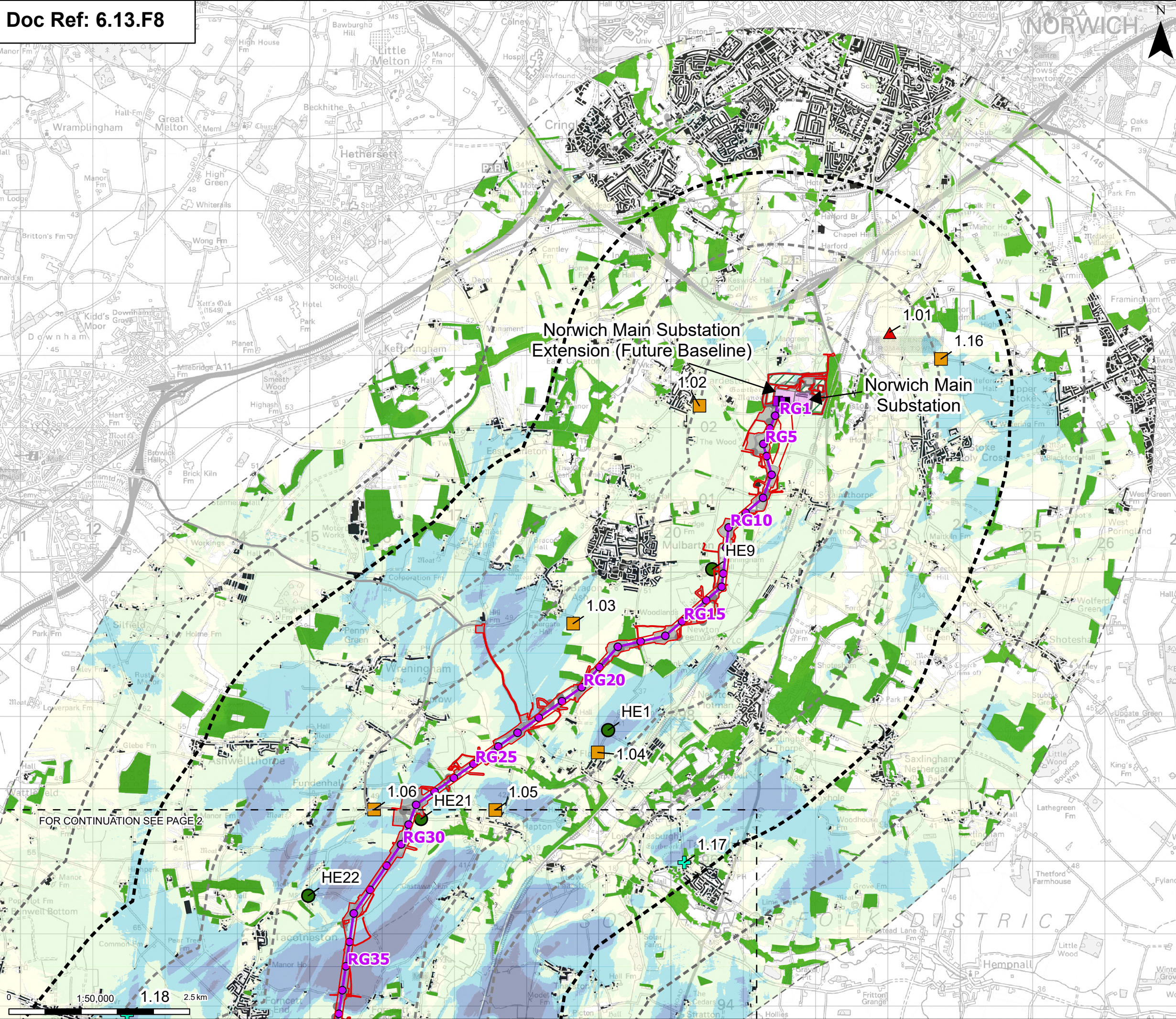
Planning Inspectorate Reference: EN020027

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 Regulation 5(2)(a)









Order limits

Sheet index outline

Proposed project design details

Proposed full line tension gantry

Proposed standard lattice pylon location

Proposed overhead line alignment

Norwich Main Substation

Norwich Main Substation Extension (future baseline)

Environmental area

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

ES landscape and visual viewpoint (baseline photo only)

ES landscape and visual viewpoint (photomontage)

ES landscape and visual viewpoint (wireslines only)

Heritage viewpoints

1 km buffer

2 km buffer

4 km buffer

5 km buffer

LVIA Study Area

Buildings

Woodland

Number of pylons theoretically visible

1 - 9

9 - 23

23 - 37

37 - 52

52 - 98

Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2). The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.

Norwich

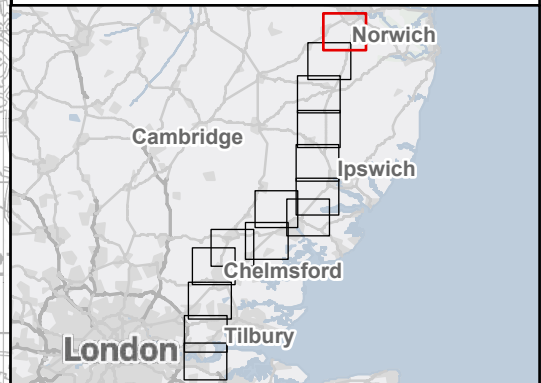
Cambridge

Ipswich

Chelmsford

Tilbury

London



A	Aug 2025	FOR DCO APPLICATION	SS	AF	KB
Rev	Date	Description	Drawn	Check	Approv

PROJECT:

nationalgrid

Norwich to Tilbury

Planning Inspectorate App Number: EN020027

Regulation 5(2)(a)

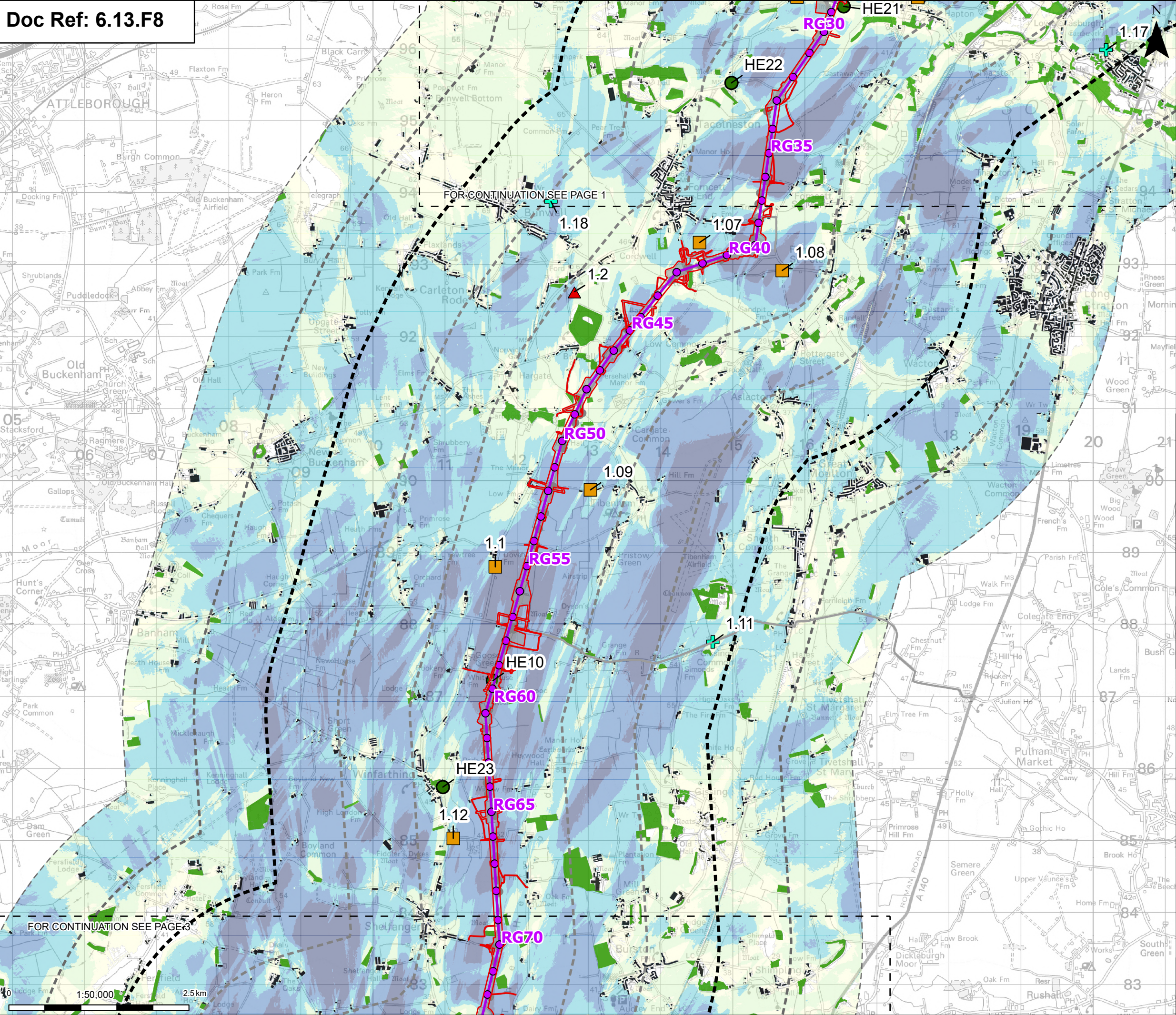
Title:

Figure 13.8 - Landscape and Visual - ZTV of Proposed 400kV Overhead Line (heat mapping/number of structures theoretically visible)

Page 1 of 14

Designed	L. Cargill	Date	21 Aug 25
Drawn	S. Sarkar	Date	21 Aug 25
Checked	A. Fell	Date	21 Aug 25
Approved	K. Burrows	Date	21 Aug 25
Scale:	1:50,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	10059280
Suitability Description:			
Accepted as Concept Stage			
Drawing Number:			Revision:
10059280-ARC-ELS-ZZ-DR-ZZ-00302			A





**Order limits**

- Sheet index outline

**Proposed project design details**

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Other temporary and permanent construction and operational works

**Discipline specific constraints**

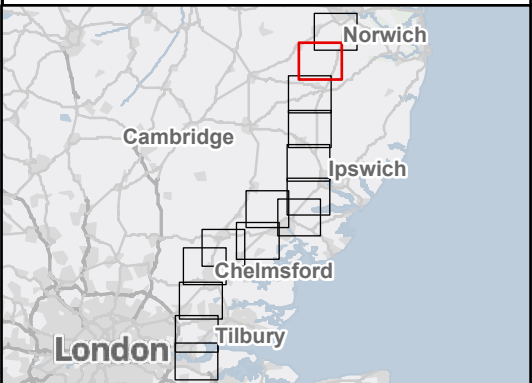
- ES landscape and visual viewpoint (baseline photo only)
- ES landscape and visual viewpoint (photomontage)
- ES landscape and visual viewpoint (wireslines only)
- Heritage viewpoints

**Number of pylons theoretically visible**

- 1 - 9
- 9 - 23
- 23 - 37
- 37 - 52
- 52 - 98

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Note: The proposed overhead line alignment and proposed underground cable alignment together comprise the alignment. For further details regarding the design, please refer to Figures 4.1 (document reference 6.4.F1) and 4.2 (document reference 6.4.F2). The ZTV indicates the theoretical visibility of the project from a viewing height of 2m above ground level. The terrain model is based on LiDAR 2m digital terrain model (DTM) data (obtained from Defra in December 2024), edited to create an indicative digital surface model (DSM), incorporating existing buildings (OS VMD building data) and existing woodland (Forestry Commission NFI 2023 data, categories assumed woodland, broadleaved, conifer, mixed mainly broadleaved and mixed mainly conifer). Hedgerows have not been modelled and proposed mitigation planting around the CSE compounds, Norwich Main Substation, EACN substation and Tilbury North Substation has not been taken into account. Earth curvature and atmospheric refraction have been taken into account. The ZTV was calculated using ArcGIS Pro 3.4.0 software.



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**PROJECT:**  
nationalgrid Norwich to Tilbury

Planning Inspectorate App Number: EN020027  
Regulation 5(2)(a)

Title:  
Figure 13.8 - Landscape and Visual - ZTV of Proposed 400kV Overhead Line (heat mapping/number of structures theoretically visible)  
Page 2 of 14

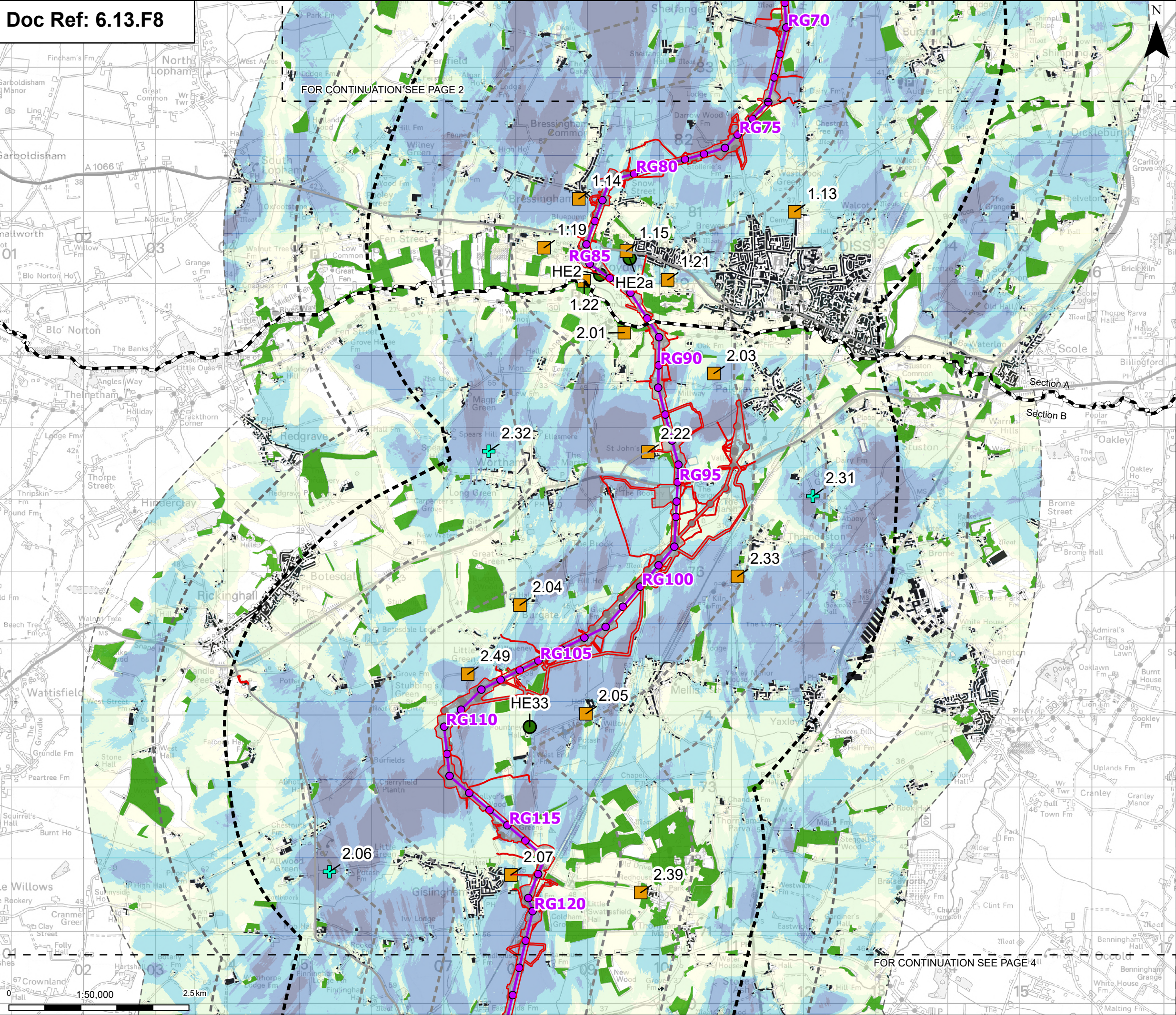
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Suitability Description:  
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Revision:  
A





**Order limits**

- Sheet index outline
- Project section line

**Proposed project design details**

- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Environmental mitigation
- Other temporary and permanent construction and operational works

**Discipline specific constraints**

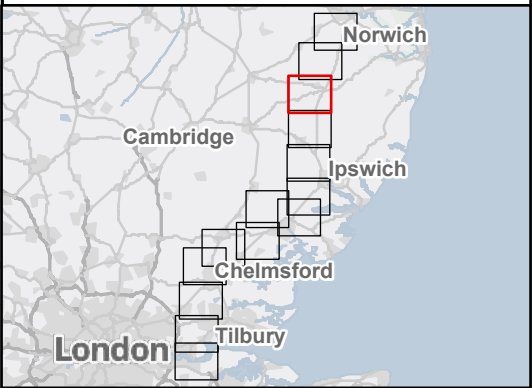
- ES landscape and visual viewpoint (photomontage)
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- Heritage viewpoints

**Number of pylons theoretically visible**

- 1 - 9
- 9 - 23
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PROJECT: **Norwich to Tilbury**

Planning Inspectorate App Number: EN020027  
Regulation 5(2)(a)

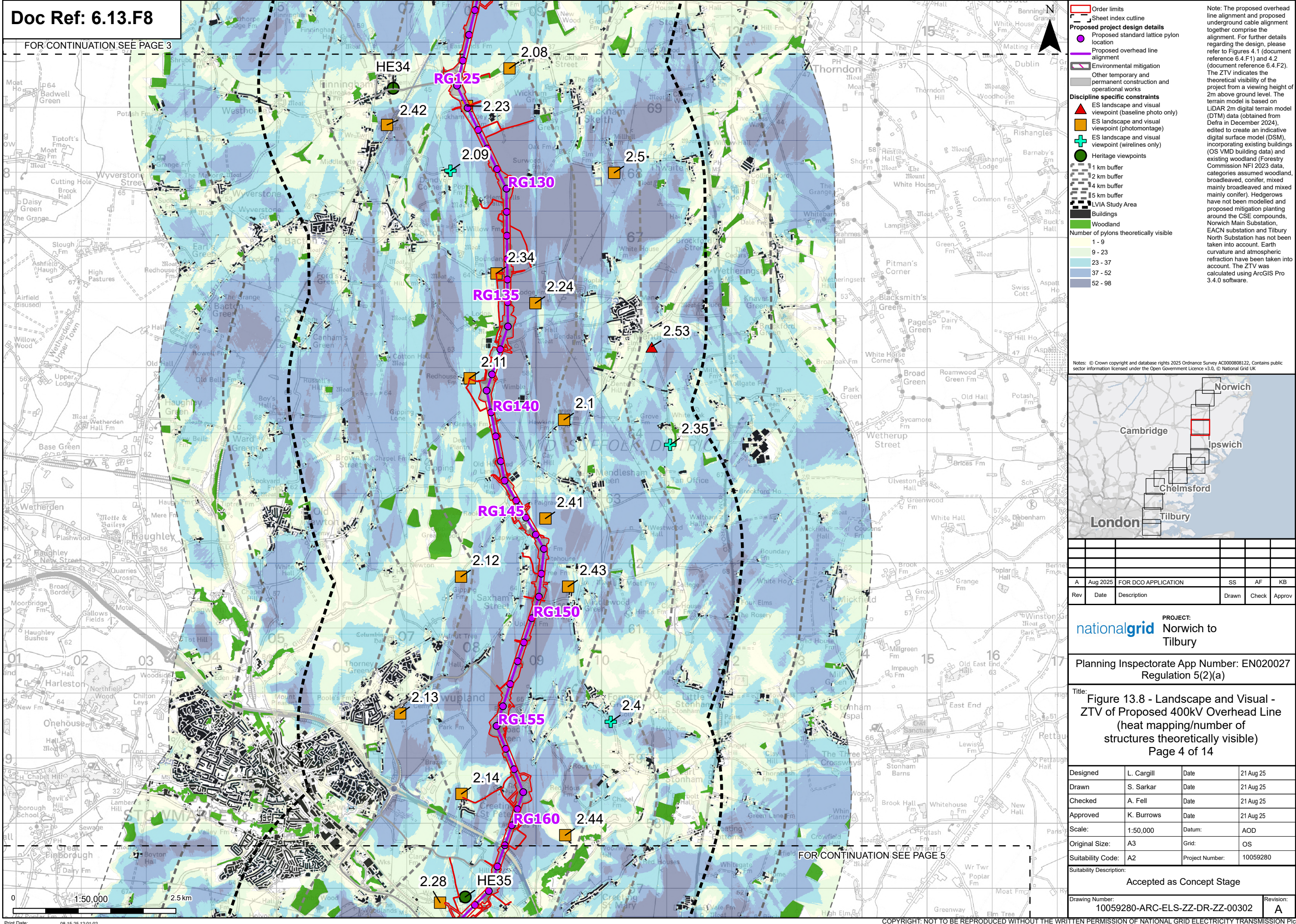
Title: **Figure 13.8 - Landscape and Visual - ZTV of Proposed 400kV Overhead Line (heat mapping/number of structures theoretically visible)**  
Page 3 of 14

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Suitability Code:	A2	Project Number:	10059280

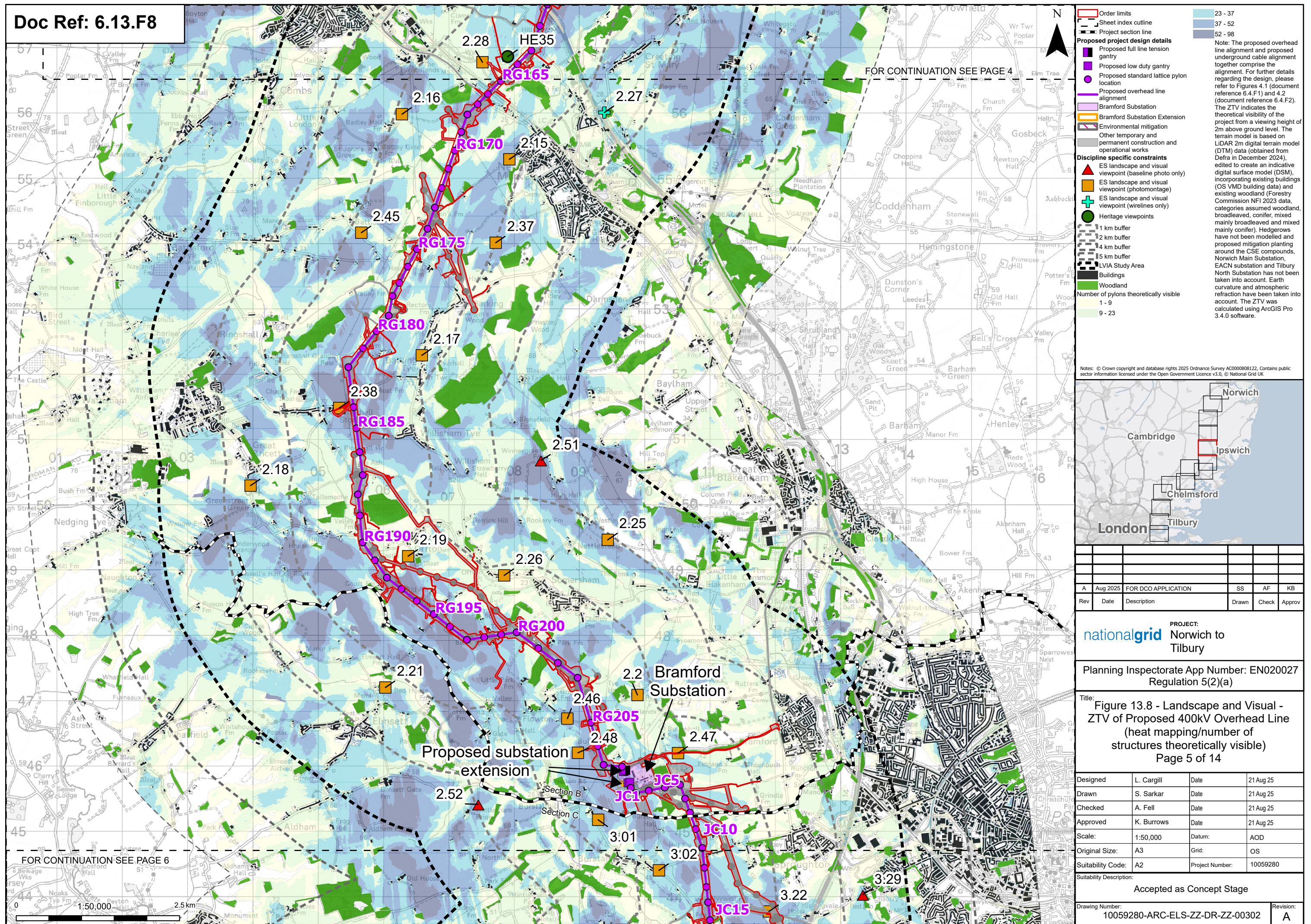
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Drawing Number: **10059280-ARC-ELS-ZZ-DR-ZZ-00302**  
Revision: **A**

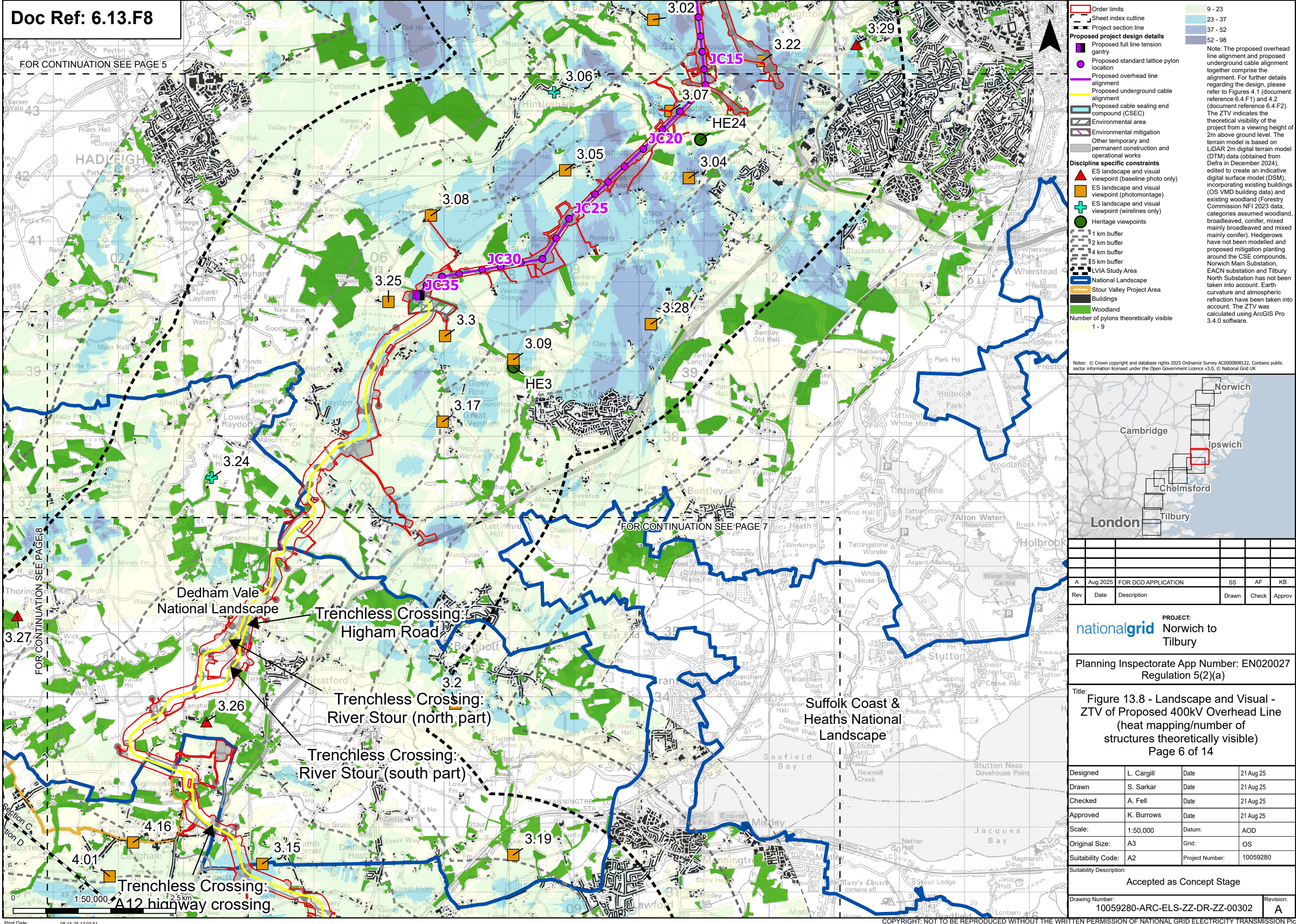




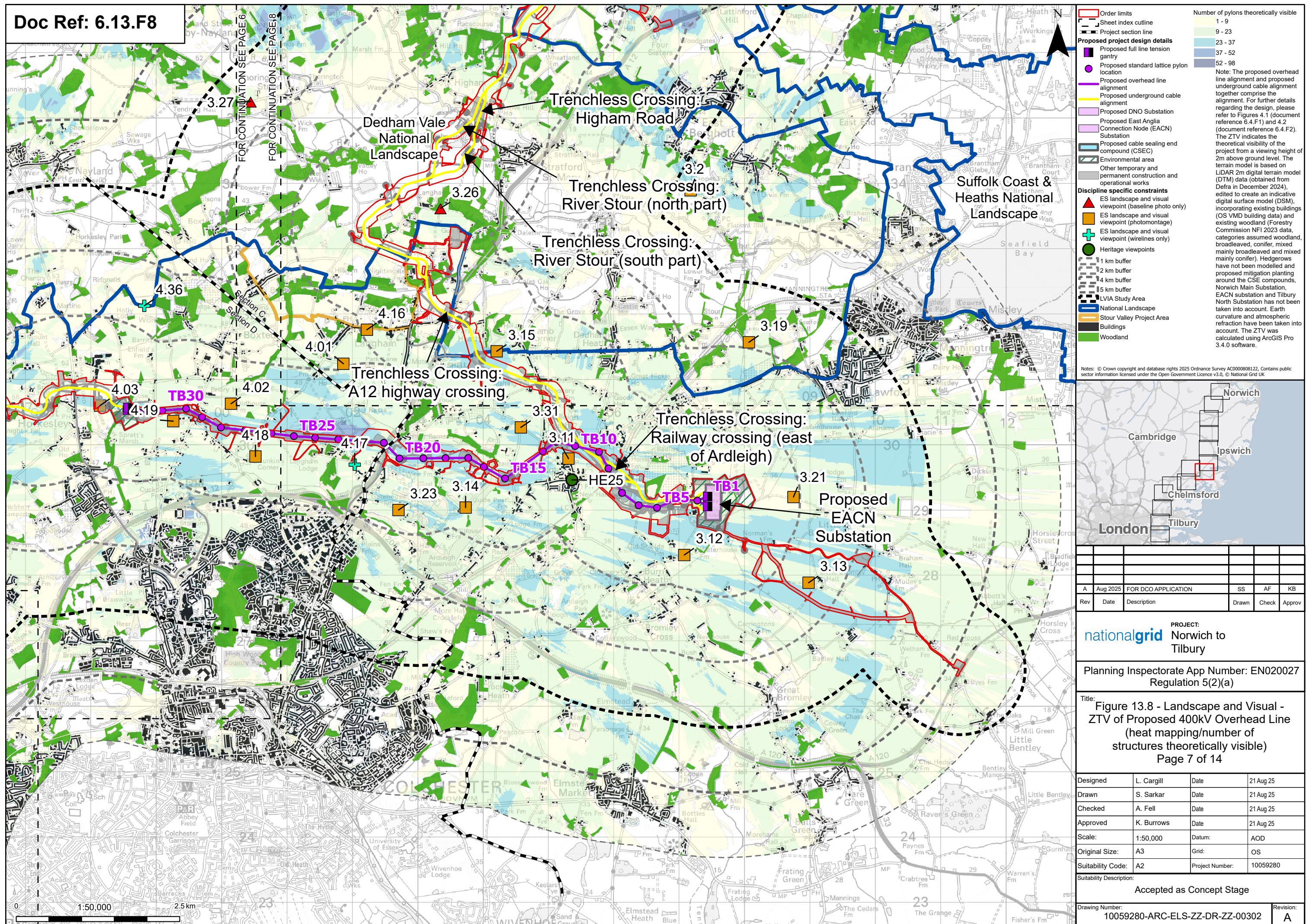




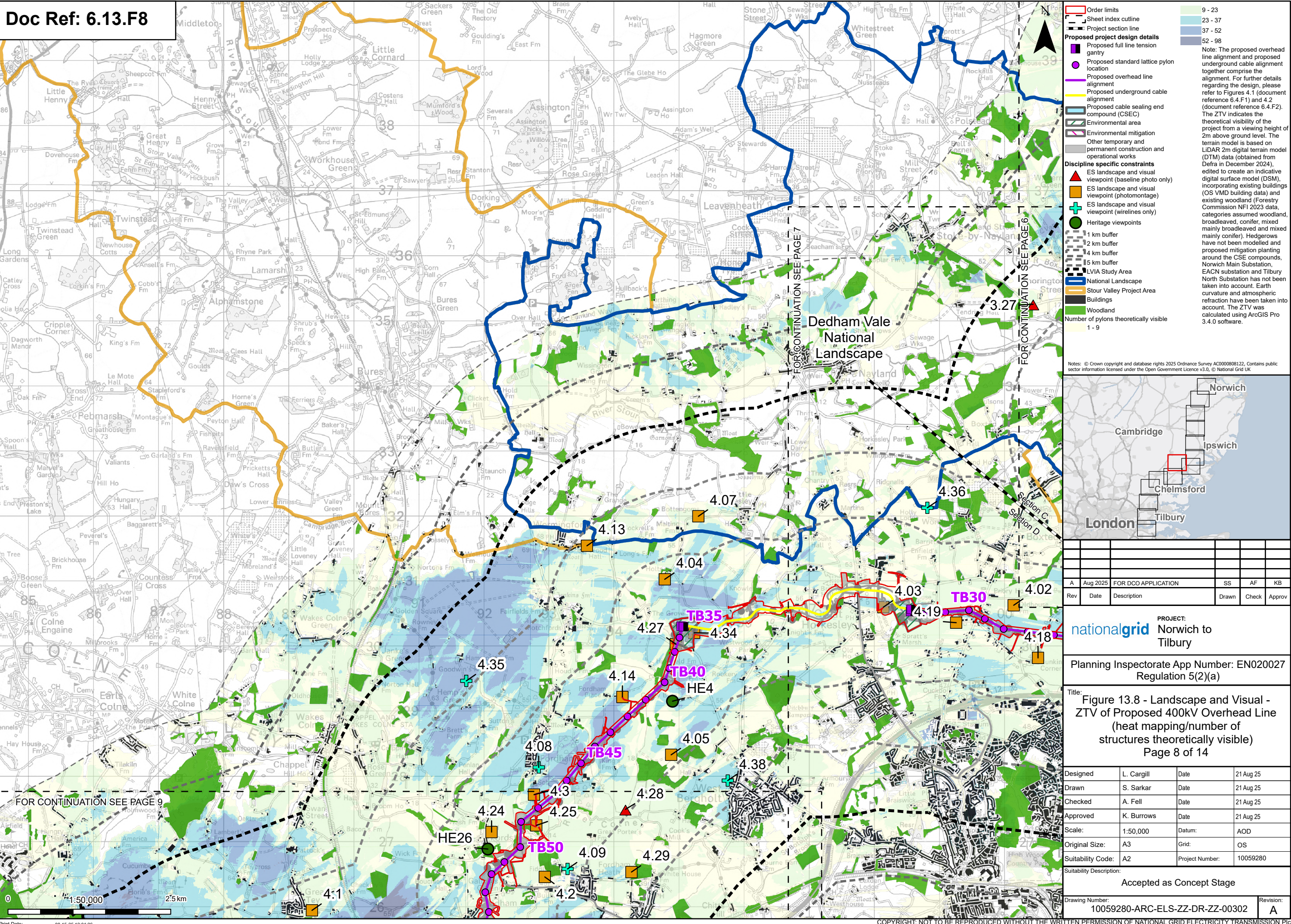




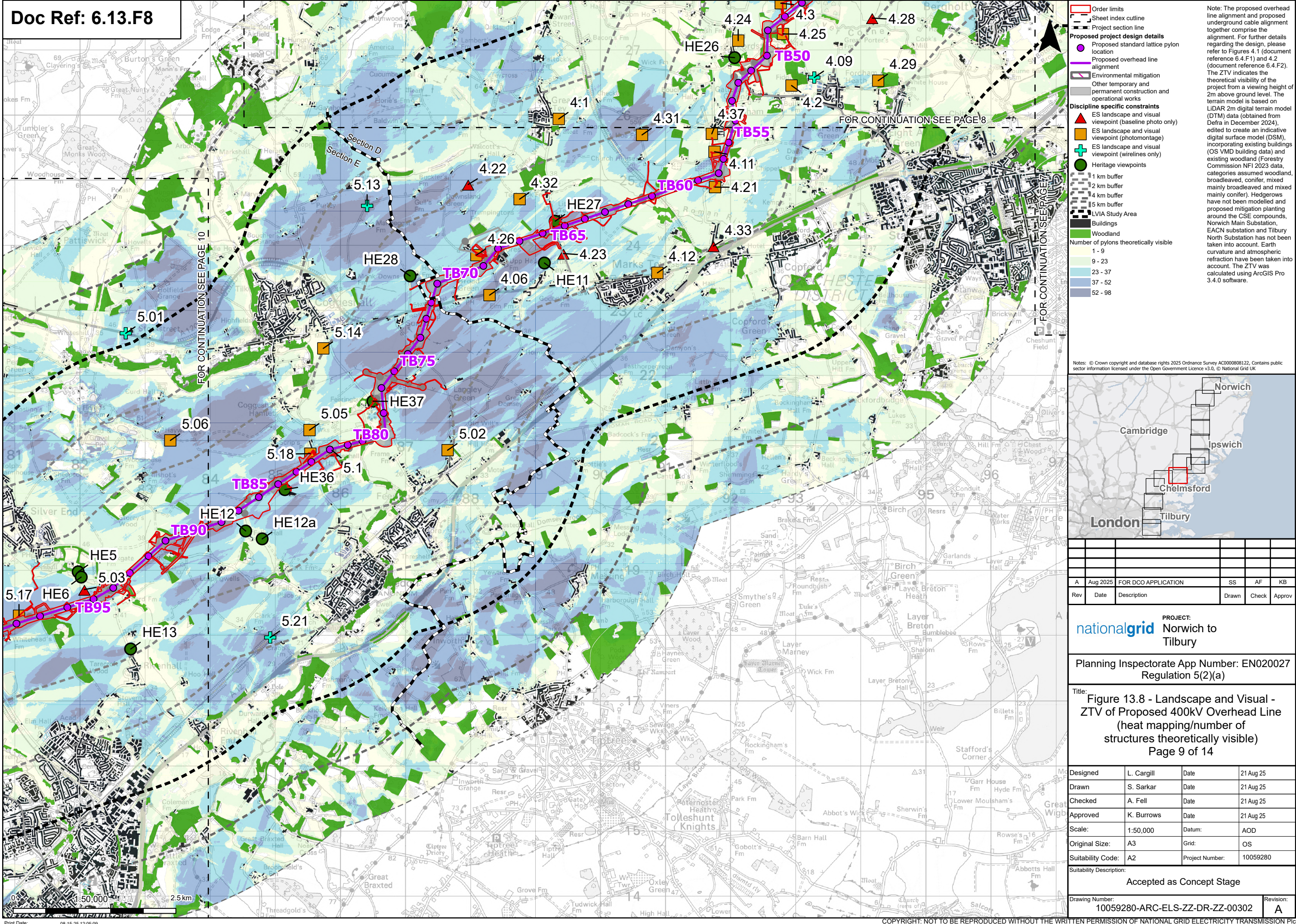




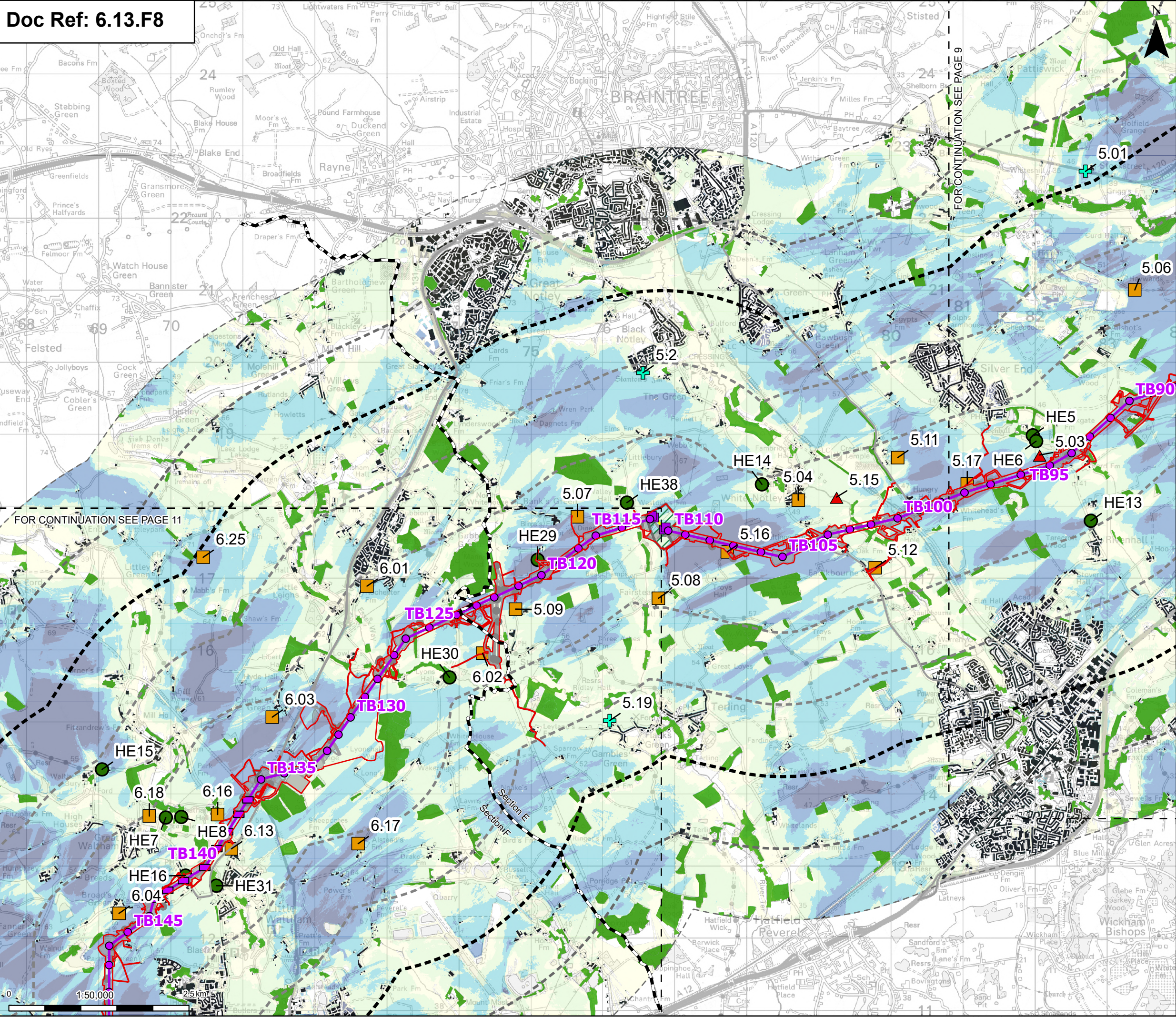












**Order limits**

- Sheet index outline
- Project section line

**Proposed project design details**

- Proposed low duty gantry
- Proposed low height pylon location
- Proposed standard lattice pylon location
- Proposed overhead line alignment
- Proposed underground cable alignment
- Proposed cable sealing end compound (CSEC)
- Environmental area
- Environmental mitigation
- Other temporary and permanent construction and operational works

**Discipline specific constraints**

- ES landscape and visual viewpoint (baseline photo only)
- ES landscape and visual viewpoint (photomontage)
- ES landscape and visual viewpoint (wires only)
- Heritage viewpoints

**Number of pylons theoretically visible**

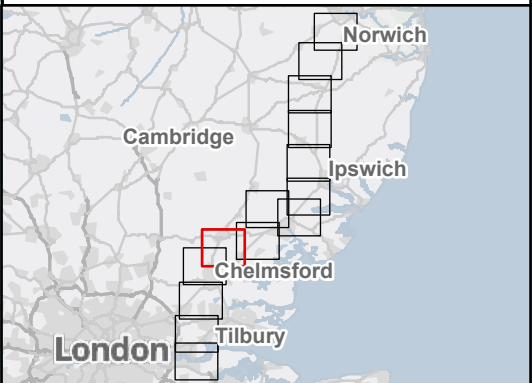
- 1 - 9

**Number of pylons theoretically visible**

- 1 - 9

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**PROJECT:**  
nationalgrid Norwich to Tilbury

Planning Inspectorate App Number: EN020027  
Regulation 5(2)(a)

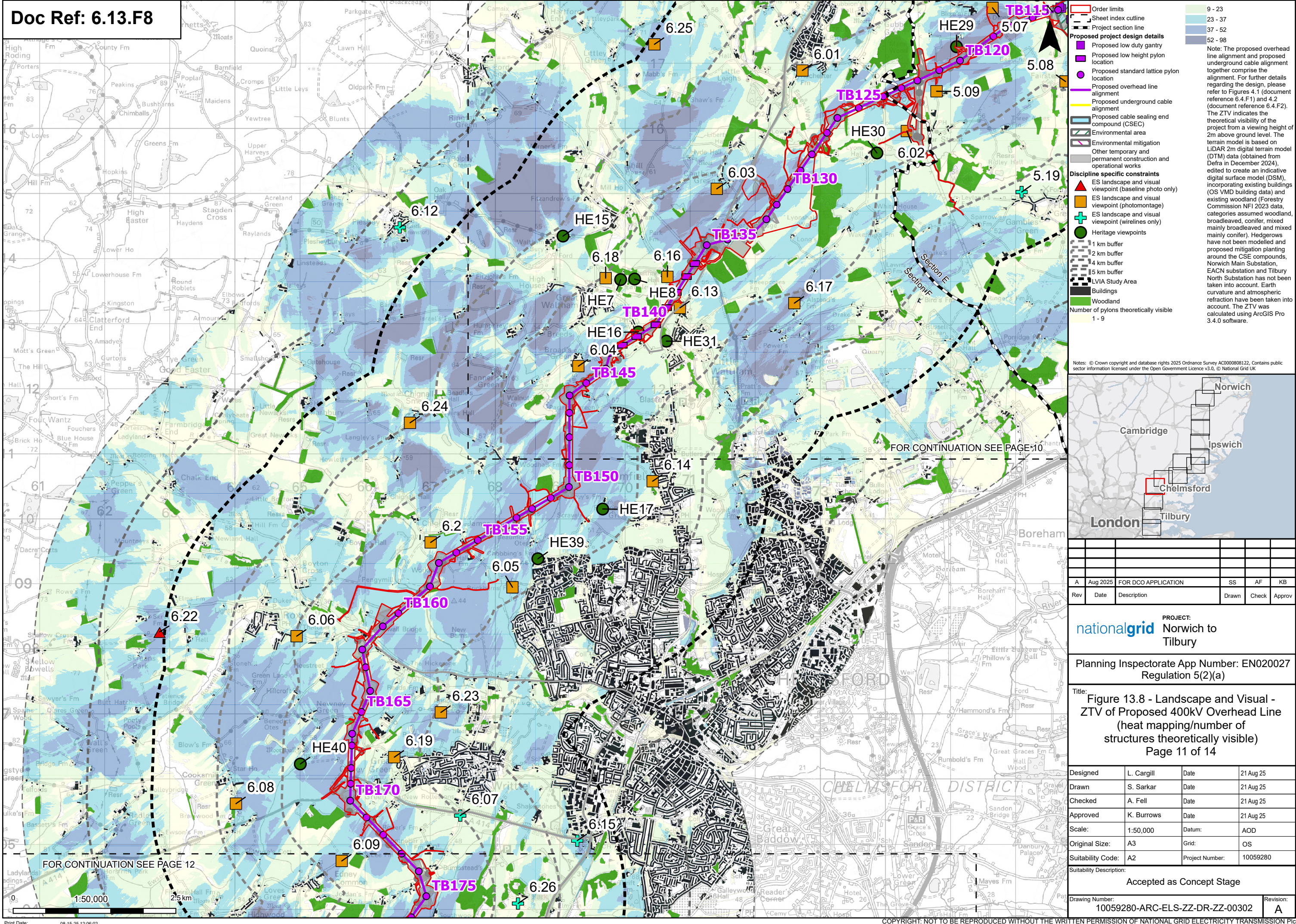
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Figure 13.8 - Landscape and Visual -  
ZTV of Proposed 400kV Overhead Line  
(heat mapping/number of  
structures theoretically visible)  
Page 10 of 14

Designed	L. Cargill	Date	21 Aug 25
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Suitability Code:	A2	Project Number:	10059280

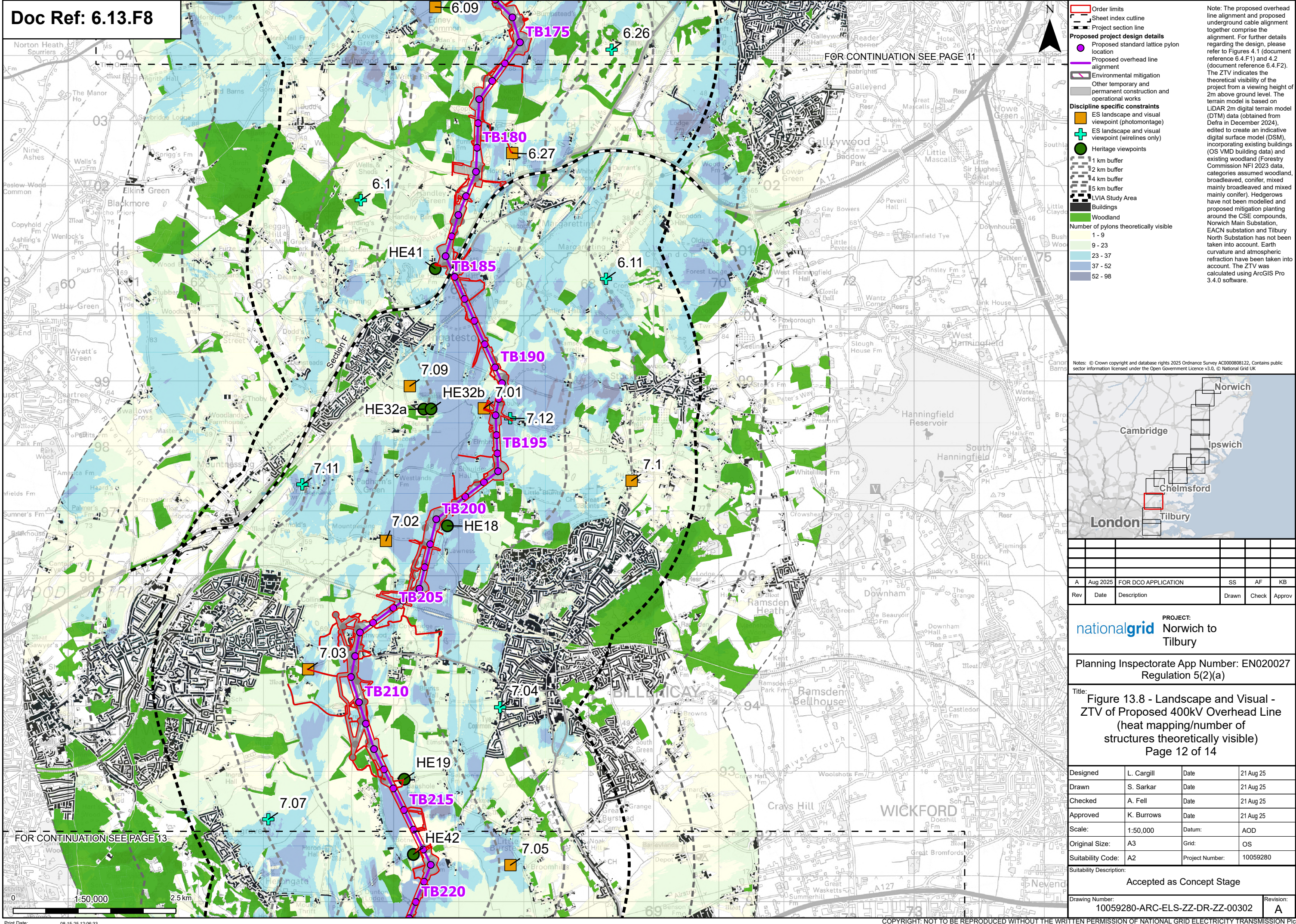
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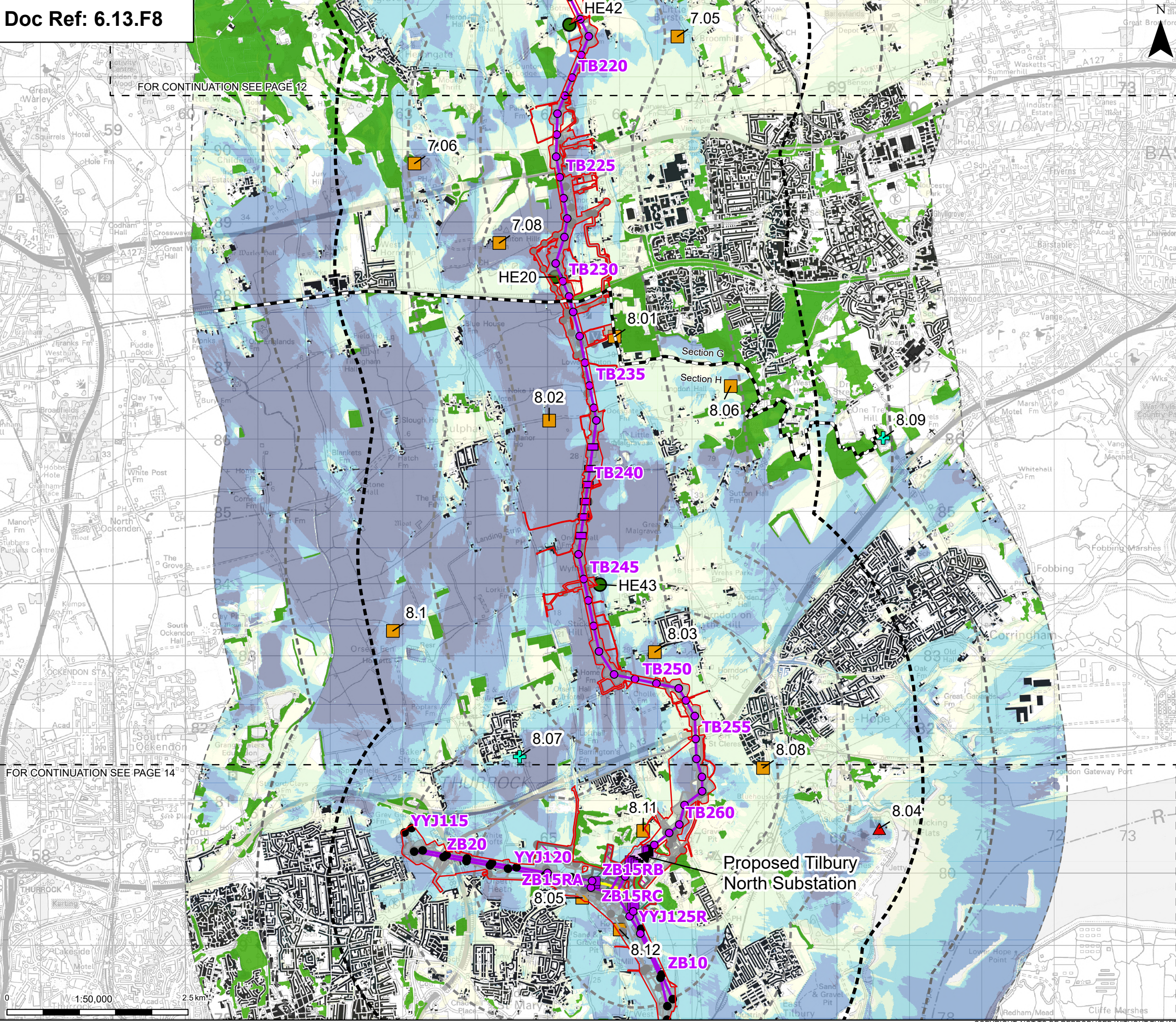






FOR CONTINUATION SEE PAGE 12

FOR CONTINUATION SEE PAGE 14



Order limits

Sheet index outline

Project section line

Proposed project design details

Proposed full line tension gantry

Proposed low duty gantry

Proposed low height pylon location

Existing pylon (modify)

Proposed standard lattice pylon location

Proposed overhead line alignment

Proposed underground cable alignment

Proposed Tilbury North Substation

Proposed cable sealing end compound (CSEC)

Environmental area

Environmental mitigation

Other temporary and permanent construction and operational works

Discipline specific constraints

ES landscape and visual viewpoint (baseline photo only)

ES landscape and visual viewpoint (photomontage)

ES landscape and visual viewpoint (wirelines only)

Heritage viewpoints

1 km buffer

2 km buffer

4 km buffer

5 km buffer

LVIA Study Area

Buildings

Woodland

Number of pylons theoretically visible

1 - 9

9 - 23

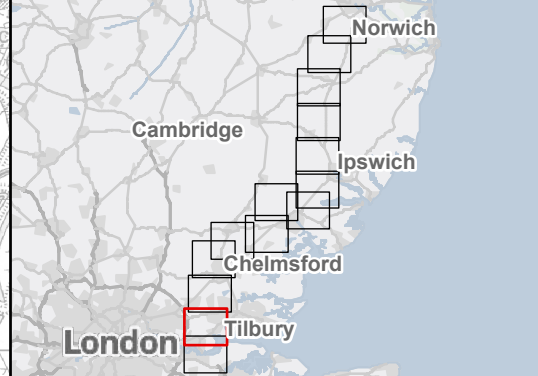
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37 - 52

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PROJECT:

nationalgrid

Norwich to Tilbury

Planning Inspectorate App Number: EN020027  
Regulation 5(2)(a)

Title:

Figure 13.8 - Landscape and Visual - ZTV of Proposed 400kV Overhead Line (heat mapping/number of structures theoretically visible)  
Page 13 of 14

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