



# Tween Bridge Solar Farm

A Nationally Significant Infrastructure Project in the Energy Sector

---

## Preliminary Environmental Information Report

### Technical Appendix 1.1 – Planning Inspectorate EIA Scoping Opinion

October 2023



Visit: [www.tweenbridgesolar.co.uk](http://www.tweenbridgesolar.co.uk)  
Email: [info@tweenbridgesolar.co.uk](mailto:info@tweenbridgesolar.co.uk)



---

# **SCOPING OPINION:**

## **Proposed Tween Bridge Solar Farm**

**Case Reference: EN010148**

---

Adopted by the Planning Inspectorate (on behalf of the Secretary of State) pursuant to Regulation 10 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

**13 March 2023**



## TABLE OF CONTENTS

|  |   |           |
|--|---|-----------|
| <b>1.</b>  | <b>INTRODUCTION .....</b>                     | <b>1</b>  |
| <b>2.</b>  | <b>OVERARCHING COMMENTS .....</b>             | <b>3</b>  |
| 2.1  | Description of the Proposed Development.....  | 3         |
| 2.2  | EIA Methodology and Scope of Assessment ..... | 8         |
| <b>3.</b>  | <b>ENVIRONMENTAL ASPECT COMMENTS .....</b>    | <b>10</b> |
| 3.1  | Major Accidents and Disasters .....           | 10        |
| 3.2  | Climate Change and Climatic Factors .....     | 12        |
| 3.3  | Human Health.....                             | 14        |
| 3.4  | Waste.....                                    | 15        |
| 3.5  | Landscape and Visual.....                     | 17        |
| 3.6  | Nature Conservation and Biodiversity .....    | 19        |
| 3.7  | Cultural Heritage .....                       | 26        |
| 3.8  | Ground Conditions.....                        | 29        |
| 3.9  | Hydrology and Flood Risk.....                 | 31        |
| 3.10   | Socio Economics .....                         | 34        |
| 3.11   | Transport and Access .....                    | 35        |
| 3.12   | Acoustics Considerations .....                | 37        |
| 3.13   | Air Quality and Carbon Saving .....           | 39        |
| 3.14   | Agriculture .....                             | 41        |
| 3.15   | Glint and Glare.....                          | 43        |
| <br>   |   |           |
| <b>APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED</b>            |   |           |
| <br>   |   |           |
| <b>APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES</b> |   |           |

## 1. INTRODUCTION

- 1.0.1 On 31 January 2023, the Planning Inspectorate (the Inspectorate) received an application for a Scoping Opinion from RWE Renewables Ltd (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed Tween Bridge Solar Farm (the Proposed Development). The Applicant notified the Secretary of State (SoS) under Regulation 8(1)(b) of those regulations that they propose to provide an Environmental Statement (ES) in respect of the Proposed Development and by virtue of Regulation 6(2)(a), the Proposed Development is 'EIA development'.
- 1.0.2 The Applicant provided the necessary information to inform a request under EIA Regulation 10(3) in the form of a Scoping Report, available from:  
  
<http://infrastructure.planninginspectorate.gov.uk/document/EN010148-000013>
- 1.0.3 This document is the Scoping Opinion (the Opinion) adopted by the Inspectorate on behalf of the SoS. This Opinion is made on the basis of the information provided in the Scoping Report, reflecting the Proposed Development as currently described by the Applicant. This Opinion should be read in conjunction with the Applicant's Scoping Report.
- 1.0.4 The Inspectorate has set out in the following sections of this Opinion where it has/ has not agreed to scope out certain aspects/ matters on the basis of the information provided as part of the Scoping Report. The Inspectorate is content that the receipt of this Scoping Opinion should not prevent the Applicant from subsequently agreeing with the relevant consultation bodies to scope such aspects/ matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects/ matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.
- 1.0.5 Before adopting this Opinion, the Inspectorate has consulted the 'consultation bodies' listed in Appendix 1 in accordance with EIA Regulation 10(6). A list of those consultation bodies who replied within the statutory timeframe (along with copies of their comments) is provided in Appendix 2. These comments have been taken into account in the preparation of this Opinion.
- 1.0.6 The Inspectorate has published a series of advice notes on the National Infrastructure Planning website, including [Advice Note 7: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping \(AN7\)](#). AN7 and its annexes provide guidance on EIA processes during the pre-application stages and advice to support applicants in the preparation of their ES.
- 1.0.7 Applicants should have particular regard to the standing advice in AN7, alongside other advice notes on the Planning Act 2008 (PA2008) process, available from:

<https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

- 1.0.8 This Opinion should not be construed as implying that the Inspectorate agrees with the information or comments provided by the Applicant in their request for an opinion from the Inspectorate. In particular, comments from the Inspectorate in this Opinion are without prejudice to any later decisions taken (e.g. on formal submission of the application) that any development identified by the Applicant is necessarily to be treated as part of a Nationally Significant Infrastructure Project (NSIP) or Associated Development or development that does not require development consent.

## 2. OVERARCHING COMMENTS

### 2.1 Description of the Proposed Development

(Scoping Report Section 2)

| ID    | Ref                | Description         | Inspectorate's comments   |
|-------|--------------------|---------------------|---|
| 2.1.1 | n/a                | Project description | <p>The description of the Proposed Development within the Scoping Report is relatively high level (at this stage) which does affect the level of detail possible in the Inspectorate's comments. In particular, the Inspectorate notes that the locations of principal development components within the application site are described as indicative and the anticipated height of the Battery Energy Storage System (BESS), which is likely to be a prominent feature of the Proposed Development, has not been provided.</p> <p>The Inspectorate understands that at this point in the evolution of the Proposed Development, a final description of the development is not yet confirmed, and the red line boundary is likely to be refined. However, the Applicant should be aware that the description of the Proposed Development provided in the ES must be sufficiently certain to meet the requirements of the EIA Regulations. The description of the Proposed Development in the ES should make reference to the design, size and locations of each element, including maximum heights, design parameters and limits of deviation. The description should be supported (as necessary) by figures, cross sections and drawings which should be clearly and appropriately referenced.</p> |
| 2.1.2 | Paras 2.9 and 2.23 | Temporary roadways  | <p>The ES should describe the type of temporary roadways required, along with their anticipated location and duration of use. Any likely significant effects resulting from their installation, use and removal should be assessed.</p>   |

| ID    | Ref                         | Description                | Inspectorate's comments  |
|-------|-----------------------------|----------------------------|--|
| 2.1.3 | Paras 2.10 and 2.27 to 2.28 | Management and maintenance | <p>The ES should describe the potential scope and duration of maintenance works that would be required during the operation of the Proposed Development, including predicted vehicle movements and staffing numbers.</p> <p>The proposals for ongoing management and maintenance of the land between and beneath the solar arrays should be confirmed in the ES, including any planting/ seeding or animal grazing, with reference to the proposed Landscape and Ecological Management Plan (LEMP).</p> <p>Proposals for maintaining vegetation around easements and the Public Rights of Way (PRoW) within the application site should also be described.</p> |
| 2.1.4 | Paras 2.12 to 2.14          | Underground cables         | <p>The ES should describe the likely routing for the underground cabling, widths and depths of the cable trenches and the works required, including any dewatering of excavations.</p>   |
| 2.1.5 | Para 2.14 and Appendix 2.1  | Trenchless crossings       | <p>Appendix 2.1 of the Scoping Report identifies one indicative location for Horizontal Directional Drilling (HDD), although paragraph 2.14 indicates that additional sections of HDD may be required.</p> <p>The location of all trenchless crossings should be identified within the ES. Where trenchless installation is relied upon to mitigate potential significant effects, the Applicant should ensure this construction method is demonstrably secured.</p>   |
| 2.1.6 | Para 2.17                   | Separate consents          | <p>Paragraph 2.17 of the Scoping Report references the potential need for separate applications in relation to the proposed National Grid substation. The description of the Proposed Development in the ES and the assessment of likely significant effects should include all design characteristics and parameters applicable to the entire development. The ES should explain the anticipated routes for</p>   |

| ID     | Ref                 | Description         | Inspectorate's comments  |
|--------|---------------------|---------------------|--|
|        |                     |                     | consenting the elements of the Proposed Development that do not form part of the DCO application.  |
| 2.1.7  | Para 2.17           | Project description | If any additional pylons/ new overhead lines are required as part of the Proposed Development, this should be described in the ES. Impacts from any additional pylons/ new overhead lines which are likely to result in significant effects should be assessed in relevant aspect chapters (such as Landscape and Visual, and Nature Conservation and Biodiversity). |
| 2.1.8  | Paras 2.18 and 2.21 | Lighting            | The ES should describe the lighting requirements for all elements and phases of the Proposed Development. It should be explained what measures are proposed to minimise light spill.   |
| 2.1.9  | Para 2.19           | BESS                | The description of the physical characteristics and technical capacity of the BESS should be developed in the ES to include details such as battery technology type/ specification and anticipated number of containerised battery units.  |
| 2.1.10 | Paras 2.22 to 2.25  | Construction        | A high-level description of the characteristics of the construction phase has been provided. This description should be developed in the ES to include details of the likely commencement date, duration and location of the required construction activities. The anticipated numbers of construction workers should also be stated.                                |
| 2.1.11 | Paras 2.22 to 2.25  | Construction        | The ES should provide details of the anticipated construction working hours (including any night-time working required) and activities on which the assessments of likely significant effect have been based. This should be consistent with the working hours specified in the dDCO.  |



| ID     | Ref                | Description               | Inspectorate's comments  |
|--------|--------------------|---------------------------|--|
| 2.1.12 | Paras 2.23 to 2.25 | Construction compound(s)  | The ES should confirm the locations and sizes of the main construction compound and smaller compounds and where possible, show detailed layouts. Any mitigation measures proposed to avoid or minimise impacts relating to the use of compounds should be described in the ES.   |
| 2.1.13 | Paras 8.12 to 8.15 | Works to drainage ditches | If the Proposed Development includes works that may affect the existing drainage regime including ditches these should be assessed in the ES. In particular the assessment should focus on upgrades to or construction of crossing points, including any crossings required temporarily for construction.  |
| 2.1.14 | Para 14.16         | Panels                    | <p>The Scoping Report states that it is unknown whether the proposed panels will be static or tracking, or a combination thereof. Where possible the Inspectorate recommends this decision is made prior to submission of the DCO application. If this is not possible, the ES should identify and assess the worst-case scenario for applicable topics (including Landscape and Visual, Cultural Heritage and Glint and Glare) during operation.</p> <p>If tracking panels are to be used, the ES should assess the potential for significant noise effects on ecological and human receptors during operation.</p> |
| 2.1.15 | n/a                | Impacts from dewatering   | Impacts from any dewatering which are likely to result in significant effects should be assessed in relevant ES aspect chapters (such as Cultural Heritage and Ground Conditions).   |
| 2.1.16 | n/a                | Existing infrastructure   | The Scoping Report identifies a number of existing infrastructure assets within or in proximity to the application site, including overhead lines, wind farms, transport infrastructure and the Stainforth and Keadby Canal. The assessment in the ES should take into account the location of existing infrastructure and identify any  |

| ID     | Ref | Description       | Inspectorate's comments   |
|--------|-----|-------------------|---|
|        |     |                   | interactions between it and the Proposed Development. Any significant effects that are likely to occur should be assessed. The Applicant's attention is drawn to the scoping consultation responses including from National Grid Electricity Transmission Plc, Network Rail, Northern Gas Networks and the Canal and River Trust (Appendix 2 of this Opinion) which highlight infrastructure likely to be affected.                               |
| 2.1.17 | n/a | Vehicle movements | The ES should detail the number of anticipated vehicle movements during all phases of the Proposed Development and explain the assumptions upon which these have been established.  |
| 2.1.18 | n/a | Decommissioning   | The ES should provide a description of the activities and works which are likely to be required during decommissioning of the Proposed Development, including the anticipated duration. Where significant effects are likely to occur as a result of decommissioning the Proposed Development, these should be described and assessed in the ES. Any proposals for restoration of the site to agricultural or other use should also be described. |

## 2.2 EIA Methodology and Scope of Assessment

(Scoping Report Section 3)

| ID    | Ref                 | Description         | Inspectorate's comments  |
|-------|---------------------|---------------------|--|
| 2.2.1 | Para 3.3            | Baseline conditions | <p>The Scoping Report provides a description of "<i>preliminary</i>" baseline conditions. Each ES aspect chapter should describe the baseline environment relevant to that aspect in full, including a comprehensive list of the data sources used. Where the baseline is informed by technical reports, these should be included where relevant as technical appendices.</p> <p>The future baseline scenario without implementation of the Proposed Development should also be described in the ES.</p> |
| 2.2.2 | Paras 3.5 to 3.14   | Sensitive receptors | <p>Noting that this information has not been presented in respect of all Scoping Report aspect chapters, the ES should provide a description of sensitive receptors and justify their selection, with reference to the extent of the likely impacts. The ES aspect chapters should explain how the sensitivity of receptors and the magnitude of the impact have been determined. Where appropriate, the locations of receptors should be illustrated on accompanying figures.</p>                       |
| 2.2.3 | Paras 3.20 and 3.21 | Cumulative effects  | <p>It is recommended that the cumulative assessment follows the methodology set out in the Inspectorate's Advice Note Seventeen. Specific other developments for inclusion in the cumulative assessment have not been identified at this stage and effort should be made to agree these with relevant consultation bodies including the host local planning authorities.</p>   |
| 2.2.4 | n/a                 | Study area(s)       | <p>The ES should, for each aspect chapter, clearly define and justify the study area(s) used for the assessment of effects from the Proposed</p>   |

| ID    | Ref | Description            | Inspectorate's comments  |
|-------|-----|------------------------|--|
|       |     |                        | Development alone and cumulatively with other development. The study area(s) should be represented on accompanying figures.  |
| 2.2.5 | n/a | Residues and emissions | The ES should provide an estimate, by type and quantity, of anticipated residues and emissions resulting from construction and operation of the Proposed Development, as required by Schedule 4 (1)(d) of the EIA Regulations 2017.  |
| 2.2.6 | n/a | Transboundary          | <p>The Inspectorate on behalf of the SoS has considered the Proposed Development and concludes that the Proposed Development is unlikely to have a significant effect either alone or cumulatively on the environment in a European Economic Area State. In reaching this conclusion the Inspectorate has identified and considered the Proposed Development's likely impacts including consideration of potential pathways and the extent, magnitude, probability, duration, frequency and reversibility of the impacts.</p> <p>The Inspectorate considers that the likelihood of transboundary effects resulting from the Proposed Development is so low that it does not warrant the issue of a detailed transboundary screening. However, this position will remain under review and will have regard to any new or materially different information coming to light which may alter that decision.</p> <p>Note: The SoS' duty under Regulation 32 of the 2017 EIA Regulations continues throughout the application process.</p> <p>The Inspectorate's screening of transboundary issues is based on the relevant considerations specified in the Annex to its Advice Note Twelve, available on our website at <a href="http://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/">http://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/</a></p> |

### 3. ENVIRONMENTAL ASPECT COMMENTS

#### 3.1 Major Accidents and Disasters

(Scoping Report Section 3)

| ID    | Ref                | Applicant's proposed matters to scope out  | Inspectorate's comments  |
|-------|--------------------|--|--|
| 3.1.1 | Tables 3.4 and 3.5 | Standalone Major Accidents and Disasters (Accidents and Emergencies) ES aspect Chapter | The Scoping Report proposes that major accidents and disasters will be assessed within ES Chapter 16 ('Other Environmental Topics'), rather than in a standalone ES Chapter. The Inspectorate has considered the nature and characteristics of the Proposed Development and is content with this approach. |

| ID    | Ref       | Description                       | Inspectorate's comments  |
|-------|-----------|-----------------------------------|--|
| 3.1.2 | Table 3.4 | Assessment methodology            | <p>Table 3.4 of the Scoping Report states that a proportionate assessment of risks from major accidents and disasters during construction, operation and decommissioning of the Proposed Development will be included in the ES, although a proposed assessment methodology has not been set out.</p> <p>The ES should describe the baseline, relevant receptors and methodology applied to the assessment of major accidents and disasters (including how significance of effect has been determined), with reference to relevant guidance.</p> |
| 3.1.3 | n/a       | Potential accidents and disasters | <p>The potential accidents and disasters which the Applicant considers to be relevant to the Proposed Development have not been defined at this stage.</p> <p>The ES should explain the approach taken to identify relevant risks/hazards. The Inspectorate considers that the ES should assess the</p>  |

| ID | Ref | Description | Inspectorate's comments  |
|----|-----|-------------|--|
|    |     |             | <p>risk of fire/ explosion at the BESS, including any measures designed to minimise impacts on the environment in the event of such an occurrence. Any mitigation measures relevant to safety risks associated with the BESS, such as an Outline Battery Safety Management Plan, should be described in the ES and their delivery secured through the dDCO. Effort should be made to agree any necessary measures with relevant consultation bodies.</p> <p>The ES should also assess risks to and from any Major Accident Hazard Pipelines and Major Accident Hazard sites that may be impacted. The Applicant's attention is drawn to scoping consultation responses from Northern Gas Networks and the Health and Safety Executive (Appendix 2 of this Opinion) in this regard.</p> |

## 3.2 Climate Change and Climatic Factors

(Scoping Report Section 3)

| ID    | Ref                | Applicant's proposed matters to scope out                         | Inspectorate's comments   |
|-------|--------------------|---|---|
| 3.2.1 | Tables 3.4 and 3.5 | Standalone Climate Change and Climatic Factors ES aspect chapters | <p>The Scoping Report proposes that climate change will be assessed within ES Chapter 16 ('Other Environmental Topics') and that climatic factors will be assessed "...within the relevant technical assessments such as flood risk", rather than in standalone ES Chapters.</p> <p>Carbon saving and impacts from greenhouse gas (GHG) emissions would be assessed in ES Chapter 14 ('Air Quality and Carbon Saving').</p> <p>The EIA Methodology ES chapter should provide clear cross-referencing to where the assessments relevant to climate change, climatic factors and GHG emissions are presented. ES Chapter 17 ('Summary of Environmental Effects') should also collate and summarise these effects. However, the Inspectorate is content that standalone ES aspect chapters for climate change and climatic factors are not required.</p> |

| ID    | Ref | Description | Inspectorate's comments  |
|-------|-----|-------------|--|
| 3.2.2 | n/a | Assessment  | <p>Notwithstanding ID 3.2.1 above, the proposed approach to the assessment lacks coherence and it is unclear what impacts on/ from climate change are intended to be considered within ES Chapter 16 ('Other Environmental Topics') as distinct from GHG emissions (proposed to be assessed in ES Chapter 14 ('Air Quality and Carbon Saving')) and climatic factors (within relevant technical assessments).</p> <p>ES Chapter 16 should describe other potential impacts on/ from climate change and provide an assessment of any likely significant</p> |

| ID | Ref | Description | Inspectorate's comments  |
|----|-----|-------------|--|
|    |     |             | <p>effects. This should include a description and assessment of any likely significant effects resulting from the vulnerability of the Proposed Development to climate change. The ES should describe and assess any impacts of the Proposed Development relevant to adaptation.</p> |



### 3.3 Human Health

(Scoping Report Section 3)

| ID    | Ref       | Applicant's proposed matters to scope out | Inspectorate's comments  |
|-------|-----------|---|--|
| 3.3.1 | Table 3.4 | Standalone Human Health ES aspect chapter | <p>Table 3.4 of the Scoping Report proposes that impacts on human health will be considered within relevant ES aspect chapters, such as Air Quality and Noise, rather than in a standalone ES chapter.</p> <p>The Inspectorate is content with this approach. The EIA Methodology ES chapter should provide clear cross-referencing to where the relevant impacts on human health are considered. Consideration should be given to direct and indirect impacts on human health receptors.</p> <p>The assessment should be informed by relevant guidance such as the Institute of Environmental Management and Assessment (IEMA) 2022 guidance '<i>Determining Significance For Human Health In Environmental Impact Assessment</i>'.</p> |

| ID    | Ref | Description                                     | Inspectorate's comments  |
|-------|-----|---|--|
| 3.3.2 | n/a | Impacts from Electric and Magnetic Fields (EMF) | <p>The Scoping Report does not consider potential impacts on human health receptors from EMF. Should any cables exceeding 132kV be required as part of the Proposed Development, the ES should provide an assessment of any likely significant effects to human health receptors arising from EMF.</p> <p>The ES should describe any necessary mitigation measures relevant to EMF (for example a minimum depth for cable burial) and explain how such measures are secured through the dDCO or other legal mechanism.</p> |

### 3.4 Waste

(Scoping Report Section 3)

| <b>ID</b> | <b>Ref</b> | <b>Applicant's proposed matters to scope out</b>       | <b>Inspectorate's comments</b>   |
|-----------|------------|--|--|
| 3.4.1     | Table 3.4  | Standalone Waste ES aspect chapter                     | The Scoping Report proposes that impacts associated with waste will be assessed within ES Chapter 16 ('Other Environmental Topics'), rather than in a standalone ES Chapter. The Inspectorate has considered the nature and characteristics of the Proposed Development and is content with this approach. |
| 3.4.2     | Table 3.4  | Impacts associated with waste during operational phase | Having regard to the nature and characteristics of the Proposed Development, the Inspectorate is content that impacts associated with waste produced during the operational phase are not likely to result in significant effects. This matter can be scoped out of the ES.                                |

| <b>ID</b> | <b>Ref</b> | <b>Description</b>  | <b>Inspectorate's comments</b>  |
|-----------|------------|---|---|
| 3.4.3     | Table 3.4  | Assessment methodology  | Table 3.4 of the Scoping Report states that impacts associated with construction waste and component replacement would be considered in a proportionate ES assessment, although a proposed methodology has not been set out. The ES should describe the assessment methodology applied and explain how this has been informed by relevant guidance. |
| 3.4.4     | n/a        | Impacts resulting from off-site transport and disposal of waste | The ES should assess any impacts from off-site transport and disposal of waste generated during construction and decommissioning which are likely to result in significant effects. Any assumptions made (such as with regard to quantities of contaminated material) should be clearly set out and justified in the ES.                            |

| ID    | Ref       | Description | Inspectorate's comments  |
|-------|-----------|-------------|--|
| 3.4.5 | Table 3.4 | Mitigation  | The Construction Environmental Management Plan and Outline Decommissioning Plan should include as much detail as possible on how waste would be managed in accordance with the waste management hierarchy, including any end use of the photovoltaic panels. |

### 3.5 Landscape and Visual

(Scoping Report Section 4)

| ID    | Ref | Applicant's proposed matters to scope out | Inspectorate's comments   |
|-------|-----|---|---|
| 3.5.1 | n/a | n/a                                       | No matters have been proposed to be scoped out of the assessment. |

| ID    | Ref       | Description         | Inspectorate's comments   |
|-------|-----------|---------------------|---|
| 3.5.2 | Para 4.29 | Sensitive receptors | Paragraph 4.29 of the Scoping Report identifies " <i>recreational</i> " users as a receptor type. For the avoidance of doubt the Inspectorate agrees with comments from the Canal and River Trust (Appendix 2 of this Opinion) that this should include boaters, walkers and cyclists.  |
| 3.5.3 | Para 4.31 | Impacts             | <p>Paragraph 4.31 of the Scoping Report states that: "<i>The SZTV [Screened Zone of Theoretical Visibility, shown on Appendix 4.1 of the Scoping Report] has been run at an average height of 3m across the site for the elements which form the proposed development</i>". However, the Inspectorate notes that the anticipated height of the BESS, which is likely to be a prominent feature of the Proposed Development, has not been provided in the Scoping Report.</p> <p>If during the design evolution of the Proposed Development it is determined that the maximum parameters of any element will exceed 3m in height, the Applicant should re-run the SZTV and review the study area and identified receptors accordingly.</p> <p>The assessment of impacts to landscape and visual amenity (including the SZTV, study area and visualisations) should be based on the relevant worst-case having regard to any parameters applicable to the Proposed Development, including all proposed structures such as the BESS.</p> |

| ID    | Ref                 | Description                   | Inspectorate's comments  |
|-------|---------------------|-------------------------------|--|
| 3.5.4 | Paras 4.35 and 4.36 | Viewpoints and visualisations | <p>Paragraph 4.35 of the Scoping Report lists 26 proposed viewpoints for assessment, while paragraph 4.36 identifies seven of those viewpoints for which visualisations are proposed to be produced.</p> <p>The number and location of viewpoints and visualisations should be justified in the ES and effort should be made to agree these details with relevant consultation bodies, including local planning authorities, Historic England and the Canal and River Trust.</p> <p>A figure to illustrate the proposed viewpoint locations has not been provided in the Scoping Report (paragraph 4.35 erroneously states that these are illustrated on Appendix 4.1 of the Scoping Report). The ES should include appropriate figure/s which clearly illustrate the viewpoint locations.</p> |
| 3.5.5 | Paras 4.38 and 4.39 | Mitigation planting           | <p>The ES should clearly present any assumptions made with regards to the height that the proposed mitigation planting would have reached by the assessment years, for the purposes of generating photomontages and reaching the assessment conclusions.</p>   |
| 3.5.6 | n/a                 | Impacts                       | <p>Impacts on landscape and visual amenity resulting from the introduction of lighting during construction, operation and decommissioning which are likely to result in significant effects should be assessed in the ES. Any proposed mitigation measures should be described and appropriately secured. The assessment should cross refer to other relevant aspect assessments and sensitive receptors (such as ecology and cultural heritage).</p>  |

### 3.6 Nature Conservation and Biodiversity

(Scoping Report Section 5)

| ID    | Ref                               | Applicant's proposed matters to scope out   | Inspectorate's comments  |
|-------|-----------------------------------|---|--|
| 3.6.1 | Paras 5.62 to 5.64; 5.76 and 5.78 | Detailed assessment of ecological features that are not considered 'important' – all phases                                     | <p>The Scoping Report proposes that the ES will only contain a detailed assessment of impacts on 'important' ecological features (as per the CIEEM Guidelines)<sup>1</sup>. A detailed assessment of ecological features that are sufficiently widespread, unthreatened and/ or resilient to impacts of the Proposed Development would be scoped out.</p> <p>The ES should explain how the importance of ecological features has been determined, with reference to baseline data, relevant guidance and professional judgement. The Applicant should make effort to agree the list of 'important' ecological features with the relevant local planning authorities and Natural England (NE). Subject to this, the Inspectorate agrees that a detailed assessment of impacts on ecological receptors which are not determined to be 'important' can be scoped out of the ES.</p> |
| 3.6.2 | Para 5.65 and Table 5.2           | Indirect impacts on statutory designated sites (without mobile qualifying features) located over 2km from the site – all phases | <p>Having regard to the nature and characteristics of the Proposed Development, the Inspectorate is content that this matter can be scoped out for the operational phase.</p> <p>Sections 7 (Ground Conditions) and 8 (Hydrology and Flood Risk) of the Scoping Report identify the potential for construction to result in contamination of surface water courses or groundwater via spills and leaks, or through disturbance of existing contaminated soils. The Inspectorate notes that NE (see Appendix 2 of this Opinion) considers the application site could be hydrologically connected to statutory</p>   |

<sup>1</sup> Chartered Institute of Ecology and Environmental Management (CIEEM) (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

| ID    | Ref                     | Applicant's proposed matters to scope out  | Inspectorate's comments  |
|-------|-------------------------|--|--|
|       |                         |  | <p>designated sites. As information has not been provided within the Scoping Report to confirm the absence of a hydrological pathway for significant effects on statutory designated sites during construction and decommissioning, the Inspectorate is not in a position to scope out this matter for construction and decommissioning.</p> <p>The ES should assess any likely significant effects on statutory designated sites including those located over 2km from the site resulting from hydrological changes and water quality impacts, during construction and decommissioning. The assessment should include the potential for increased nutrient and other pollutant inputs.</p>  |
| 3.6.3 | Para 5.66 and Table 5.2 | Impacts on statutory designated sites (with mobile qualifying features) within 10km of the site – all phases | <p>Paragraph 5.66 of the Scoping Report proposes that designated sites within 10km of the site with associated qualifying bird assemblages are scoped out of the ES. However, Table 5.2 of the Scoping Report identifies this matter as scoped into the assessment meaning the Applicant's proposed approach is unclear.</p> <p>For the avoidance of doubt, the Inspectorate considers that this matter should be scoped into the ES. In particular the Inspectorate considers there is potential for significant effects as a result of hydrological changes and water quality impacts (see above) and habitat loss or disturbance of any qualifying features using the application site and surrounding area. The scope of the assessment should be sufficient to ensure that significant effects to habitats and features due to any functional link with statutory designated sites (including the Humber Estuary Special Protection Area (SPA)/ Ramsar/ Site of Special Scientific Interest (SSSI); Thorne and Hatfield Moors SPA; Thorne, Crowle and Goole Moors SSSI; and Hatfield Moor SSSI) are assessed.</p> |

| ID    | Ref                               | Applicant's proposed matters to scope out   | Inspectorate's comments  |
|-------|-----------------------------------|---|--|
| 3.6.4 | Para 5.67 and Table 5.2           | Impacts on common and widespread habitats of low sensitivity and/ or conservation interest – all phases | The ES should explain how the classification of any habitat as 'low sensitivity' has been determined, with reference to baseline data, relevant guidance and professional judgement. The Applicant should make effort to agree its findings on sensitivity with the relevant local planning authorities and NE. Subject to this, the Inspectorate is content to scope this matter out.   |
| 3.6.5 | Para 5.68 and Table 5.2           | Impacts on invertebrates – all phases   | <p>Table 5.1 of the Scoping Report describes the Hatfield Chase Ditches SSSI (within the site boundary) as supporting rare invertebrates. The Thorne, Crowle and Goole Moors SSSI (adjacent to the site) and Hatfield Moor SSSI (in close proximity) are also described as supporting a range of invertebrates. The Inspectorate considers that impacts from the Proposed Development, such as changes in water quality, could result in significant effects on invertebrates. Therefore, this matter cannot be scoped out of the ES.</p> <p>The ES should assess impacts to invertebrates which are likely to result in significant effects. The assessment should be based on sufficient baseline survey data.</p> |
| 3.6.6 | Paras 5.45 and 5.69 and Table 5.2 | Specific surveys for reptiles and detailed assessment of impacts on reptiles – all phases               | <p>The Scoping Report proposes to scope out specific surveys for reptiles (para 5.45) and a detailed assessment of impacts (para 5.69), stating that baseline surveys have not identified the site as being sufficiently important to lead to the potential for significant effects. However, Table 5.2 of the Scoping Report identifies reptiles as scoped into the assessment meaning the Applicant's proposed approach is unclear.</p> <p>The Inspectorate is therefore not in a position to agree that these matters can be scoped out. The ES should assess potential impacts on reptiles, supported by robust baseline survey data, unless otherwise agreed with relevant consultation bodies.</p>             |



| <b>ID</b> | <b>Ref</b>              | <b>Applicant's proposed matters to scope out</b>   | <b>Inspectorate's comments</b>  |
|-----------|-------------------------|--|---|
| 3.6.7     | Para 5.69 and Table 5.2 | Detailed assessment of impacts on small mammals (including brown hare, polecat, harvest mouse and hedgehog) – all phases | <p>Paragraph 5.69 of the Scoping Report proposes to scope out a detailed assessment of impacts on these species, stating that baseline surveys have not identified the site as being sufficiently important to lead to the potential for significant effects.</p> <p>The Inspectorate notes that the Applicant has not yet undertaken ecological surveys of the study area (with the exception of a Walkover Survey and bird surveys) and that the site may potentially support these species. Without certainty on the extent and presence of these species, the Inspectorate does not agree that a detailed assessment of impacts on brown hare, polecat, harvest mouse and hedgehog can be scoped out.</p> <p>The ES should address potential impacts on these species, supported by robust baseline survey data, unless otherwise agreed with relevant consultation bodies.</p> |
| 3.6.8     | Para 5.71 and Table 5.2 | Impacts from lighting – all phases   | In the absence of defined locations for principal development components and without certainty on the extent and presence of certain species (including SPA/ Ramsar bird qualifying features), the Inspectorate does not agree that this matter can be scoped out.  |

| <b>ID</b> | <b>Ref</b> | <b>Description</b>   | <b>Inspectorate's comments</b>   |
|-----------|------------|----------------------|--|
| 3.6.9     | n/a        | Confidential annexes | Public bodies have a responsibility to avoid releasing environmental information that could bring about harm to sensitive or vulnerable ecological features. Specific survey and assessment data relating to the presence and locations of species such as badgers, rare birds and plants that could be subject to disturbance, damage, persecution, or commercial exploitation resulting from publication of the information, should be provided in the ES as a confidential annex. All other |

| ID     | Ref                     | Description  | Inspectorate's comments  |
|--------|-------------------------|--|--|
|        |                         |  | assessment information should be included in an ES chapter, as normal, with a placeholder explaining that a confidential annex has been submitted to the Inspectorate and may be made available subject to request.  |
| 3.6.10 | Paras 5.5, 5.6 and 5.14 | Breeding bird survey surveys and passage/ wintering bird surveys | <p>Breeding bird surveys were completed during April to July 2022. The Scoping Report states that whilst areas of the site boundary have been omitted from the breeding bird surveys (due to the design evolution of the Proposed Development), the baseline data is considered sufficient "...to reliably inform an Ecological Assessment Process".</p> <p>The Scoping Report states that wintering bird surveys are being undertaken from "September 2022 to March 2023 [ongoing]". The Inspectorate notes advice from NE (Appendix 2 of this Opinion) that the passage/ wintering bird surveys should cover different tidal states and consideration should be given to surveys during poor weather/ visibility conditions. NE advise that surveys at dusk and dawn should also be considered, if geese and swans on site have the potential to use the application site or surrounding area.</p> <p>It does not appear that further breeding bird or passage/ wintering bird surveys are proposed to inform the ES. The ES should be based on sufficient baseline data to support a robust assessment of LSE as required by the EIA Regulations 2017. The Applicant should make effort to agree the approach to breeding bird surveys and passage/ wintering bird surveys with NE and to evidence this at the point of DCO application submission.</p> |
| 3.6.11 | Para 5.23               | Invasive species   | The ES should assess the risks of spreading invasive species including <i>Azolla</i> , Himalayan Balsam, New Zealand pygmy weed and New Zealand moss during construction and operation of the Proposed   |

| ID     | Ref                | Description  | Inspectorate's comments  |
|--------|--------------------|--|--|
|        |                    |  | Development. Any necessary eradication/ control measures should be detailed in the ES.   |
| 3.6.12 | Paras 5.38 to 5.40 | Water vole surveys   | The use of detection dogs is noted but for the avoidance of doubt, the Inspectorate agrees with comments from the Environment Agency (Appendix 2 of this Opinion) that the assessment should include two water vole surveys at the recommended times of year. Effort should be made to agree the survey assessment methodology with relevant consultation bodies including the Environment Agency. |
| 3.6.13 | Para 5.44          | Great Crested Newt (GCN) eDNA survey extent                      | The Scoping Report states that ponds within 250m of the site will be surveyed for the presence of GCN. GCN can travel up to 500m from their breeding ponds. As such, the Inspectorate considers that ponds up to 500m from the site should be surveyed for the presence of GCN.  |
| 3.6.14 | Para 5.50          | Mitigation   | Wintering bird mitigation areas are proposed. Details of the location, extent, implementation (including specific timings) and management of these mitigation areas should be provided in the ES, with reference to available evidence on the requirements of relevant species. Effort should be made to discuss and agree these details with NE and other relevant consultation bodies.           |
| 3.6.15 | Para 5.52          | Impacts from HDD   | Appendix 2.1 of the Scoping Report identifies an indicative location for HDD beneath the Stainforth and Keadby Canal. Any impacts on aquatic environment and water resource receptors from mud toxicity and bentonite breakout during HDD works which are likely to result in significant effects should be assessed in the ES.  |
| 3.6.16 | n/a                | Botanical species<br>Ancient woodland, ancient and veteran trees | The ES should explain whether any scarce or priority botanical species, ancient woodland, ancient and veteran trees could potentially be impacted by the Proposed Development. Any impacts on these  |

| <b>ID</b> | <b>Ref</b> | <b>Description</b> | <b>Inspectorate's comments</b>   |
|-----------|------------|--------------------|--|
|           |            |                    | features which are likely to result in significant effects should be assessed in the ES. |

### 3.7 Cultural Heritage

(Scoping Report Section 6)

| ID    | Ref | Applicant's proposed matters to scope out | Inspectorate's comments   |
|-------|-----|---|---|
| 3.7.1 | n/a | n/a                                       | No matters have been proposed to be scoped out of the assessment. |

| ID    | Ref                         | Description                           | Inspectorate's comments   |
|-------|-----------------------------|---------------------------------------|---|
| 3.7.2 | Para 6.9                    | Impacts to archaeology and mitigation | <p>The Inspectorate notes the potential for the Proposed Development to disturb or remove buried archaeological remains within the site. The ES should identify which works associated with the Proposed Development would result in direct impacts on archaeological resource (for example, those requiring piling), as well as indirect impacts (for example, changes to drainage patterns). Any impacts on archaeology which may result in a likely significant effect during construction and/ or decommissioning should be assessed.</p> <p>The ES should set out the proposals for the recording of any archaeological resource which would be permanently lost as a result of the Proposed Development. Effort should be made to agree the approach with relevant consultation bodies.</p> |
| 3.7.3 | Paras 6.10 and 6.17 to 6.20 | Impacts to setting                    | <p>The Scoping Report acknowledges the potential for significant effects on the setting of heritage assets during operation of the Proposed Development. The ES should also identify potential impacts to the setting of heritage assets during construction and decommissioning and assess any impacts that are likely to result in significant effects.</p> <p>The assessment of impacts to setting should be supported by baseline data which is sufficient to identify all designated and non-designated</p>  |

| ID    | Ref       | Description | Inspectorate's comments   |
|-------|-----------|-------------|---|
|       |           |             | <p>built heritage assets which could be impacted by the Proposed Development.</p> <p>The SZTV developed for the Landscape and Visual assessment should be used to confirm which heritage assets may experience visual impacts from the Proposed Development. Paragraph 6.20 of the Scoping Report states that there is no intervisibility between the Proposed Development and the Peel Hill motte and bailey castle scheduled monument and Thorne Conservation Area, although these lie partly within the SZTV shown on Appendix 4.1 of the Scoping Report.</p> <p>The ES should fully justify the choice of heritage assets included in the setting assessment and their locations should be depicted on a supporting plan.</p> <p>The assessment should be supported by appropriate visualisations such as photomontages to help illustrate the likely impacts of the Proposed Development. Effort should be made to agree appropriate viewpoint locations for such visualisations with relevant consultation bodies including local authorities and Historic England. Cross-reference can be made to the Landscape and Visual ES assessment to avoid duplication.</p> |
| 3.7.4 | Para 6.15 | Baseline    | <p>The Scoping Report states that following completion of the desk-based assessment, the need for any further investigative works would be considered.</p> <p>Where necessary any intrusive investigations and trial trenching should be completed prior to submission of the DCO application. The Applicant should make effort to discuss and agree the timing, scope and methodology for any intrusive investigations and trial trenching with relevant consultation bodies.</p>  |

| ID    | Ref       | Description             | Inspectorate's comments  |
|-------|-----------|-------------------------|--|
| 3.7.5 | Para 6.22 | Significance of effects | <p>Historic England has raised concern (Appendix 2 of this Opinion) with the proposed approach to recording significance of heritage assets (both designated and non-designated). The Applicant should make effort to agree the approach with Historic England and other relevant consultation bodies. In the event that the Applicant's approach to recording significance of an asset deviates from the advice it has received, the ES should explain why and provide justification based on relevant evidence and professional opinion.</p> |

### 3.8 Ground Conditions

(Scoping Report Section 7)

| ID    | Ref | Applicant's proposed matters to scope out | Inspectorate's comments   |
|-------|-----|---|---|
| 3.8.1 | n/a | n/a                                       | No matters have been proposed to be scoped out of the assessment. |

| ID    | Ref                     | Description                              | Inspectorate's comments  |
|-------|-------------------------|--|--|
| 3.8.2 | Para 7.3                | Key policy and guidance                  | The ES assessment should also be informed by the Environment Agency's Land Contamination Risk Management Procedures.   |
| 3.8.3 | Paras 7.5 to 7.17       | Preliminary baseline information         | <p>It is noted that third party data such as a Landmark or Groundsure information report, which typically informs a preliminary risk assessment/ desk study (as provided within Appendix 7.1 of the Scoping Report) has not been provided. The Scoping Report also uses vague terminology such as "<i>several to many metres</i>" to describe the depth of the underlying geology.</p> <p>The ES should provide a detailed description of the baseline environment with reference to the data sources used. The ES should be based on sufficient baseline data to support a robust assessment of likely significant effects as required by the EIA Regulations 2017.</p> |
| 3.8.4 | Para 7.17 and Table 7.1 | Anticipated superficial/ shallow geology | Table 7.1 of the Scoping Report ('Anticipated Shallow Soils') is described as a summary, with the reader referred to Appendix 7.1 for full details. However, no information is given as to the specific location of the relevant evidence within Appendix 7.1. Where the ES Ground Conditions Chapter is to cross refer to appendices or figures, specific paragraph numbers/ figure numbers to the relevant evidence should be provided.  |



| ID    | Ref          | Description                                  | Inspectorate's comments   |
|-------|--------------|--|---|
| 3.8.5 | Appendix 7.1 | Figures                                      | <p>A number of the figures provided within Appendix 7.1 of the Scoping Report ('Ground Conditions Study Area') do not show the red line boundary of the Proposed Development, or the applicable study area. It is also noted that Appendix 7.1, Appendix E ('Mining, Quarrying and Minerals') only provides information for part of the red line boundary. A number of the figures contain shaded areas or other graphical representations which are not shown on an accompanying key.</p> <p>Relevant figures accompanying the ES Ground Conditions assessment should consistently and accurately illustrate the red line boundary and applicable study area. The figures should clearly present baseline information across the entirety of the application site.</p> |
| 3.8.6 | n/a          | Impacts on mineral and hydrocarbon resources | <p>The scoping consultation response from City of Doncaster Council (Appendix 2 of this Opinion) states that "<i>the scoping area</i>" is partially within a Mineral Safeguarding Area and a Petroleum Exploration and Development Licence area. The ES should identify potential impacts on mineral and hydrocarbon resources, including those resulting from sterilisation of the resources during the lifetime of the Proposed Development. Any likely significant effects should be assessed. Effort should be made to discuss and agree the approach with the relevant local planning authorities.</p>   |

### 3.9 Hydrology and Flood Risk

(Scoping Report Section 8)

| ID   | Ref                 | Applicant's proposed matters to scope out | Inspectorate's comments   |
|------|---------------------|---|---|
| 39.1 | Paras 8.28 and 8.29 | Assessment of cumulative effects          | <p>The Scoping Report does not provide any evidence to justify the conclusion of "<i>nil detriment</i>" in terms of offsite/ downstream hydrogeology related impacts from the Proposed Development. Specific other developments for inclusion in the ES cumulative assessment have also not been identified at this stage. The Inspectorate is therefore not in a position to agree that this matter can be scoped out.</p> <p>The Hydrology and Flood Risk ES Chapter should identify relevant other developments within the catchment with potential to result in cumulative impacts on hydrological, hydrogeological and flood risk receptors. Any likely significant cumulative effects should be assessed.</p> |

| ID   | Ref                               | Description | Inspectorate's comments  |
|------|-----------------------------------|-------------|--|
| 39.2 | Paras 8.3 and 8.25;<br>Figure 8.1 | Flood risk  | <p>The ES and Flood Risk Assessment including accompanying figures should distinguish between areas of Flood Zones 3a and 3b.</p> <p>The scoping consultation response from the Environment Agency (Appendix 2 of this Opinion) states that indicative locations for components including the proposed National Grid substation and BESS are within Flood Zone 3b. Any mitigation measures to reduce significant effects from flooding should be described in the ES and their delivery secured through the dDCO or other legal mechanism.</p> |

| ID    | Ref       | Description                       | Inspectorate's comments  |
|-------|-----------|-----------------------------------|--|
| 3.9.3 | Para 8.7  | Underlying geology                | <p>Paragraph 8.7 of the Scoping Report states that "<i>It is unlikely that Made Ground exists beneath the site boundary</i>". This is not consistent with the information provided within Section 7 of the Scoping Report, which identifies manmade working and placement of alluvium.</p> <p>The ES should present consistent baseline information across relevant aspect chapters. Impacts resulting from disturbance of any made ground which are likely to result in significant effects on hydrological/hydrogeological receptors should be assessed in the ES.</p>   |
| 3.9.4 | Para 8.18 | Surface Water Management Strategy | <p>A draft/ outline copy of the Surface Water Management Strategy (proposed for the operational phase) should be appended to the ES.</p>   |
| 3.9.5 | Para 8.27 | Sensitive receptors               | <p>The table at paragraph 8.27 of the Scoping Report ('Summary of Potential Environmental Receptors') lists only a single receptor type (groundwater) with no reference to flood risk, surface water or other specific receptors.</p> <p>The ES should present a complete list of hydrological, hydrogeological and flood risk receptors which are likely to be impacted by the Proposed Development and assess any likely significant effects on those receptors.</p> <p>Paragraph 7.15 of the Scoping Report describes overall groundwater vulnerability to pollution as "<i>Low or Medium</i>", while the table at paragraph 8.27 describes the Source Protection Zone (SPZ) below Thorne as "<i>low</i>" sensitivity. In some places, groundwater should be considered highly vulnerable due to the presence of SPZ3. The approach to determining the sensitivity/ vulnerability of identified receptors should be explained in the ES and clearly and consistently cross referenced across the Ground Conditions and Hydrology and Flood Risk ES assessments.</p> |

| ID    | Ref | Description                     | Inspectorate's comments   |
|-------|-----|---------------------------------|---|
| 3.9.6 | n/a | Water Framework Directive (WFD) | <p>The Scoping Report identifies the potential for contamination of surface water and groundwater bodies. Given the geographic location of the Proposed Development, the ES should consider the potential impacts on WFD water bodies. The Applicant's attention is drawn to the Inspectorate's Advice Note Eighteen: The WFD in this regard.</p> <p>The ES should explain the relationship between the Proposed Development and any relevant water bodies in relation to the current relevant River Basin Management Plan.</p> |

### 3.10 Socio Economics

(Scoping Report Section 9)

| <b>ID</b> | <b>Ref</b> | <b>Applicant's proposed matters to scope out</b> | <b>Inspectorate's comments</b>                                   |
|-----------|------------|--|--|
| 3.10.1    | n/a        | n/a  | No matters have been proposed to be scoped out of the assessment |

| <b>ID</b> | <b>Ref</b> | <b>Description</b>    | <b>Inspectorate's comments</b>   |
|-----------|------------|-----------------------|--|
| 3.10.2    | Table 3.4  | Impacts on population | Table 3.4 of the Scoping Report proposes that impacts on population are assessed within the Socio Economics ES Chapter. The Inspectorate is content with this approach.  |
| 3.10.3    | Para 9.14  | Baseline              | Paragraph 9.14 of the Scoping Report only references data for Doncaster, although the Proposed Development is located across the boundary of two local authorities (City of Doncaster Council and North Lincolnshire Council). The description of baseline conditions and assessment in the ES should be sufficient to address impacts on all areas likely to be affected by the Proposed Development. |

### 3.11 Transport and Access

(Scoping Report Section 10)

| ID     | Ref                         | Applicant's proposed matters to scope out                                | Inspectorate's comments   |
|--------|-----------------------------|--|---|
| 3.11.1 | Paras 2.29, 10.14 and 10.15 | Impact on pedestrians (severance, delay, amenity and fear/ intimidation) | <p>Paragraph 10.14 of the Scoping Report proposes that due to the limited number of pedestrians anticipated within the vicinity of the site, impacts to pedestrians in terms of severance, delay, amenity and fear/ intimidation will not be assessed.</p> <p>The Inspectorate is content that this matter can be scoped out for the operational phase, but not in relation to construction and decommissioning. The temporary diversion or stopping up of a PRoW (Doncaster footpath Thorne 19) may be required during construction and decommissioning and the reference to a "<i>limited number</i>" of pedestrians has not been quantified.</p> <p>The ES should assess impacts to users of PRoW or other recreational routes (including severance, delay, amenity and fear/ intimidation) during construction and decommissioning which are likely to result in significant effects. Any such assessment should be supported by pedestrian/ user counts where possible, with effort made to agree the locations for such counts with relevant consultation bodies.</p> <p>Where relevant, the ES should assess potential interactions between aspect assessments (for example traffic and transport, noise, dust, recreation and visual impact).</p> <p>The locations of any diversions or closures should be illustrated on suitable figures in the ES.</p> |

| ID     | Ref                                | Description                                 | Inspectorate's comments  |
|--------|------------------------------------|---|--|
| 3.11.2 | Paras 2.24 and 10.7; Appendix 10.1 | Access routes                               | <p>The ES should describe the proposed site entrance/s and the routes to be used for all vehicular access during construction and operation of the Proposed Development and this information should be clearly presented on supporting plans within the ES.</p> <p>The ES should describe and assess the potential impacts (both positive and negative) associated with any improvements/ changes to the access routes which are either required to facilitate construction of the Proposed Development or are required for restoration purposes on completion of the works. For the assessment of impacts during construction the ES should explain how the proposed access route(s) relate to sensitive receptors.</p> |
| 3.11.3 | Paras 10.4 to 10.6                 | Baseline                                    | <p>The Scoping Report states that the Transport and Access ES chapter would consider baseline transportation conditions including traffic flows and highways safety. The ES should describe the baseline environment in full including pedestrian/ user counts (see above), existing land uses and existing site access.</p>   |
| 3.11.4 | Para 10.8                          | Construction Traffic Management Plan (CTMP) | <p>A draft/ outline copy of the CTMP should be appended to the ES.</p>   |
| 3.11.5 | n/a                                | Study area                                  | <p>The ES should explain the how the study area for the Transport and Access ES assessment has been defined, with reference to the extent of the likely impacts.</p>   |

### 3.12 Acoustics Considerations

(Scoping Report Section 11)

| ID     | Ref                   | Applicant's proposed matters to scope out                       | Inspectorate's comments  |
|--------|-----------------------|---|--|
| 3.12.1 | Paras 11.28 and 11.41 | Construction noise and vibration assessment (including traffic) | <p>The Scoping Report proposes to scope out an assessment of impacts from construction noise on the basis that the noise is temporary and occurs during the day. Impacts from vibration are not specifically sought to be scoped out, nor are potential impacts described.</p> <p>No substantial evidence has been provided to suggest that noise or vibration impacts during construction would not be significant. The Inspectorate also notes the potential for construction noise impacts on ecological receptors including SPA/ Ramsar bird qualifying features.</p> <p>The Inspectorate does not agree that these matters can be scoped out. The ES should assess noise and vibration impacts arising from construction and decommissioning activities (including traffic) which are likely to result in significant effects. The assessment should include information on predicted construction and decommissioning traffic movements, traffic routing, noise and vibration emissions and distances from receptors. Any proposed mitigation measures (such as the proposed use of a push-piling rig rather than impact-driven piles) should be described and their delivery secured through the dDCO or other legal mechanism.</p> |

| ID     | Ref | Description         | Inspectorate's comments  |
|--------|-----|---------------------|--|
| 3.12.2 | n/a | Sensitive receptors | The ES should identify ecological and cultural heritage receptors which could be impacted by noise and vibration from the Proposed |



| ID | Ref | Description | Inspectorate's comments  |
|----|-----|-------------|--|
|    |     |             | Development and assess any likely significant effects on such receptors. |

### 3.13 Air Quality and Carbon Saving

(Scoping Report Section 12)

| <b>ID</b> | <b>Ref</b>            | <b>Applicant's proposed matters to scope out</b>                        | <b>Inspectorate's comments</b>  |
|-----------|-----------------------|---|---|
| 3.13.1    | Paras 12.47 and 12.52 | Road traffic and GHG emissions - decommissioning                        | The Scoping Report proposes to scope out an assessment of air quality impacts related to the decommissioning of the Proposed Development on the basis that road traffic and GHG emissions at the time of decommissioning are expected to be zero. The Inspectorate agrees that these matters can be scoped out.                                     |
| 3.13.2    | Paras 12.50 and 12.67 | Road traffic and GHG emissions - operation                              | The Scoping Report proposes to scope out these matters on the basis that traffic movements during operation are expected to be minimal. The Inspectorate agrees that these matters can be scoped out.   |
| 3.13.3    | Para 12.66            | Detailed assessment of construction traffic impacts on ecological sites | On the basis that the Decision Making Thresholds set out by the Joint Nature Conservation Committee are not exceeded and that the roads affected by the Proposed Development are more than 200m from any designated site, the Inspectorate agrees that a detailed assessment of construction traffic impacts on ecological sites can be scoped out. |

| <b>ID</b> | <b>Ref</b> | <b>Description</b>                    | <b>Inspectorate's comments</b>  |
|-----------|------------|---------------------------------------|---|
| 3.13.4    | Para 12.57 | Impacts from dust                     | Paragraph 12.57 of the Scoping Report refers to ecological sites within 50m of the site boundary being assessed. The impacts from dust (not limited to construction traffic) on ecological sites within 200m of the construction area should be assessed. |
| 3.13.5    | n/a        | Air Quality Management Areas (AQMA's) | Details regarding the locations of any AQMA's relative to the site are not included in the Scoping Report. The ES should provide information to explain the locations of any AQMA's relative to the   |

| <b>ID</b> | <b>Ref</b> | <b>Description</b> | <b>Inspectorate's comments</b>   |
|-----------|------------|--------------------|--|
|           |            |                    | Proposed Development and assess (where relevant) any potential impacts the Proposed Development may have on them, for example due to construction traffic, and describe any mitigation measures. |

### 3.14 Agriculture

(Scoping Report Section 13)

| ID     | Ref        | Applicant's proposed matters to scope out | Inspectorate's comments   |
|--------|------------|---|---|
| 3.14.1 | Para 13.20 | Cumulative schemes                        | The Scoping Report proposes to exclude sites of less than 20ha in area from the list of cumulative schemes. The Inspectorate considers that insufficient justification is provided within the Scoping Report and as such cannot agree to scope schemes of this scale out of assessment at this stage. Other development to be included in the cumulative effects assessment should be agreed with relevant consultation bodies including the host local planning authorities. |

| ID     | Ref                  | Description                                   | Inspectorate's comments  |
|--------|----------------------|---|--|
| 3.14.2 | Paras 13.7 and 13.17 | Impacts on Best and Most Versatile (BMV) land | <p>The Scoping Report states that the Proposed Development would have temporary effects only on BMV land. Whilst the impacts may be reversible on decommissioning, the Inspectorate considers that the anticipated 45-year lifespan of the Proposed Development represents a long-term impact which should be reflected in the assessment conclusions accordingly.</p> <p>The ES should provide evidence to support the statement in paragraph 13.17 of the Scoping Report that Agricultural Land Classification grades do not decline during the operational phases of solar farms. Any impacts likely to result in significant effects on soil quality should be described and assessed.</p> |
| 3.14.3 | Para 13.14           | Methodology                                   | The ES should explain the applicability of the Welsh Government Predictive Agricultural Land Classification Model for a project located in England.  |

| ID     | Ref | Description | Inspectorate's comments  |
|--------|-----|-------------|--|
| 3.14.4 | n/a | Guidance    | The ES assessment should utilise the guidance in Defra: Construction Code of Practice for the Sustainable Use of Soil on Development Sites and The British Society of Soil Science Guidance Note: Benefitting from Soil Management in Development and Construction, as relevant. |

### 3.15 Glint and Glare

(Scoping Report Section 14)

| <b>ID</b> | <b>Ref</b>          | <b>Applicant's proposed matters to scope out</b> | <b>Inspectorate's comments</b>  |
|-----------|---------------------|--|---|
| 3.15.1    | Para 14.1 and 14.18 | Glint and Glare ES aspect chapter                | <p>The Scoping Report proposes to scope out a Glint and Glare ES aspect chapter. A Glint and Glare Assessment would instead be presented as a standalone report submitted as a technical appendix to ES Chapter 4 (Development Description).</p> <p>The Inspectorate is content that a standalone ES Chapter for Glint and Glare is not required. However, as the Scoping Report (paragraph 14.18) identifies 'moderate' adverse effects on receptors, the Inspectorate considers that significant effects as a result of glint and glare cannot be excluded.</p> <p>ES Chapter 16 ('Other Environmental Topics') should therefore contain a summary of the assessment in the technical appendix and identify any significant effects resulting from glint and glare.</p> |

| <b>ID</b> | <b>Ref</b>         | <b>Description</b>  | <b>Inspectorate's comments</b>  |
|-----------|--------------------|---------------------|---|
| 3.15.2    | Paras 14.4 to 14.6 | Sensitive receptors | <p>The Applicant is advised to use the SZTV developed for the Landscape and Visual Assessment to identify sensitive receptors with potential views of the site, which may therefore be affected by glint and glare. Effort should be made to agree the sensitive receptors with relevant consultation bodies. The locations of the sensitive receptors should be shown on an accompanying plan.</p> |



## APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

**TABLE A1: PRESCRIBED CONSULTATION BODIES<sup>2</sup>**

| <b>SCHEDULE 1 DESCRIPTION</b>   | <b>ORGANISATION</b>                                  |
|---|--|
| The Health and Safety Executive   | Health and Safety Executive                          |
| The National Health Service Commissioning Board   | NHS England  |
| The relevant Integrated Care Board  | NHS South Yorkshire Integrated Care Board            |
|   | NHS Humber and North Yorkshire Integrated Care Board |
| Natural England   | Natural England                                      |
| The Historic Buildings and Monuments Commission for England   | Historic England                                     |
| The relevant fire and rescue authority  | Humberside Fire and Rescue Service                   |
|   | South Yorkshire Fire and Rescue Service              |
| The relevant police and crime commissioner  | Humberside Police and Crime Commissioner             |
|   | South Yorkshire Police and Crime Commissioner        |
| The relevant parish council(s) or, where the application relates to land [in] Wales or Scotland, the relevant community council | Thorne-Moorends Town Council                         |
|   | Hatfield Town Council                                |
|   | Belton Parish Council                                |
|   | Crowle and Ealand Town Council                       |
| The Environment Agency  | The Environment Agency                               |
| The Civil Aviation Authority  | Civil Aviation Authority                             |

<sup>2</sup> Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the 'APFP Regulations')



| <b>SCHEDULE 1 DESCRIPTION</b>  | <b>ORGANISATION</b>  |
|--|--|
| Integrated Transport Authorities (ITAs) and Passenger Transport Executives (PTEs)                      | South Yorkshire Passenger Transport Executive                          |
| The Relevant Highways Authority  | North Lincolnshire Council Highways Authority                          |
|  | City of Doncaster Council Highways Authority                           |
| The relevant strategic highways company  | National Highways  |
| The Coal Authority   | The Coal Authority   |
| The relevant internal drainage board   | Black Drain Internal Drainage Board                                    |
|  | Doncaster East Internal Drainage Board                                 |
|  | Isle of Axholme and North Nottinghamshire Water Level Management Board |
| The Canal and River Trust  | The Canal and River Trust  |
| United Kingdom Health Security Agency, an executive agency of the Department of Health and Social Care | United Kingdom Health Security Agency                                  |
| Relevant statutory undertakers   | See Table A2 below   |
| The Crown Estate Commissioners   | The Crown Estate   |
| The Forestry Commission  | Forestry Commission  |
| The Secretary of State for Defence   | Ministry of Defence  |

**TABLE A2: RELEVANT STATUTORY UNDERTAKERS<sup>3</sup>**

| <b>STATUTORY UNDERTAKER</b>                                | <b>ORGANISATION</b>                                  |
|--|--|
| The relevant Integrated Care Board                         | NHS South Yorkshire Integrated Care Board            |
|  | NHS Humber and North Yorkshire Integrated Care Board |
| The National Health Service Commissioning Board            | NHS England  |
| The relevant NHS Trust                                     | Yorkshire Ambulance Service NHS Trust                |
| Railways   | Network Rail Infrastructure Ltd                      |
|  | National Highways Historical Railways Estate         |
| Canal Or Inland Navigation Authorities                     | The Canal and River Trust                            |
| Civil Aviation Authority                                   | Civil Aviation Authority                             |
| Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000) | NATS En-Route Safeguarding                           |
| Universal Service Provider                                 | Royal Mail Group                                     |
| Homes and Communities Agency                               | Homes England  |
| The relevant Environment Agency                            | The Environment Agency                               |
| The relevant water and sewage undertaker                   | Anglian Water  |
|  | Severn Trent Water                                   |
|  | Yorkshire Water                                      |
| The relevant public gas transporter                        | Cadent Gas Limited                                   |
|  | Northern Gas Networks Limited                        |
|  | Scotland Gas Networks Plc                            |
|  | Southern Gas Networks Plc                            |

<sup>3</sup> 'Statutory Undertaker' is defined in the APFP Regulations as having the same meaning as in Section 127 of the Planning Act 2008 (PA2008)

| STATUTORY UNDERTAKER                                 | ORGANISATION                       |
|--|------------------------------------|
|  | Wales and West Utilities Ltd       |
|  | Energy Assets Pipelines Limited    |
|  | ES Pipelines Ltd                   |
|  | ESP Connections Ltd                |
|  | ESP Networks Ltd                   |
|  | ESP Pipelines Ltd                  |
|  | Fulcrum Pipelines Limited          |
|  | GTC Pipelines Limited              |
|  | Harlaxton Gas Networks Limited     |
|  | Independent Pipelines Limited      |
|  | Indigo Pipelines Limited           |
|  | Last Mile Gas Ltd                  |
|  | Leep Gas Networks Limited          |
|  | Quadrant Pipelines Limited         |
|  | Squire Energy Limited              |
|  | National Grid Gas Plc              |
| The relevant electricity distributor with CPO Powers | Eclipse Power Network Limited      |
|  | Energy Assets Networks Limited     |
|  | ESP Electricity Limited            |
|  | Fulcrum Electricity Assets Limited |
|  | Harlaxton Energy Networks Limited  |
|  | Independent Power Networks Limited |
|  | Indigo Power Limited               |
|  | Last Mile Electricity Ltd          |
|  | Leep Electricity Networks Limited  |

| STATUTORY UNDERTAKER                                 | ORGANISATION                                      |
|--|---|
|  | Mua Electricity Limited                           |
|  | Optimal Power Networks Limited                    |
|  | The Electricity Network Company Limited           |
|  | UK Power Distribution Limited                     |
|  | Utility Assets Limited                            |
|  | Vattenfall Networks Limited                       |
|  | Northern Powergrid (Yorkshire) plc                |
| The relevant electricity transmitter with CPO Powers | National Grid Electricity Transmission            |
|  | National Grid Electricity System Operator Limited |
|  | Elexon Limited                                    |

**TABLE A3: SECTION 43 LOCAL AUTHORITIES (FOR THE PURPOSES OF SECTION 42(1)(B))<sup>4</sup>**

| LOCAL AUTHORITY <sup>5</sup>           |
|--|
| North Lincolnshire Council             |
| City of Doncaster Council              |
| West Lindsey District Council          |
| Selby District Council                 |
| Bassetlaw District Council             |
| Rotherham Metropolitan Borough Council |
| Wakefield Council                      |
| Barnsley Metropolitan Borough Council  |
| East Riding of Yorkshire Council       |

<sup>4</sup> Sections 43 and 42(B) of the PA2008

<sup>5</sup> As defined in Section 43(3) of the PA2008

| <b>LOCAL AUTHORITY<sup>5</sup></b> |
|------------------------------------|
| North East Lincolnshire Council    |
| Lincolnshire County Council        |
| North Yorkshire County Council     |
| Nottinghamshire County Council     |

**TABLE A4: NON-PRESCRIBED CONSULTATION BODIES**

| <b>ORGANISATION</b>                        |
|--|
| South Yorkshire Mayoral Combined Authority |

## APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

| <b>CONSULTATION BODIES WHO REPLIED BY THE STATUTORY DEADLINE:</b>  |
|--|
| Black Drain Internal Drainage Board  |
| The Canal and River Trust  |
| City of Doncaster Council  |
| Coal Authority   |
| Lindsey Marsh Drainage Board (Water Management Consortium) (on behalf of Doncaster East Internal Drainage Board and Isle of Axholme Internal Drainage Board) |
| East Riding of Yorkshire Council   |
| The Environment Agency   |
| Health and Safety Executive  |
| Historic England   |
| Ministry of Defence  |
| National Grid Electricity Transmission   |
| National Grid Gas  |
| National Highways  |
| NATS En-Route Safeguarding   |
| Natural England  |
| Network Rail   |
| North East Lincolnshire Council  |
| Northern Gas Networks  |
| Nottinghamshire County Council   |
| Selby District Council   |
| Severn Trent Water   |

|   |
|---|
| South Yorkshire Mayoral Combined Authority  |
| South Yorkshire Police (on behalf of South Yorkshire Police and Crime Commissioner) |
| United Kingdom Health Security Agency   |
| Wakefield Council   |

**From:** [Liam Plater](#)  
**To:** [Tween Bridge](#)  
**Subject:** Tween Bridge Solar Farm (Nationally Significant Infrastructure Project)  
**Date:** 08 February 2023 09:07:21  
**Attachments:** [image001.png](#)  
[Technical Guidance for Developer and Standing Advice.pdf](#)

---

Good morning,

Thank you for consulting Black Drain Drainage Board in relation to the proposed Tween Bridge Solar Farm.

We would advise that the applicant consult our Standing Advice for Developers (please see attached), which sets out our requirements for information to be submitted as part of a development.

While drainage details will need to be submitted later in the planning process, our key requirements to highlight at this stage are as follows:

- No structures to be installed within 9 metres of any watercourse
- Any works relating to watercourses to be subject to Land Drainage Consent from the Board
- Developer to demonstrate that the proposal will not increase surface water runoff when compared to the greenfield runoff rate

I hope this is helpful, and please let me know if you require anything further at this stage.

Kind regards,

Liam

Liam Plater

**Senior Development Control Officer**







**Yorkshire & Humber  
Drainage Boards**

# **Technical Guidance for Developers & Standing Advice for Local Planning Authorities**

**Black Drain Drainage Board**

**Cowick and Snaith Internal Drainage Board**

**Danvm Drainage Commissioners**

**Dempster Internal Drainage Board**

**Ouse & Humber Drainage Board**

**Rawcliffe Internal Drainage Board**

**Reedness & Swinefleet Internal Drainage Board**

**Vale of Pickering Internal Drainage Board**

**The South Holderness Internal Drainage Board also subscribe to this guidance**

| Document Control |            |                       |
|------------------|------------|-----------------------|
| Version          | Approved   | Next Review           |
| 2.01             | 17/08/2020 | <del>17/08/2021</del> |
| 2.02             | 05/09/2020 | 05/09/2021            |

## Contents

|     |  |    |
|-----|--|----|
| 1.  | Introduction .....   | 5  |
| 2.  | Policy Area.....   | 5  |
| 3.  | The Role of IDBs, other RMAs and LPAs.....                                     | 5  |
| 4.  | Land Drainage Consent .....  | 6  |
| 5.  | Design Principles (Surface Water Drainage) .....                               | 7  |
| 6.  | Design Principles (Fluvial or Tidal Displacement) .....                        | 8  |
| 7.  | Design Principles and Policies of other Authorities .....                      | 9  |
| 8.  | Hydraulic Design (Surface Water) .....   | 9  |
| 9.  | Further Advice.....  | 11 |
| 10. | Standing Advice for Local Planning Authorities .....                           | 12 |
| 11. | How to Provide Supporting Information.....                                     | 15 |
| 12. | Box A1 – Total Area of The Proposed Development Site (Redline Area).....       | 15 |
| 13. | Box A2 – Existing Impermeable Area .....                                       | 16 |
| 14. | Box A3 – Total New Impermeable Area .....                                      | 16 |
| 15. | Box A4 – Urban Creep Allowance .....   | 16 |
| 16. | Box A5 – Design Impermeable Area.....  | 16 |
| 17. | Box A6 – Is the design impermeable area greater than 249m <sup>2</sup> ? ..... | 17 |
| 18. | Box A7 – Design Discharge Rate.....  | 17 |
| 19. | Box A8 – Peak Flow Control Rate .....  | 18 |
| 20. | Box A9 – Surface Water Disposal Hierarchy .....                                | 18 |
| 21. | Box B1 – Have You Conducted a Valid Soakaway Test?.....                        | 19 |
| 22. | Box C1 – Can You and Do You Wish to use The Simple Method?.....                | 19 |
| 23. | Box C2 – Simple Method - Rainfall Volume Over Duration.....                    | 20 |
| 24. | Box C3 – Simple Method - Volume Discharged Over Duration.....                  | 20 |
| 25. | Box C4 – Simple Method - Design attenuation volume .....                       | 20 |
| 26. | Box D1 – Complex Method - Design Attenuation Volume.....                       | 20 |
| 27. | Box D2 – Complex Method - Critical Storm Duration .....                        | 21 |
| 28. | Box E1 – Have You Provided a Suitable Engineering Design? .....                | 21 |
| 29. | Box E2 – Do You Have a Long-Term Maintenance Plan in Place?.....               | 22 |

## Legal Notice

*The Applicant, Agent or any other user of this guidance agrees that by following the advice given, the Internal Drainage Boards (“IDBs”) shall under no circumstances whatsoever, be liable to the Applicant, Agent or user of this document, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any loss of profit, or any indirect or consequential loss arising under or in connection with advice given or procedures followed.*

*A favourable response from an IDB to a planning application does not imply land drainage consent is or will be granted. On becoming aware of changes to a planning application the IDBs reserve the right to withdraw any comment made to the local planning authority.*

*The IDBs that subscribe to the standing advice and guidance contained within this document are listed on the cover page of this document, please refer to individual policy positions of other IDBs.*

*Yorkshire and Humber Drainage Boards (“YHDB”) is a public sector management group that directly represents 8 IDBs through arrangements made under S11 of the Land Drainage Act 1991. Administrative services are provided on behalf of YHDB by Ouse and Humber Drainage Board, a public authority constituted under statutory instrument.*

*A map showing England’s Internal Drainage Districts and contact details for all IDBs in England can be found at [www.ada.org.uk](http://www.ada.org.uk).*

## Data Protection Notice

*We will process the information you provide in line with the Data Protection Act 2018 so that we can deal with your application. We may also process or release the information to:*

- offer you documents or services relating to environmental matters;*
- consult the public, public organisations and other organisations (for example, Health & Safety Executive, local authorities, emergency services, Department for Environment, Food and Rural Affairs) on environmental issues;*
- carry out research into environmental issues and develop solutions to problems;*
- provide information from the public register to anyone who asks;*
- prevent anyone from breaking environmental law, investigate cases where environmental law may have been broken, and take any action that is needed;*
- assess whether customers are satisfied with our service and improve it where necessary; and*
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows).*

*We may pass information on to our agents and representatives to do these things for us.*

## Copyright Notice

*© Ouse and Humber Drainage Board 2020*

*© Yorkshire and Humber Drainage Boards 2020*

*The content of this document may be used by other RMAs under licence.*

*This policy references and acknowledges the works of others throughout this document.*

## **1. Introduction**

- 1.1. The following guidance is intended to assist developers when designing drainage systems that are both sustainable and where appropriate mimic natural processes. This means a development will not result in an increased flood risk elsewhere or result in a negative impact on existing drainage systems and should ensure the users of the development are safe. Any such design should work over the lifetime of the development within acceptable design parameters which consider future climate change. This kind of drainage design is commonly referred to as Sustainable Drainage Systems ("**SuDS**").
- 1.2. In addition to SuDS the placement of any development, its associated infrastructure or ancillary works must not physically interfere with the local land drainage system.
- 1.3. These measures are required to protect the local land drainage network to ensure lawful compliance with local land drainage bylaws ("**the Bylaws**") and the Land Drainage Act 1991 ("**the Act**").
- 1.4. The information given in this guidance is intended to help a developer support a Land Drainage Consent Application. It is also intended to support the local planning authority ("**LPA**") with their consultation, validation, and decision-making processes where YHDB internal drainage districts coincide with unitary or lower tier local authority districts.
- 1.5. YHDB encourages developers to work within the town and country planning process to provide evidence required by relevant [Flood] Risk Management Authorities ("**RMAs**") to support an application in respect of drainage and flood risk.
- 1.6. Failure to provide information or consult with IDBs during the planning process may result in delays or viability issues later, or in worst case scenarios '*returning to the drawing board*'.

## **2. Policy Area**

- 2.1. The area to which this guidance applies is made up of the internal drainage districts of the Black Drain Drainage Board, Cowick and Snaith Internal Drainage Board, Danvm Drainage Commissioners, Dempster Internal Drainage Board, Ouse & Humber Drainage Board, Rawcliffe Internal Drainage Board, Reedness & Swinefleet Internal Drainage Board, Vale of Pickering Internal Drainage Board and the South Holderness Internal Drainage Board and from time to time may be applied to the catchment area outside of, but draining into these internal drainage districts. This is the ("**Policy Area**").
- 2.2. A map of internal drainage districts in England can be accessed at [ada.org.uk](http://ada.org.uk).

## **3. The Role of IDBs, other RMAs and LPAs**

- 3.1. IDBs have a very important role in any process that may have an impact on flood risk or the local land drainage system. The statutory position is that IDBs are public authorities that shall exercise a general supervision over all matters relating to the drainage of land within their districts, meaning they are the relevant authority that makes decisions about land drainage

including giving permission to discharge to the land drainage system and regulating actions that may impact it through the land drainage consent process.

- 3.2. IDBs are not currently a statutory consultee to the town and country planning process but do have powers to stop and reverse unlawful changes that may increase flooding or impact the local land drainage system using enforcement powers.
- 3.3. LPAs may consult IDBs on development proposals; this is to ensure that as the relevant authority, IDBs are satisfied that the proposals mitigate potential increased flood risk and have no adverse impact on the local land drainage system.
- 3.4. Outside of internal drainage districts the relevant authority for land drainage is the LLFA, this is a statutory function provided by a unitary or upper tier local authority. The LLFA holds many of the same powers as an IDB, but not all LLFAs make use of local land drainage bylaws.
- 3.5. The LLFA is also the statutory body for managing and coordinating flood risk management locally and publish the Local Flood Risk Management Strategy that other RMA's must act consistently with or have regard to when making decisions. The LLFA is a statutory consultee to the town and country planning process which means the LPA must consult with them on major planning applications.
- 3.6. The Environment Agency ("**EA**") is the authority that has powers to manage flooding from main rivers and the sea. The EA is a statutory consultee to the planning process. The EA hold a strategic role to coordinate the national response to all types of flood risk.
- 3.7. Water and Sewerage Companies ("**WSC**") are responsible for the public sewerage system. They have powers to manage the impact on the public sewer network and may enter into an agreement to adopt sewers built by the developer.
- 3.8. The highway authority may adopt drainage apparatus, however these apparatus are usually associated exclusively with the drainage of the adoptable highway.
- 3.9. There are 6 LLFAs and 8 LPAs in the Policy Area, we recognise that although each authority will have broadly the same technical requirements, one authority may require a higher standard than another. YHDB boards will always accept a higher technical standard if required by another RMA or LPA. In the unlikely event technical standards of two authorities' conflict YHDB officers may communicate directly with the other authority to seek an agreed standard.

#### **4. Land Drainage Consent**

- 4.1. If a person wishes to change, or by their actions cause changes to the local land drainage system, either directly or indirectly, a land drainage consent may be required. A land drainage consent is a separate permission to a planning consent.
- 4.2. In the simplest terms a land drainage consent is required if any proposal or action may be contrary to Bylaws or the Act. If you can answer yes to any of the following questions it is likely a land drainage consent will be required:

- ***“Do you plan to place any structure, fencing or planting within 9 metres of the top of the bank of a watercourse, the outside toe of a raised flood defence or the outside edge of a piped watercourse?”***
  - ***“Will your actions increase the flow or volume of water entering a board maintained watercourse either directly or indirectly by any means whatsoever, including water entering the internal drainage district from outside and water entering via any other watercourse or pipeline?”***
  - ***“Do you plan to introduce anything in, below, above, or next to a watercourse?”***
- 4.3. When considering the above questions, the answer may not be obvious, e.g. stripping topsoil off a site planned for a major development will increase the flow and volume of water and will require consent.
- 4.4. Please also consider if any action may displace water within or into a drainage district, without the agreement of the IDB this may contravene the Bylaws e.g. a scheme to divert exceedance flows from a river to prevent flooding elsewhere will still require land drainage consent if it increases flows to a watercourse within the Policy Area.
- 4.5. For further information and to make an application for land drainage consent please download our consent guidance document and application form which can be found on our website.

## **5. Design Principles (Surface Water Drainage)**

- 5.1. Before considering any commercial or other viability issues, the developer should first work with his designer to ask - ***“is the development at flood risk, and how can it be drained without causing a flood risk to its users or increasing flood risk outside of the development?”***. The answer to this question will influence the design and layout of roads, other infrastructure, and buildings. Taking the opposite approach e.g. ***“firstly let’s assess how many housing units can this piece of land accommodate”*** could result in costly abortive design works if the site is at flood risk or cannot be effectually drained.
- 5.2. If the new development is proposed to discharge all surface water directly to the sea or a large tidal body such as an estuary, YHDB do not require attenuation on site, otherwise the guidance should be followed. Please be aware that any new discharge to main rivers may require the consent of the EA.
- 5.3. YHDB recognise that for smaller developments the level of information required to assess flood risk is sometimes disproportionate to the size of the development. There is an option in this guidance to follow a simple method which explains to smaller developers how to undertake hydraulic equations without support from specialists, although this method is acceptable to YHDB, other RMAs may require more detailed information. For larger developments, the developer may wish to seek the advice of a consulting engineer or other qualified or experienced person.

5.4. The IDBs advocate the dual use of public open space (“POS”) and regional SuDS systems. If the LPAs policy agrees with this stance, from an engineering standpoint it is important to understand where on the site POS is proposed.

## **6. Design Principles (Fluvial or Tidal Displacement)**

6.1. Deliberate flooding of land within an internal drainage district (either directly or by displacement) to prevent more damaging flooding elsewhere, may be an appropriate method of managing flood risk in other areas, however the agreement of the affected landowner should be sought and land drainage consent applied for to ensure technical and maintenance proposals are robust.

6.2. If works are planned to lower or raise flood defences on a river or tidal body that impacts the Policy Area (either directly or indirectly) or diverts exceedance flows from a river or tidal body into the Policy Area which will cause an increase in volume of flow to a watercourse, land drainage consent will be required.

6.3. Exceedance flows should be established by understanding how changes on the entire fluvial or tidal system may impact the policy area e.g. raising flood defences on the opposite bank of a river may cause the Policy Area to flood earlier than it does presently.

6.4. Any such proposal should be designed to accommodate exceedance flows in the 1 in 200-year event plus allowances for climate change over the lifetime of the development, which should be taken to be 100-years. Climate change allowances should use the Higher Central Estimate for peak river flow and sea level rise estimates contained within the latest climate change allowances for flood risk assessments published by the EA.

6.5. If water is introduced into the Policy Area from elsewhere that results in over 25,000m<sup>3</sup> of water being impounded above natural ground level, this may be classified as a reservoir. Any engineering proposal that is a reservoir will need to meet the reservoir safety regulations<sup>1</sup>, which may include for the provision of a designed spillway. You must tell the EA if you intend to build a reservoir. The position of the spillway and any designed secondary flow exceedance route that enters the Policy Area must be agreed with YHDB.

6.6. For land drainage consent to be considered in these circumstances the following 4 preliminary tests must be passed:

- TEST 1 - Will the proposals result in an exceedance volume being contained in a discrete area e.g. impounded using barrier banks, valves?
- TEST 2 - Are there formal agreements in place with the owner(s) of land within the discrete area where exceedance volume is to be contained?
- TEST 3 – Do the proposals include for the provision of permanent infrastructure to remove at least 95% of the exceedance volume from the discrete area, by extent, from the Policy

---

<sup>1</sup> For more information visit <https://www.gov.uk/government/publications/design-operation-and-adaptation-of-reservoirs-for-flood-storage>



Area to a depth of less than 100mm within 72 hours of the event occurring (provided the fluvial or tidal system has capacity to accept the return of the exceedance volume)?

- TEST 4 - Is there a long-term funded maintenance strategy in place to manage the permanent infrastructure constructed to meet the above tests over the lifetime of the development?

6.7. If you are planning these types of works anywhere on a tidal or fluvial system and this may impact the Policy Area, please speak with YHDB officers early as possible in the process.

## **7. Design Principles and Policies of other Authorities**

7.1. Developers are encouraged to speak to the IDB, LPA, EA, Highways Authority and WSC early to discuss a development's drainage and flood risk proposals. This is important to ensure the proposed design is compatible with the individual authorities' acceptable technical standards.

7.2. This guidance should be read in conjunction with the National Planning Policy Framework, the Local Flood Risk Management Strategy<sup>2</sup>, the Strategic Flood Risk Assessment<sup>3</sup> and relevant technical notes or supplementary planning advice issued by local authorities. If any part of the drainage design forms part of an adoption agreement with a WSC the designer should ensure that the design complies with the WSC's technical requirements.

## **8. Hydraulic Design (Surface Water)**

8.1. This guidance is based on the publication "*Sustainable Drainage Systems – Non-statutory technical standards for sustainable drainage systems: Department for Environment, Food and Rural Affairs: 2015*" ("**NSTS**") and other publications referenced throughout.

8.2. The guidance differs from the NSTS where it asks the developer to identify the Critical Duration rather than the 6-hour duration. The Critical Duration is the event likely to cause the highest volume within the proposed engineered drainage system for the specified return period. YHDB consider that applying a standard duration regardless of the size of impermeable area and peak runoff rate will give erroneous results, e.g. a large warehousing development with metalled car parks will have a very different critical duration to a small residential development with gardens and landscaping.

8.3. Other RMAs may ask for the 6-hour duration storm to be used for the calculation; however, sensitivity testing should be undertaken to compare this to the critical duration. The IDB will accept designs that are oversized for the critical duration but not undersized.

8.4. If a proposed development introduces a new impermeable area that is estimated to be greater than 249m<sup>2</sup>, applicants are advised to complete the form found at Appendix A – '*Sustainable Drainage Information*' accompanied by guidance notes found later on in this document. Please then submit this and the required supporting information as evidence along with the planning application documents to the LPA (or in the case of permitted development directly to YHDB). Once this information is published by the LPA, YHDB development control

---

<sup>2</sup> Published by Unitary or Upper Tier Local Authority Lead Local Flood Authority Department

<sup>3</sup> Published by Unitary or District Authority Local Planning Authority Department

officers may assess the information and if relevant make comments to the LPA or directly to the developer.

- 8.5. The design should consider flooding within the development, peak flow control, design attenuation, off site flood risk and the runoff destination.
- 8.6. In the case of greenfield areas to be developed the design should ensure runoff from the development mimics natural processes as closely as possible. The drainage system should be designed to attenuate (store) additional rainfall volume generated over the duration of the design rainfall event due to the development and release this at a controlled rate to the runoff destination, usually a downstream watercourse or piped system.
- 8.7. Ideally the design should restrict flows generated from the site in the 1 in 1-year rainfall event using the method set out in IH124 QBAR<sup>4</sup> (Nominally 1.4 litres per second per hectare (l/s/ha)), this is normally achieved using an engineered flow control device, this could be a pump or a mechanically actuated valve but in most cases will be a static flow control device which restricts the amount of water that can pass through it. Where static flow control device such as a vortex flow control or orifice plates are used, they must not have an orifice (diameter) of less than 75mm which will give a flow rate that is normally not less than 3.5 litres per second (l/s).
- 8.8. YHDB consider orifices smaller than 75mm may block more easily and will result in unacceptable drain-down periods increasing flood risk overall, however new designs or novel approaches to reduce this runoff rate further may be considered if effective operation and long term serviceability issues are proven to be met. If a novel approach or new proprietary product is proposed that has a diameter of less than 75mm or flow rate of less than 3.5 l/s then please contact YHDB to discuss this further.
- 8.9. For residential development, a 10% additional allowance in impermeable area should be made for 'urban creep'; this accounts for extensions, patios and conservatories built during the life of the development.
- 8.10. The design event shall be based on the critical duration for the 1 in 100-year rainfall event + allowances for climate change on greenfield sites (always 40% for residential development). FSR<sup>5</sup>/FEH<sup>6</sup> rainfall profiles will be accepted when making this calculation.
- 8.11. It is important to understand that a return period does not represent a future time frame, it represents a statistical probability of an event occurring, e.g. a 1 in 100-year rainfall event represents a 1% chance of that rainfall event occurring in a given year. It is entirely feasible that a 1 in 100-year event could occur in the same place twice in the same year.
- 8.12. The runoff destination should be considered in accordance with the following hierarchy:

---

<sup>4</sup> Institute of Hydrology Report Nr. 124: 1994

<sup>5</sup> Flood Studies Report: 1975

<sup>6</sup> Flood Estimation Handbook: 2013

- Infiltration to ground
  - Discharge to a watercourse or river
  - Discharge to a surface water sewer or highway drain
  - Discharge to a combined sewer
- 8.13. Due to the nature of ground conditions and seasonal variation in ground water levels within an internal drainage district, conditions are often not conducive to infiltration to ground.
- 8.14. Unless an existing connection exists (and this was made lawfully), discharge to a watercourse or river outside of the development will require the agreement of the landowner(s) through which the watercourse or river passes. Discharge to a main river may require the consent of the EA. Discharge to a public sewer or highway drain may require the consent of the WSC or Highway Authority.
- 8.15. The developer should show they have considered a Sustainable Drainage (SuDS) approach to design:
- Source Control - *e.g. unbound surfaces, planted areas, runoff paths to gardens*
  - Site Control - *e.g. slowing the flow down, e.g. swales in verges*
  - Regional Control - *e.g. dry attenuation basin with a flow control device*
- 8.16. The design should consider exceedance flow above the design event, consider if the route of the water will be changed due to the development e.g. will a new wall deflect water in a new direction?
- 8.17. For developments on previously developed land the peak runoff rate, where the water leaves the site should be as close as reasonably practicable to the greenfield runoff rate especially where there is no existing positive drainage system. For areas that have a proven existing positive drainage system, a higher rate will be accepted only where detailed sensitivity testing is undertaken to establish the current maximum rate at which water leaves that system. This should be assessed up to the current 1 in 30-year rainfall event where water does not escape at ground level. In other words, the peak runoff rate should never exceed the rate of discharge from the drainage system prior to the redevelopment. Any such proposal will require a body of evidence potentially including surveys and computer modelling.

## 9. Further Advice

- 9.1. YHDB offers up to 30 minutes of free pre-application telephone advice to developers. We also offer a chargeable pre-application service for more detailed advice; please contact us for more details on 01430 430237.

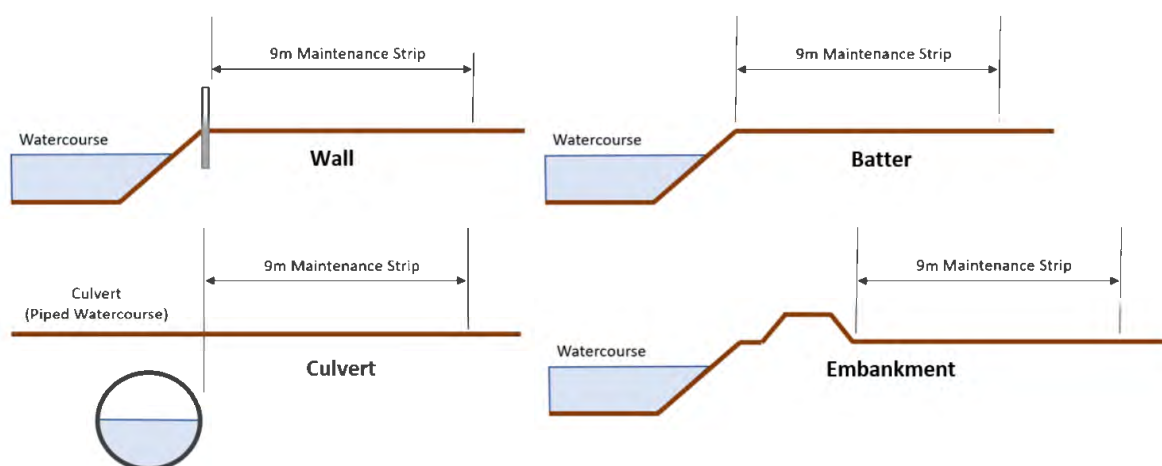
## 10. Standing Advice for Local Planning Authorities

- 10.1. YHDB wish to better support LPAs in making decisions about drainage and flood risk in internal drainage districts and catchment areas, this guidance is intended to assist with their validation and decision-making process. YHDB development control officers are available to offer reasonable support to LPA case officers on drainage and flood risk matters; please contact us on **01430 430237** for further guidance or assistance.
- 10.2. Paragraph 163 of the National Planning Policy Framework states that ***“when determining planning applications, local planning authorities should ensure that flood risk is not increased elsewhere.”*** This provision is underpinned by the statutory definition of flooding set out in Section 1 of the Flood and Water Management Act 2010 which defines a flood as ***“any case where land not normally covered by water becomes covered by water”***.
- 10.3. It is important that the control of flow of water and the proximity of development to drainage systems should be considered against provisions that are set out the Bylaws or the Act e.g. if planning consent was given to construct a building 5m from a watercourse without land drainage consent, and this development was to go ahead this would be unlawful.
- 10.4. Please use the standing advice matrix below to decide if you should consult the IDB. If you are unclear, please contact us on **01430 430237**.

| <b>Any development</b>   |                       |   |
|--|-----------------------|---|
| Any development with a new impermeable area greater than 249m <sup>2</sup>               | <b>Consult</b>        | Include roofs, drives and paths even if they are marked as unbound or permeable.  |
| A discharge to the local land drainage system is proposed in the application             | <b>Consult</b>        | The applicant should consult the IDB to establish if land drainage consent is required before further consultation.<br><br>See NOTE 1 |
| The proposed means of access for the development crosses a watercourse                   | <b>Consult</b>        | The applicant should consult the IDB to establish if land drainage consent is required before further consultation.<br><br>See NOTE 1 |
| A structure, road, fence-line, or planting is proposed within 9 metres of a watercourse  | <b>Consult</b>        | The applicant should consult the IDB to establish if land drainage consent is required before further consultation.<br><br>See NOTE 1 |
| A garden or landscaped area is within 9m of a watercourse.                               | <b>Consult</b>        | The applicant should consult the IDB to establish if land drainage consent is required before further consultation.<br><br>See NOTE 1 |
| No structure, road, fence-line, or planting is proposed within 9 metres of a watercourse | <b>Do not consult</b> |   |
| Change of use only   | <b>Do not consult</b> | With no significant changes to paths, drives, roads or means of access  |
| <b>I am unclear if I should consult the IDB</b>  |                       |   |
| Please speak with an IDB development control officer on 01430 430237                     |                       |   |

## Note 1 – No Obstructions within NINE metres of the Edge of the Watercourse

It is unlawful without the prior consent of the internal drainage board for any person to erect any building or structure, whether temporary or permanent, or plant any tree, shrub, willow or other similar growth within 9 metres of the landward toe of the bank where there is an embankment or wall or within 9 metres of the top of the batter where there is no embankment or wall, or where the watercourse is enclosed within 9 metres of the enclosing structure.



By section 66(6) of the Land Drainage Act 1991 every person who acts in contravention of or fails to comply with any of the land drainage Byelaws is liable on summary conviction in respect of each offence.

### Consultation email addresses

Black Drain Drainage Board  
Cowick and Snaith Internal Drainage Board  
Danvm Drainage Commissioners  
Dempster Internal Drainage Board  
Ouse & Humber Drainage Board  
Rawcliffe Internal Drainage Board  
Reedness & Swinefleet Internal Drainage Board  
Vale of Pickering Internal Drainage Board

**[development@yorkshirehumberdrainage.gov.uk](mailto:development@yorkshirehumberdrainage.gov.uk)**

South Holderness Internal Drainage Board

**[info@southholdernessidb.co.uk](mailto:info@southholdernessidb.co.uk)**

## 11. How to Provide Supporting Information

- 11.1. This guidance is to be read in conjunction with the “*Sustainable Drainage Information*” form which can be found at **Appendix A**. It advises you on how to fill in the form and what information and evidence is required to support the information you have given. These requirements are not exhaustive so further information may be required.
- 11.2. The planning authority or the applicant have no statutory requirement to provide this information, however failure to do so may result in YHDB objecting to the proposed development due to lack of information.

## 12. Box A1 – Total Area of The Proposed Development Site (Redline Area)

- 12.1. Provide a location plan of the development, to scale of 1:1000 or 1:1250 or 1:2500 ideally on a recent Ordnance Survey base-map, the plan should include a local named road and nearby building to help identify its location, along with a north arrow.
- 12.2. Provide a site plan of the development, of an appropriate scale that allows all the items listed below to be easily identified.
- 12.3. The plan should have a red line drawn around the area to be developed to define the exact area of the application including means of access. The exact area should be entered in Box A1.
- 12.4. You should include lines for existing below ground surface water drainage or watercourse culverts (where known), these should be marked with a dashed blue line with an arrow marking the direction of flow. Ideally you should mark any manhole or outfall positions and annotate (label) these.
- 12.5. Watercourses should be shown and marked with a solid blue line with an arrow indicating direction of flow and annotated with the words: “**watercourse**”.
- 12.6. If topographical (level) information is available this should be shown with the datum clearly indicated e.g. Metres above Ordnance Datum (mAOD).
- 12.7. There must be no new buildings, hedges, fences, or trees within 9m of a watercourse without consent of the IDB. If any are proposed and you have not contacted the IDB in advance, it is likely the IDB will object to the application.
- 12.8. The IDB always presumes against culverting (piping) of watercourses, and in general will only ever consider this in respect of means of access and health and safety (where health and safety cannot be managed in another way). If culverting is proposed and you have not contacted the YHDB in advance, we are likely to object to the application

**13. Box A2 – Existing Impermeable Area**

- 13.1. On the site plan of the development you have prepared for box A1 shade the existing impermeable area Green, annotate this with **“Existing Impermeable Area”** with the area shown in m<sup>2</sup>.
- 13.2. If there is an existing positive (piped) drainage system that you intend to use as part of the proposed development please provide evidence of this such as, as-built records of drainage or a recent drainage / CCTV survey report proving positive drainage.
- 13.3. If an impermeable area has been constructed previously without land drainage consent, the IDB may ask for the whole area to be treated as greenfield.

**14. Box A3 – Total New Impermeable Area**

- 14.1. On the site plan of the development you have prepared for box A1, shade the total impermeable area red. The shaded area should be annotated **“New Impermeable Area”** with the area shown in m<sup>2</sup>. Enter this value in Box A3.
- 14.2. Include roofs, paths, roads, parking, drives or any other surface that will not allow rainfall to naturally percolate into the ground below.
- 14.3. For residential developments where there is an estate road, include verges between the adoptable footpath and the adoptable highway.
- 14.4. You may exclude unbound surfaces from the impermeable area such as gravel or non-crushable clean stone that is placed directly on earth or on a permeable geotextile fabric.
- 14.5. You may exclude surfaces from the impermeable area where a proprietary product that is designed for infiltration such as permeable paving is proposed, provided such a product is accredited and the proposed installation meets the technical specification of the manufacturer. If a proprietary product is proposed, please supply supporting product and technical information.
- 14.6. Any material that will compact or bind over time, such as crushed stone or bitumen macadam planings are to be treated as impermeable.

**15. Box A4 – Urban Creep Allowance**

- 15.1. This value only applies to residential development and accounts for the fact that householders build extensions, conservatories, and new paved areas over the lifetime of the development.

**16. Box A5 – Design Impermeable Area**

- 16.1. There is no additional guidance - follow instructions on the form.



**17. Box A6 – Is the design impermeable area greater than 249m<sup>2</sup>?**

17.1. If the answer is no, then you do not have to submit any more information at this stage. The IDB may consider allowing an unrestricted discharge to the local land drainage system and may ask for a contribution to improve the local land drainage system to allow such a discharge.

**18. Box A7 – Design Discharge Rate**

18.1. Enter the runoff value; this will depend if the development is greenfield or brownfield or both. If the site is entirely or partly brownfield with a proven positive drainage system you may enter the brownfield runoff rate. If you are unsure or you are unable to provide the evidence requested to calculate brownfield runoff, you may wish to treat the development as greenfield only, this would be acceptable.

*Greenfield Calculations*

18.2. If applicable, calculate and enter the figure for the greenfield runoff rate of the part of the development that is to be made impermeable. Enter this in Box A7. You can do this in 2 ways:

18.3. Divide Box A5 by 10,000 and multiply by 1.4<sup>†</sup> or;

18.4. Divide Box A5 by 10,000 and multiply by Qbar (1 year) <sup>††</sup>

18.5. <sup>†</sup>1.4 l/s/ha is the generic standard greenfield runoff rate adopted by most flood risk management authorities<sup>7</sup>. YHDB accept this greenfield runoff rate.

18.6. <sup>††</sup> A more advanced method may give a higher existing runoff rate than 1.4l/s/ha. The accepted method is to use Qbar (1 year) which may result in a smaller attenuation area. This should be established by the method set out in Institute for Hydrology Report 24 (IH124). You should show your workings which should include hydrological region, soil type, standard annual average rainfall (SAAR) and the 2.3 year to 1-year growth factor adjustment.

*Brownfield Calculations*

18.7. If applicable, calculate and enter the figure for the brownfield runoff rate for the part of the site that is already impermeable and has a proven positive drainage system. If you are unsure or you are unable to provide the evidence requested, you may wish to treat the development as greenfield only.

18.8. Provide evidence of an existing positive drainage system such as a recent CCTV survey accompanied by a plan.

18.9. Using hydraulic modelling software to undertake sensitivity testing, calculate the critical duration and peak volume in the piped system up to the point that no part of the existing drainage system surcharges (floods out of manholes at ground level); do this for a range of

---

<sup>7</sup> If this rate differs from a rate determined another RMA or the LPA please contact the Board for further advice.

durations and return periods up to a maximum of the 1 in 30-year rainfall event. Please provide the results of this simulation.

- 18.10. From this simulation calculate the maximum discharge rate where water leaves the site; this is the brownfield design discharge rate. Enter this value in l/s in Box A7.
- 18.11. If applicable, if the development is partly greenfield and partly brownfield, you may add the brownfield design discharge rate and the greenfield design discharge rate together and enter this value in Box A7.

#### **19. Box A8 – Peak Flow Control Rate**

- 19.1. The flow control rate is the maximum rate at which the rainwater that lands on the new impermeable area is permitted to leave the development.
- 19.2. Flow is usually controlled using a static orifice pipe or a vortex control device but can be controlled using other methods. When using a static flow control device this should be 75mm in diameter or larger to prevent blockage, if you are considering using a small diameter product please contact the IDB on 01430 430237.
- 19.3. YHDB considers that if flows are restricted to less than 3.5l/s, drain down times may be unacceptable; therefore, if the design discharge rate is less than 3.5l/s this figure should be rounded up to 3.5l/s. If this value cannot be achieved, please contact the IDB on 01430 430237.
- 19.4. The IDB recognises that proprietary products that may achieve a lesser rate are available and will consider these if robust evidence can be provided on the effectiveness and serviceability of these products over the lifetime of the development.

#### **20. Box A9 – Surface Water Disposal Hierarchy**

- 20.1. The applicant should always take a hierarchical approach to disposal of surface water in the following order:
- 20.2. Infiltration
- 20.3. *Due to the nature of ground conditions and seasonal variation in ground water levels within an internal drainage district conditions are often not conducive to infiltration, the IDB require a high degree of evidence that this method will work.*
- 20.4. *If you are using this method, please go to Box B1.*
- 20.5. Discharge to watercourse
- 20.6. *This is the IDB's preferred method. A watercourse can include discharge to a culverted (piped) watercourse; in this case please provide evidence that the culvert is in a serviceable condition and maintained. The applicant will need the permission of the person(s) that owns the land on the route to, or next to the watercourse.*

- 20.7. *If you are using this method, please go to Box C1.*
- 20.8. Discharge to surface water sewer
- 20.9. *The applicant is advised to contact their local WSC before considering this method.*
- 20.10. *If you are using this method, please go to Box C1.*
- 20.11. Discharge to combined sewer
- 20.12. *The applicant is advised to contact their local WSC before considering this method. If the IDB considers that this will increase the volume of water entering the local land drainage system elsewhere, it will object.*

**21. Box B1 – Have You Conducted a Valid Soakaway Test?**

- 21.1. If you are intending to use a soakaway as your means of disposal you must provide a valid test.
- 21.2. The test should be carried out in accordance with BRE365 or other method approved by the IDB. In addition:
- 21.3. The test should be conducted between December 1<sup>st</sup> and March 31<sup>st</sup>. If this is not possible results should be supported by a report from a qualified hydrologist.
- 21.4. Two test pits are required to be excavated to a minimum depth of 1.5m. The test should be conducted 3 times per pit and on each occasion the pit should be allowed to drain completely.
- 21.5. The tests should be evidenced with photographs with a tape or measuring staff included in the image for scale.
- 21.6. The IDB should be contacted and given notice of at least 7 days of when the test is to be undertaken and invited to witness the test. The IDB may or may not attend. Alternatively, if the test is witnessed by an officer of another flood risk management authority the IDB will accept the results.
- 21.7. If groundwater or saturated earth is exposed during the excavation the IDB will consider the test to have failed.
- 21.8. For developments where the new impermeable area is over 500m<sup>2</sup> please contact the IDB first to discuss the technical approach to a soakaway for a larger development.

**22. Box C1 – Can You and Do You Wish to use The Simple Method?**

- 22.1. The IDB does not unduly wish to impose disproportionate requirements on small developers.
- 22.2. If the design impermeable area in Box A5 is between 250m<sup>2</sup> and 750m<sup>2</sup> the applicant can choose a simple method for hydraulic calculations that the IDB will accept.

22.3. To ensure these results are robust it is important the applicant understands and accepts that this method uses figures that are conservative and are likely to overestimate requirements such as attenuation volume.

**23. Box C2 – Simple Method - Rainfall Volume Over Duration**

23.1. The simple method assumes 60mm of rain will fall over the design impermeable area; this figure already includes an allowance for climate change. By multiplying this figure by the design impermeable area this tells us how much water the drainage system needs to cope with.

**24. Box C3 – Simple Method - Volume Discharged Over Duration**

24.1. The simple method assumes the (critical) storm duration is 60 minutes (3,600 seconds); by multiplying the flow control rate in Box A8 by 3.6, this tells us how much water leaves the drainage system during the critical storm duration.

**25. Box C4 – Simple Method - Design attenuation volume**

25.1. This is the amount of water that needs to be stored on site and released at a controlled rate so that flood risk is not increased elsewhere.

**26. Box D1 – Complex Method - Design Attenuation Volume**

26.1. This is the amount of water that needs to be stored on site and released at a controlled rate so that flood risk is not increased elsewhere for the critical storm duration.

26.2. Work this out using industry standard probabilistic rainfall data and catchment descriptors. Ensure the method used matches the figures stated in Part A.

26.3. You may use modelling software to produce the results. You may submit calculations produced by the software as evidence, however this information should be summarised clearly in a cover sheet.

26.4. Failure to summarise results clearly may result in a request for further information.

26.5. The design attenuation volume shall be calculated using the 1 in 100-year rainfall event + 40%<sup>8</sup> (1% Annual Exceedance Probability + 40% allowance for climate change (CC)). The entire attenuation volume should be accommodated within the development area unless clearly achievable off-site arrangements have been identified.

26.6. If any part of the development is subject to an agreement under Section 104 of the Water Industry Act 1991 the WSC may require that attenuation below the 1 in 30-year rainfall event (3.3% Annual Exceedance Probability) event + CC is held in a drainage system without

---

<sup>8</sup> If a smaller climate change allowance is proposed for non-residential development, please contact the YHDB

surcharging, any volume between the 1 in 30-year rainfall event + CC and 1 in 100-year rainfall event + CC may be designed to be held in above ground areas designed for such a purpose e.g. swales, public open space or a car park. If a two-tier solution of this type is proposed, please show calculations for the 1 in 30-year event + CC and 1 in 100-year event + CC.

26.7. Please state any assumptions on the cover sheet.

**27. Box D2 – Complex Method - Critical Storm Duration**

27.1. Establish the critical storm duration based on the peak design attenuation volume for the 100-year (1% Annual Exceedance Probability) event + 40% for climate change.

**28. Box E1 – Have You Provided a Suitable Engineering Design?**

28.1. For all developments components must be designed to ensure structural integrity of the drainage system and any adjacent structures or infrastructure under anticipated loading conditions over the design life of the development considering the requirement for reasonable levels of maintenance. The materials, including products, components, fittings or naturally occurring materials, which are specified by the designer must be of a suitable nature and quality for their intended use.

28.2. For minor developments, a general arrangement drawing should be provided showing the line and direction of any proposed drainage system. This should indicate manhole, outfall, flow control details and attenuation proposals. The drawing should be clearly annotated.

28.3. For major developments the following information is requested:

28.4. A topographical survey in metres Above Ordnance Datum (mAOD) which should include existing general site levels, existing intermediate ground levels for proposed off-site drainage works, crown, intermediate and channel level of the nearest adjacent public highway, bank/cover and invert level of the receiving watercourse/sewer/culvert.

28.5. A plan showing the line, dimensions, and levels in mAOD of all existing (and to be retained) and proposed drainage apparatus, flow control details and attenuation systems.

28.6. Cross sections with dimensions and levels in mAOD of all existing and proposed drainage apparatus.

28.7. The engineering standard to be used for construction and materials, e.g. WRC Sewers for Adoption. Where novel proprietary products or bespoke solutions are proposed please submit supporting technical information.

28.8. For sites over 4 hectares or 'masterplan' developments the IDBs encourage a regional SuDS scheme which should drain water into a central storage area which can be drained down at the flow control rate. Ownership or commercial considerations should not influence this approach.

28.9. This list is not exhaustive, if further information is required, the LPA will be asked for further information.

**29. Box E2 – Do You Have a Long-Term Maintenance Plan in Place?**

29.1. For major development, the LPA is required by a development management procedure order (Written Statement HCWA161) to ensure that suitable ongoing maintenance arrangements are in place over the lifetime of the development. The IDB will always ask for a condition to ensure a suitable maintenance plan is in place and will ask the LPA to ensure that any such plan is monitored and if necessary, enforced over the lifetime of the development.

29.2. The IDB does not favour private maintenance arrangements for drainage apparatus and associated land, from a land drainage consent stance any such proposal will result in a high degree of scrutiny from the Board unless the development is likely to remain under single ownership and within a single curtilage over its lifetime. If a private maintenance arrangement is planned, please contact the IDB to discuss your proposals before making your planning submission.

29.3. The following approaches to maintenance arrangements are supported by the IDBs:

- Vesting of drainage apparatus in an IDB or other public RMA
- Adoption of drainage apparatus under section 104 of the Water Industry Act 1991.
- Adoption of drainage apparatus as part of a Section 38 agreement
- Or a combination of the above.

29.4. Please provide a comprehensive statement on how drainage apparatus will be maintained in the future.

*Appendix A – Sustainable Drainage Information Form*

Please Read in Conjunction with Above Guidance

**SUSTAINABLE DRAINAGE INFORMATION**

This form and the associated guidance is provided to assist developers so they might prepare adequate information so the IDB is better able to comment on planning applications within its district / catchment area. There is no statutory requirement to complete this form or provide the suggested supporting information, however failure to provide relevant information in an appropriate form or level of detail may result in the Board objecting to the application on grounds of insufficient information. Determination of planning applications remains a matter for the Local Planning Authority (LPA).

Regardless of the LPA decision, if any part of a development is found to be constructed contrary to the Land Drainage Act 1991 or Local Land Drainage Bylaws this may be an offence.

As well as planning consent the development may require land drainage consent, please see our website for further information

**PART A - BASIC INFORMATION**

Fill the Box in marked "VALUE" with a number or response

Refer to the accompanying Guidance Sheet about how to complete this form and ensure all supporting information is included

| LINE | INFORMATION REQUIRED                               | VALUE | UNIT    | DESCRIPTION   |
|------|--|-------|---------|---|
| A1   | Total area of proposed development                 | A1    | m2      | Also known as the redline area.<br>Include everything within the redline regardless of surface type.<br>Enter this value.   |
| A2   | Existing impermeable area.                         | A2    | m2      | Enter Existing Impermeable Area<br>Enter this value.  |
| A3   | Total new impermeable area                         | A3    | m2      | Enter New Impermeable Area<br>Enter this value.   |
| A4   | Urban Creep Allowance                              | A4    | m2      | This is for residential development only, enter NA if the development is not residential.<br>This is the value on Line A3 multiplied by 0.1 or 10%.<br>Enter this value = <b>(A3 x 0.1)</b> .   |
| A5   | Design impermeable Area                            | A5    | m2      | This is the value on Line A3 added to the value on Line A4.<br>Enter this value = <b>(A3 + A4)</b> .  |
| A6   | Is the design impermeable area greater than 250m2? | A6    | YES/NO  | If the answer is <b>NO</b> then <b>STOP</b> . The Board does not require any further information.<br>Do not fill in any more of this form and submit it with the information requested so far.<br>Enter this value = <b>(YES or NO)</b> .                                   |
| A7   | Design Discharge Rate                              | A7    | l/s     | Enter the Design Discharge Rate<br>To calculate these values see the guidance note.<br>Enter this value = <b>(Greenfield Rate) OR (Brownfield Rate) OR (Greenfield + Brownfield Rate)</b>   |
| A8   | Peak Flow Control Rate                             | A8    | l/s     | If the value on Line A7 is less than 3.5 then enter 3.5 otherwise enter the value from Line A7.<br>Enter this value = <b>(A7) or (3.5)</b> .  |
| A9   | Surface water disposal heirarchy                   | A9    | I/W/S/C | Enter I for Infiltration, <b>W</b> for Watercourse, <b>S</b> for Surface Water Sewer or <b>C</b> for Combined Water Sewer.<br>If discharge is to infiltration go to <b>Line B1</b> otherwise go to <b>Line C1</b> .<br>Enter this value = <b>(I) or (W) or (S) or (C)</b> . |

**PART B - DISCHARGE TO INFILTRATION (SOAKAWAY)**

Fill the Line in marked "VALUE" with a number or response

Refer to the accompanying Guidance Sheet about how to complete this form and ensure all supporting information is included

|    |   |    |        |  |
|----|---|----|--------|--|
| B1 | Have you conducted a valid soakaway test? | B1 | YES/NO | Have you completed a successful BRE 365 (or approved) soakaway test and did it pass?<br>If the answer is <b>NO</b> use another method of surface water disposal.<br>Enter this value <b>(YES) or (NO)</b> . Go to Line E1. |
|----|---|----|--------|--|

**PART C - DISCHARGE TO WATERCOURSE, CULVERT, SURFACE WATER SEWER or COMBINED SEWER - SIMPLE METHOD**

Fill the Line in marked "VALUE" with a number or response

Refer to the accompanying Guidance Sheet about how to complete this form and ensure all supporting information is included

|    |  |    |        |   |
|----|--|----|--------|---|
| C1 | Can you and do you wish to use the simple method?                      | C1 | YES/NO | If you wish to use the simple method, enter <b>YES</b> and go to <b>Line C2</b> . Otherwise enter <b>NO</b> and go to <b>Line D1</b> .<br>Enter this value = <b>(YES) or (NO)</b> . |
| C2 | Simple Method - Rainfall volume over duration including climate change | C2 | m3     | This is the value on Line A5 multiplied by <b>0.06</b><br>Enter this value = <b>(A5 x 0.06)</b>   |
| C3 | Simple Method - Volume discharged over duration                        | C3 | m3     | This is the value in Line A8 multiplied by <b>3.6</b> .<br>Enter this value = <b>(A8 x 3.6)</b>   |
| C4 | Simple Method - Design attenuation volume                              | C4 | m3     | This is the value on Line C2 minus the value on Line C3.<br>Enter this value = <b>(C2 - C3)</b><br>Go to Line E1  |



| PART D - DISCHARGE TO WATERCOURSE, CULVERT, SURFACE WATER SEWER or COMBINED SEWER - COMPLEX METHOD                         |   |    |               |  |
|--|---|----|---------------|--|
| Fill the Line in marked "VALUE" with a number or response  |   |    |               |  |
| Refer to the accompanying Guidance Sheet about how to complete this form and ensure all supporting information is included |   |    |               |  |
| D1   | Complex Method - Design Attenuation Volume  | D1 | m3            | Enter the design attenuation volume for the 100 year event (1% Annual Exceedance Probability) and include an allowance of 30%* to account for climate change. (*See Guidance)<br>Enter this value. |
| D2   | Complex Method - Critical Storm Duration  | D2 | min           | Enter the critical storm duration.<br>Enter this value.  |
| D4   | Go to Line E1   |    |               |  |
| PART E - DESIGN AND SUBMISSION   |   |    |               |  |
| Fill the Line in marked "VALUE" with a number or response  |   |    |               |  |
| Refer to the accompanying Guidance Sheet about how to complete this form and ensure all supporting information is included |   |    |               |  |
| E1   | Have you provided a suitable engineering design?  | E1 | YES / NO      | Provide a suitable engineering design - see guidance.<br>Enter this value = <b>(Yes or No)</b>   |
| E2   | Do you have a long term maintenance plan in place?  | E2 | YES / NO / NA | Only fill this in for a major development.<br>Provide a statement on how the drainage apparatus will be maintained in the future.<br>Enter this value = <b>(Yes, No or NA)</b>                     |
| E3   | Have you prepared all of the supplementary documents and evidence requested in the guidance document? | E3 | YES/NO        | Ensure all the information requested is submitted to the local planning authority to support your application<br>Enter this value = <b>(Yes or No)</b>   |

The applicant understands that by following the advice given, the Internal Drainage Boards (IDBs) shall under no circumstances whatsoever be liable to the applicant, whether in contract, tort (including negligence), breach of statutory duty, or otherwise, for any loss of profit, or any indirect or consequential loss arising under or in connection with advice given or procedures followed.

|  |  |
|--|--|
| <b>Name of Applicant / Business Name of Developer</b>              |  |
| <b>Address of Applicant</b>  |  |
| <b>Name of Agent (If authorised to act on behalf of applicant)</b> |  |
| <b>Telephone Number(s) of Applicant</b>                            |  |
| <b>Email Address of Applicant</b>                                  |  |
| <b>Address of Agent</b>  |  |
| <b>Agent Telephone Number(s)</b>                                   |  |
| <b>Agent Email Address</b>   |  |
| <b>Signed on Behalf of Developer</b>                               |  |
| <b>Name</b>  |  |
| <b>Position</b>  |  |
| <b>Date</b>  |  |



**Canal &  
River Trust**

Making life better by water

Your Ref EN010148

Our Ref IPP-182

Friday 24<sup>th</sup> February 2023

BY EMAIL ONLY [tweenbridge@planninginspectorate.gov.uk](mailto:tweenbridge@planninginspectorate.gov.uk)

Dear Sirs

**EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification**

Thank you for your consultation on the Environmental Impact Assessment Scoping for the above project.

We are the charity who look after and bring to life 2000 miles of canals & rivers. Our waterways contribute to the health and wellbeing of local communities and economies, creating attractive and connected places to live, work, volunteer and spend leisure time. These historic, natural and cultural assets form part of the strategic and local green-blue infrastructure network, linking urban and rural communities as well as habitats. By caring for our waterways and promoting their use we believe we can improve the wellbeing of our nation.

Having reviewed the location of the proposed project and the Scoping Report, we wish to make the following comments:

The Trust are Landowner and Navigation Authority for the Stainforth & Keadby Canal. The river is included within the development boundary of the project. Due to the nature of the need for cable connections, we understand that a crossing of the canal is proposed. The proposals also seek to construct new solar farms and associated substations in close proximity to the canal, which will be visible from the waterway.

The canal is classified as a freight waterway, and can accommodate large craft.

#### **Landscape and Visual Effects (Chapter 4)**

The proposals would involve the permanent erection of solar panels in locations visible from the Towpath of the Stainforth & Keadby Canal.

The canal in this location is characterised by existing long distance rural views of agricultural fields that are lined with field trees and hedgerows. To the north of the canal, the neighbouring railway is low lying and would likely not wholly buffer views of the proposed solar farms to the north of the canal. To the south of the canal, the proposed solar farm could have a significant visual impact due to the proximity of the development boundary to the waterway. There is therefore a significant risk that the proximity of these works could have a significant negative visual impact to the setting of the canal.

#### **Canal & River Trust**

Fradley Junction, Alrewas, Burton-upon-Trent, Staffordshire DE13 7DN

T 0303 040 4040 E [canalrivertrust.org.uk/contact-us](http://canalrivertrust.org.uk/contact-us) W [canalrivertrust.org.uk](http://canalrivertrust.org.uk)

The proposed LVIA would include two viewpoint locations from the towpath of the canal (highlighted in paragraph 4.35). The locations are not set out on a plan available for comment. As a result, we are unable to advise on the appropriateness of proposed locations at the scoping stage. We request that viewpoints for the LVIA from the canal should include views towards Clay Bank Farm, where the red line boundary extends up to the curtilage of the canal, and should take into account the impact of proposed sub stations in this location.

Open views of the countryside and agricultural land as existing would likely be heavily interjected by the vastness of the solar farm, particularly if outward views have a rise in land elevation or the solar farm is proposed in immediate proximity to the canal boundary. We request that mitigation to protect the amenity of the canal should seek to set back the solar farm from the boundaries with the canal (especially to the south), and to incorporate native boundary planting of rural character to buffer views based on careful landscape character analysis. Whilst paragraph 4.38 of the scoping report discusses the use of planting alongside the development, we would welcome reference about the sensitive siting of equipment relative to publicly accessible paths, including the canal and its associated towpath.

We request that any planting should respond to the LVIA assessment findings, **and should not be limited to the ecological and landscape mitigation areas shown on drawing number P21-3484\_08\_C**. Dependant on the final layout of development, mitigation planting may be required to the south of the canal where the development area abuts the waterway (notably in the location of the drilled crossing). No planting is presently indicated in this area within P21-3484\_08\_C.

We note that the scoping report does not identify any specific users who may be impacted by the works, beyond undefined residential, recreational and road users (paragraph 4.29). **We request that the LVIA should specifically address boaters, walkers and cyclists who utilise the canal corridor**. Such users would likely pass through the area at low speed, and may be more subject to visual impacts from the scheme than road or railway users, passing through the area at speed.

The proposals include new substation areas. **We request that the Environmental Report should assess the impact of these on wider views from the canal, and should explore potential mitigation measures, including the potential for any re-siting to areas where they will be less visible.**

## Nature Conservation and Biodiversity (Chapter 5)

The Stainforth & Keadby Canal offers a potential habitat for waterborne species, potentially including amphibians, mammals (including otter), fish and waterborne plants. We understand that the Environmental Report will be supported with a study of biodiversity and habitats, and that the canal is included in the study boundary.

Paragraph 5.23 highlights the presence of invasive species within the canal. We advise that the report should seek to assess whether there is any risk of this species being transferred elsewhere during development, which may be dependant on the works proposed alongside or on the water.

Directional drilling is proposed under the canal. We wish to highlight that directional drilling can still cause sediment discharges and problems arising from mud toxicity due to vibration below the watercourse. **As a result, we believe the impact should be scoped in, with consideration given to the provision of field studies into invertebrates and fish species found in the water to assess the sensitivity of these species to potential sediment movement.**

We note that artificial lighting may be proposed on site, and that is proposed to not be scoped into the Environmental Report. We advise that temporary construction lighting, including upon the cable corridor routing, has the potential to disturb wildlife, including along the canal. Paragraph 5.71 highlights that lighting required during construction, operation and decommissioning will be directed away from trees and surrounding habitats,

## Canal & River Trust

Fradley Junction, Alrewas, Burton-upon-Trent, Staffordshire DE13 7DN

T 0303 040 4040 E [canalrivertrust.org.uk/contact-us](http://canalrivertrust.org.uk/contact-us) W [canalrivertrust.org.uk](http://canalrivertrust.org.uk)

and that lighting proposed will be 'temporary' and 'low impact'. There is a risk that temporary lighting may be in position for a long time during the period of construction. **As a result, we request that further justification may be required for not scoping this into the report, such as the agreement for additional lighting details to be provided prior to the commencement of construction works.** The submission of a construction phase lighting plan with LUX values provided could offer an appropriate solution, and could potentially be provided post determination.

## Ground Conditions (Chapter 7)

The proposals involve land in close proximity to the Stainforth & Keadby Canal. We request that any disturbance of land here should seek to avoid pollution to the water environment of the canal which could be caused through unintentional runoff from exposed soils, or dust.

Paragraphs 7.18 to 7.22 of the scoping report highlight the likely effects of development. These include risks from topsoil disturbance during the construction phase. 7.24 identifies that effects will be managed through a Construction Environmental Management Plan (CEMP).

**A CEMP could offer an appropriate measure to address risks to the canal. We advise that dust prevention measures, and specific measures (such as trenches or hoarding) should be incorporated to reduce the risk of pollution towards the canal.**

## Transport and Access (Chapter 10)

The Stainforth & Keadby Canal consists of several bridge crossings, many owned and managed by the Trust. We wish to highlight that several of these bridges have weight limits or width restrictions that could make them susceptible to damage from HGV traffic. **We request that the routing of construction traffic to and from site should be identified in the Environmental Report, so as to ensure that any risks to potentially vulnerable bridges can be assessed at the earliest stage.** We would be happy to provide the applicant further advice on construction traffic routing over Trust owned bridges, should this be of use.

We wish to highlight that the Stainforth & Keadby Canal is a freight waterway capable of handling freight traffic. Opportunities may exist for the carriage of construction associated traffic to the site via waterborne craft, which could help reduce the need for carriage by road. This could help to reduce road miles and help improve the sustainability of the proposal, in line with the principles of section 2 of the National Planning Policy Framework. **We consider that options for alternative non-road based construction transport to and from the site, including use of the canal, should be considered in the Environmental Report.** We would be happy to provide further advice upon this, should the applicant wish to explore use of the canal for waterborne freight.

## Other Comments

### General Comment on the Routing of the Cables

The submitted documents indicate that new cables will be sited underground. The Trust generally welcomes this approach, as it would help to minimise any impact on the visual appearance of our waterway corridors. It would also minimise any potential harm to navigation that could be caused through the positioning of cables above navigable channels.

## Canal & River Trust

Fradley Junction, Alrewas, Burton-upon-Trent, Staffordshire DE13 7DN

T 0303 040 4040 E [canalrivertrust.org.uk/contact-us](http://canalrivertrust.org.uk/contact-us) W [canalrivertrust.org.uk](http://canalrivertrust.org.uk)

Should the scheme be amended to incorporate above ground cable crossing(s) of the Stainforth & Keadby Canal, then we advise that the Environmental Report would need to assess the visual impacts of the cables, and how they would be assessed and impacts mitigated against. In addition, consideration would need to be given to the potential impact on Navigation on the canal and the headroom available for craft below.

### Risks of Vibration

Works to install cables below the canal would need to be carefully managed to avoid any significant vibration or loading that could adversely impact the stability of the river bank above.

We request that methodology and associated risk mitigation details should be submitted prior to the commencement of development on site. We advise that we do not believe this information need to be incorporated into the EIA. However, we would request that the need for this is addressed in any subsequent submission.

### Landowner Comments

Our consent as Navigation Authority and Landowner may be required for the installation of a new cable below the Stainforth & Keadby Canal.

Please note that the Canal & River Trust is a statutory undertaker which has specific duties to protect the waterways. Accordingly, it is likely that we will resist the use of compulsory powers which may affect our undertakings. Accordingly, we require that the acquisition of any rights over the canal should be secured by agreement.

Landowner consent would be required from the Trust for the installation of a new cable below the canal. The applicant is advised to contact the Trust's Utilities section at [utilitiesenquiry@canalrivertrust.org.uk](mailto:utilitiesenquiry@canalrivertrust.org.uk) for further advice.

The proposals include works in close proximity to and crossing the canal. In our capacity as landowner, we wish to advise that the applicant/landowner would likely be required to comply with the Trust's 'Code of Practice for Works affecting the Canal & River Trust'. The applicant/developer is advised to contact the Canal & River Trust's Works Engineering Team via switchboard on 0303 040 4040 should they have any questions or require further information upon the Code.

We hope the above comments are of use. If you have any questions or require further information, please feel free to contact me via the contact details below.

Yours Sincerely

Simon Tucker MRTPI  
Area Planner

[Redacted signature block]

<https://canalrivertrust.org.uk/specialist-teams/planning-and-design>

### Canal & River Trust

Fradley Junction, Alrewas, Burton-upon-Trent, Staffordshire DE13 7DN  
T 0303 040 4040 E [canalrivertrust.org.uk/contact-us](https://canalrivertrust.org.uk/contact-us) W [canalrivertrust.org.uk](https://canalrivertrust.org.uk)



# City of Doncaster Council

Environmental Services  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

**Contact:** Jessica Duffield  
**Tel:** [REDACTED]  
**E-Mail:** [REDACTED]  
**Website:** [www.doncaster.gov.uk](http://www.doncaster.gov.uk)  
**Our Ref:** 23/00218/CON  
**Date:** 28<sup>th</sup> February 2023

*Proposal* **Environmental Impact Assessment (EIA) Scoping Report for the Tween Bridge Solar Farm for construction, operation and decommissioning of ground mounted.**

Dear Sir/Madam.

I am responding on behalf of the City of Doncaster Council to your email communication of 1/2/2023 regarding the above. The Council have consulted the relevant consultees to request what information should be included within the Applicant's Environmental Statement (ES) and provided other initial comments as per the below.

## Internal Consultees

### Air Quality

Air Quality issues are covered in Section 12 of the EIA scoping report. No further information is requested in this regard other than consideration of the nitrogen dioxide concentrations at King Street, Thorne and vehicles to avoid routing through Thorne Town.

### Open Space Officer

The proposal would not impact any existing open spaces. As it is not a residential scheme thus it does not trigger an open space requirement.

### Highways Development Control

The Highways matters are set out in Section 10 of the EIA scoping report. Based on the report the principle of the development looks to be achievable as it benefits from existing transport links. However, multiple access points will be required which will each need to be carefully considered, particularly in terms of highway safety. As suggested, the Construction Traffic Management Plan (CTMP) should be included in the application process as this ensures that all access points have been carefully scrutinised, in addition to the Stage 1 RSA.

### Transportation

The Transport Assessment or Statement should fully assess the impact of the development on Doncaster's Highway Network. The scope of this can be agreed beforehand to avoid any abortive work.

### Highways Safety

The approach taken in Section 10 of the EIA scoping appears reasonable.



#### Urban Design Officer

The EIA scoping report sets out an appropriate assessment in line with institute guidelines. The main impact consideration would be in terms of landscape and visual impacts, in which specialist consultants may be required to critique the Applicant's assessment.

#### Planning Policy – Employment

No comments to make.

#### Planning Policy – Waste and Minerals

**Agricultural Land** - The PPG states that large scale solar farms should be directed to previously developed land/non – agricultural land or if on greenfield land, that which is poorer quality. The online Agricultural Land Classification map shows the land to be predominately Grade 2 and 3 agricultural land which is classed as 'very good quality' and 'good quality'. On this basis the development would be resisted. Further consultation with Natural England should be undertaken.

**Minerals** – The south western section of the scoping area is partially in a mineral safeguarding area and PEDL licence area. No further scoping considerations are required based

#### Planning Policy – Flood Risk

Majority of the proposed site lies within Flood Zone 3. NPPF Annex 3: Flood Risk Vulnerability Classification, places the proposed use of a Solar Farm as 'essential infrastructure' and the associated development plant and other infrastructure classified as 'highly vulnerable'; Table 2: Flood Risk Vulnerability and Flood Zone Incompatibility states that an exception test is required, and in developing essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

A sequential test is required to guide the development to the lowest flood risk area, which may not necessarily fall within the Doncaster borough boundary given that it is national. If the development cannot be located elsewhere, then the exception test needs to demonstrate: that the development will provide wider sustainability benefits to the community that outweigh flood risk; and will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall. A site-specific flood risk assessment should be provided.

#### Tree Officer

The cultural significance of the existing hedgerows should be recognised in the Environmental Statement along with details of their structural condition and species composition as part of the of hedgerow/arboricultural survey data in accordance with BS5837 (2012) which will also need to identify individual or groups of trees and woodlands. These features, along with the hedgerows would, in principle, be expected to be retained and enhanced with increased connectivity as part of this scheme.

#### Public Rights of Way

Section 4 of the EIA Scoping Report adequately covers the assessment of the public rights of way and open access land. The proposal should consider public footpath no.19 Thorne



# City of Doncaster Council

which passes through the site and has a legally recorded width of 30 feet along its entire length.

## Contamination

Section 7 of the EIA Scoping Report covers potential contaminated land. The Phase 1 study has identified some areas of concern, though reference to the appropriate guidance and methodology has been included. A Phase II will be undertaken & CEMP as part of the EIA which will be reviewed in due course.

## Ecology

Full comments attached below as an appendix.

## **External Consultees**

### NATS Safeguarding

Proposed development does not conflict with the safeguarding criteria, although any proposed changes will require a re-consultation.

### National Grid Asset Protection

No National Grid gas assets affected in the area.

### Airport Safeguarding

Incorrect consultation response provided.

Yours Sincerely,

Jessica Duffield

Principal Planning Officer.





**Appendix 1 – Ecology Requirements**

| Principle Receptors | Pathways                                       | Study area and survey requirements   |
|---------------------|--|--|
| Water               | Surface water hydrology and channel morphology | -Provide adequate mapping of water level management catchments.<br>-Assess potential impacts on flows (volume and pathways) and potential for temporary or permanent changes, particularly those that might result in the lowering of the water table.   |
|                     | Surface water                                  | -Mapping of surface water requirements for all habitat types within the study area.<br>-Assess the potential for standing water and impacts of drainage of standing water.   |
|                     | Ground water hydrology & quality               | -Groundwater studies to identify if surface activities will affect discharge into ground water resources.<br>-An assessment/review of the potential for nutrient enrichment of surface and ground waters associated with the planned sheep grazing.  |
| Land                | Landscape                                      | -Landscape appraisal linking in with flora and fauna i.e. presence of mire species in relation to pockets of peat soils, landscape features and nightjar and bat foraging/commuting.   |
|                     | Soils  | -As assessment of the potential for soil compaction and disturbance of surface layers, changes to soil hydrology and contamination via spillages.<br>-Identification and mapping of peat soils (including peat depths) outside of statutory sites and in construction/operational areas and their management.<br>-An assessment of impacts relating to Ecosystem Service provision, most notably carbon sequestration and storage and water storage. |
|                     | Archaeology and paleo-archaeology              | -SYAS will no doubt be fully involved in this consultation   |
|                     | Geology  | -Probably dealing just with superficial deposits but links in with soils and the presence of geological features   |
| Air                 | Local air pollution                            | -An assessment of potential sources of discharges during construction phase e.g. areas of operation, access routes in relation to prevailing wind.<br>-An assessment of types of discharges that would be harmful.   |
|                     | Regional air quality                           | -An assessment of wider scale trends in regional air quality and if there may be any in-combination effects.   |
| Flora               | Terrestrial flora                              | -Site and beyond habitat mapping. Identification through habitat mapping of sensitive sites that have supporting roles in the maintenance of qualifying features on protected sites. An appraisal of trends of regeneration and habitat development.   |



| Principle Receptors    | Pathways               | Study area and survey requirements  |
|------------------------|------------------------|---|
|                        | Mire and wetland flora | -Identification of specific requirements of specialist mire and aquatic flora. Review of literature and papers concerned with regeneration of these species that are extremely specialised in their requirements and potential for these to be disturbed.   |
| Fauna                  | Terrestrial Fauna      | <p>-Faunal surveys to include key species, their interaction with the habitats of the area and potential impacts associated with construction and operational phases.</p> <p>Considerations:</p> <ul style="list-style-type: none"> <li>- protected species with potential conflict with other site aims,</li> <li>- mammals that could impact site condition and</li> <li>- Invasive non-natives.</li> </ul> <p>-Key species on protected sites: Scarce Vapourer moth, Greater Yellow Rattle, Badger, Deer species, Himalayan Balsam, New Zealand Pygmy weed, New Zealand Moss (<i>Campylopus introflexus</i>)</p> <p>-Review of potential to attract pests and predator pressure associated with grazing land management.</p> |
|                        | Avian Fauna            | <p>-Overwintering surveys with an extension of at least 0.5km beyond site boundary. Details of qualifying and non-qualifying avian species of significance populations and survey information on potential impacts on these species.</p> <p>-Breeding bird surveys will be required.</p> <p>-Review of recorded nightjar foraging distribution/activity and survey for existing and potential habitat features outside of protected sites.</p>  |
|                        | Aquatic fauna          | -Usual survey methods to provide a detailed overview of presence and potential for impacts particularly during construction phase. Otter, water vole surveys are required and also potential of adverse impacts of mink.  |
| General Considerations |                        | <p>-Brief description of the project including timescales and lifespan</p> <p>-Locations and potential need for access roads, water diversion pipelines;</p> <p>-Needs assessment.</p> <p>-Consulted bodies, groups, stakeholders,</p> <p>-Comparable projects and examples of issues and resolutions</p> <p>-Likely key impacts, with magnitude and duration both positive and negative.</p> <p>-Period of review to ensure full capture of required ecological information with consultation prior to ES production.</p> <p>-Timescales and milestones</p>  |



The Coal  
Authority

Resolving the **impacts** of mining

200 Lichfield Lane  
Mansfield  
Nottinghamshire  
NG18 4RG

T: [REDACTED]

E: [planningconsultation@coal.gov.uk](mailto:planningconsultation@coal.gov.uk)

[www.gov.uk/coalauthority](http://www.gov.uk/coalauthority)

For the attention of: Emma Cottam – Senior EIA Advisor  
on behalf of the Secretary of State

Your ref: EN010148-000003

**[By email: [tweenbridge@planninginspectorate.gov.uk](mailto:tweenbridge@planninginspectorate.gov.uk)]**

08 February 2023

Dear Emma

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulations 10 and 11**

**Application by RWE Renewables Ltd (the Applicant) for an Order granting Development Consent for the Tween Bridge Solar Farm (the Proposed Development)**

**Scoping consultation and notification of the Applicant's contact details and duty to make available information to the Applicant if requested**

Thank you for your notification of 01 February 2023 on what relevant matters should be 'Scoped In' to any forthcoming Environmental Statement for the above development.

I have reviewed the site location plan against our coal mining information and can confirm that, whilst the site falls within the coalfield, it is located outside the Development High Risk Area as defined by the Coal Authority; meaning that there are no recorded coal mining legacy hazards at shallow depth that could pose a risk to public safety and / or land instability at the surface.

Accordingly, if you consider that the application is EIA development, there is no requirement for the applicant to consider coal mining legacy as part of their Environmental Impact Assessment or to consult with us further on this project.

I hope that this is helpful however please do not hesitate to contact me if you require any further assistance with this matter.

Yours sincerely

A black rectangular box redacting the signature of Deb Roberts.

Deb Roberts *M.Sc. MRTPI*

Planning & Development Manager

Disclaimer

The above consultation response is provided by The Coal Authority as a Statutory Consultee and is based upon the latest available data on the date of the response, and electronic consultation records held by The Coal Authority since 1 April 2013. The comments made are also based upon only the information provided to The Coal Authority by the Local Planning Authority and/or has been published on the Council's website for consultation purposes in relation to this specific planning application. The views and conclusions contained in this response may be subject to review and amendment by The Coal Authority if additional or new data/information (such as a revised Coal Mining Risk Assessment) is provided by the Local Planning Authority or the Applicant for consultation purposes.



# Water Management Consortium

Mr A. McGill, M.A., F.C.M.I.  
Chief Executive

Wellington House, Manby Park, Manby,  
LOUTH, Lincolnshire, LN11 8UU.

Mr R. Brown, BEng (hons), GMICE  
Senior Engineer

Telephone: [REDACTED]  
E-mail: [enquiries@lmdb.co.uk](mailto:enquiries@lmdb.co.uk)

Your reference: EN010148

Our reference:

Please ask for: Darren Cowling

7 February 2023

The Planning Inspectorate  
Environmental Services  
Central Operations  
Temple Quay House  
2 The Square  
Bristol, BS1 6PN  
**(Sent by E Mail)**

Dear Sirs,

**Re: Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulations 10 and 11**  
**Application by RWE Renewables Ltd (the Applicant) for an Order granting Development Consent for the Tween Bridge Solar Farm (the Proposed Development)**  
**Scoping consultation and notification of the Applicant's contact details and duty to make available information to the Applicant if requested.**

Regarding the above consultation, I would advise that the extent of the development covers an area under the control of Doncaster East Internal Drainage Board and potentially impacts the Isle of Axholme and North Nottinghamshire Water Level Management Board area.

There are numerous watercourses that are likely to be impacted by the development, either by the position of the proposed arrays, buildings, fences, cable route or by potential increase in flows, please see attached plans for infrastructure within and adjacent to the site covered by the order limits.

The flood risk information is being considered by the relevant officers within the consortium. However, I would advise that the catchment area (particularly around Tween Bridge) is sensitive and it would be very difficult to accommodate any additional flows. I feel that it is also important to raise some issues that will need to be considered further and in detail as a part of the DCO process.

All Board watercourses are subject to Byelaws, which are intended to protect the watercourses and the Boards ability to maintain them. I would advise the following.

**Byelaw Number 3 states that:**

*No person shall as a result of development (within the meaning of section 55 of the Town and Country Planning Act 1990 as amended ("the 1990 Act")) (whether or not such development is authorised by the 1990 Act or any regulation or order whatsoever or none of them) for any purpose by means of any channel, siphon, pipeline or sluice or by any other means whatsoever introduce any water into any watercourse in the District so as to directly or indirectly increase the flow or volume of water in any watercourse in the District (without the previous consent of the Board)."*

*Consent will only be granted for the increase in flow to a watercourse where the Board is happy that in doing so no demonstrable harm will be caused. It may be the case that appropriate mitigations are required to be put in place to either attenuate flow or to enhance the existing watercourse to ensure no detriment. If this is not possible alternative outfall locations may need to be considered.*

As stated above the proposal sits within a sensitive catchment area and no additional flows should be created as a result of the development. While generally solar farms are not considered to increase flows to watercourses significantly there have been instances where this has been the case and as such appropriate mitigations will need to be considered.

**Byelaw Number 10 states that:**

*No person without the previous consent of the Board shall erect any building or structure, whether temporary or permanent, or plant any tree, shrub, willow or other similar growth within nine metres of the landward toe of the bank where there is an embankment or wall or within nine metres of the top of the batter where there is no embankment or wall, or where the watercourse is enclosed within nine metres of the enclosing structure.*

This will relate primarily to the location of the arrays, compounds, transformer stations and boundary fences. All of these features should be kept a minimum of 9m away from Board maintained assets with appropriate separation distances provided to allow for the effective maintenance of any riparian watercourses.

**Byelaw number 17 states that:**

*No person shall without the previous consent of the Board -*

*(a) place or affix or cause or permit to be placed or affixed any gas or water main or any pipe or appliance whatsoever or any electrical main or cable or wire in, under or over any watercourse or in, over or through any bank of any watercourse;*

*(b) cut, pare, damage or remove or cause or permit to be cut, pared, damaged or removed any turf forming part of any bank of any watercourse, or dig for or remove or cause or permit to be dug for or removed any stone, gravel, clay, earth, timber or other material whatsoever forming part of any bank of any watercourse or do or cause or permit to be done anything in, to or upon such bank or any land adjoining such bank of such a nature as to cause damage to or endanger the stability of the bank;*

*(c) make or cut or cause or permit to be made or cut any excavation or any tunnel or any drain, culvert or other passage for water in, into or out of any watercourse or in or through any bank of any watercourse;*

(d) *erect or construct or cause or permit to be erected or constructed any fence, post, pylon, wall, wharf, jetty, pier, quay, bridge, loading stage, piling, groyne, revetment or any other building or structure whatsoever in, over or across any watercourse or in or on any bank thereof;*

(e) *place or fix or cause or permit to be placed or fixed any engine or mechanical contrivance whatsoever in, under or over any watercourse or in, over or on any bank of any watercourse in such a manner or for such length of time as to cause damage to the watercourse or banks thereof or obstruct the flow of water in, into or out of such watercourse.*

*Provided that this Byelaw shall not apply to any temporary work executed in an emergency but a person executing any work so excepted shall, as soon as practicable, inform the Board in writing of the execution and of the circumstances in which it was executed and comply with any reasonable directions the Board may give with regard thereto.*

The Board will require all watercourses to be crossed by means of HDD at a depth no less than 2 metres PLUS the cable safety distance below the hard bed level of all watercourses (to ODN if EA or IDB maintained). This will allow the IDBs to have the flexibility to improve watercourses in the future due to climate change (works will include deepening & widening of watercourses).

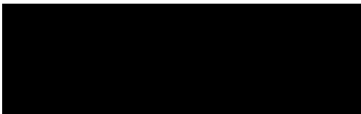
It is anticipated that the above requirements would be covered by SOCGs, MOU, and via Protective Provisions within the DCO. This matter should be discussed further and in more detail as the proposed cable routes are refined.

Any culverting or other works within the bed of any riparian watercourse within the Boards district be they temporary or permanent will also require consent. Any temporary or permanent access culverts will also require the Boards consent.

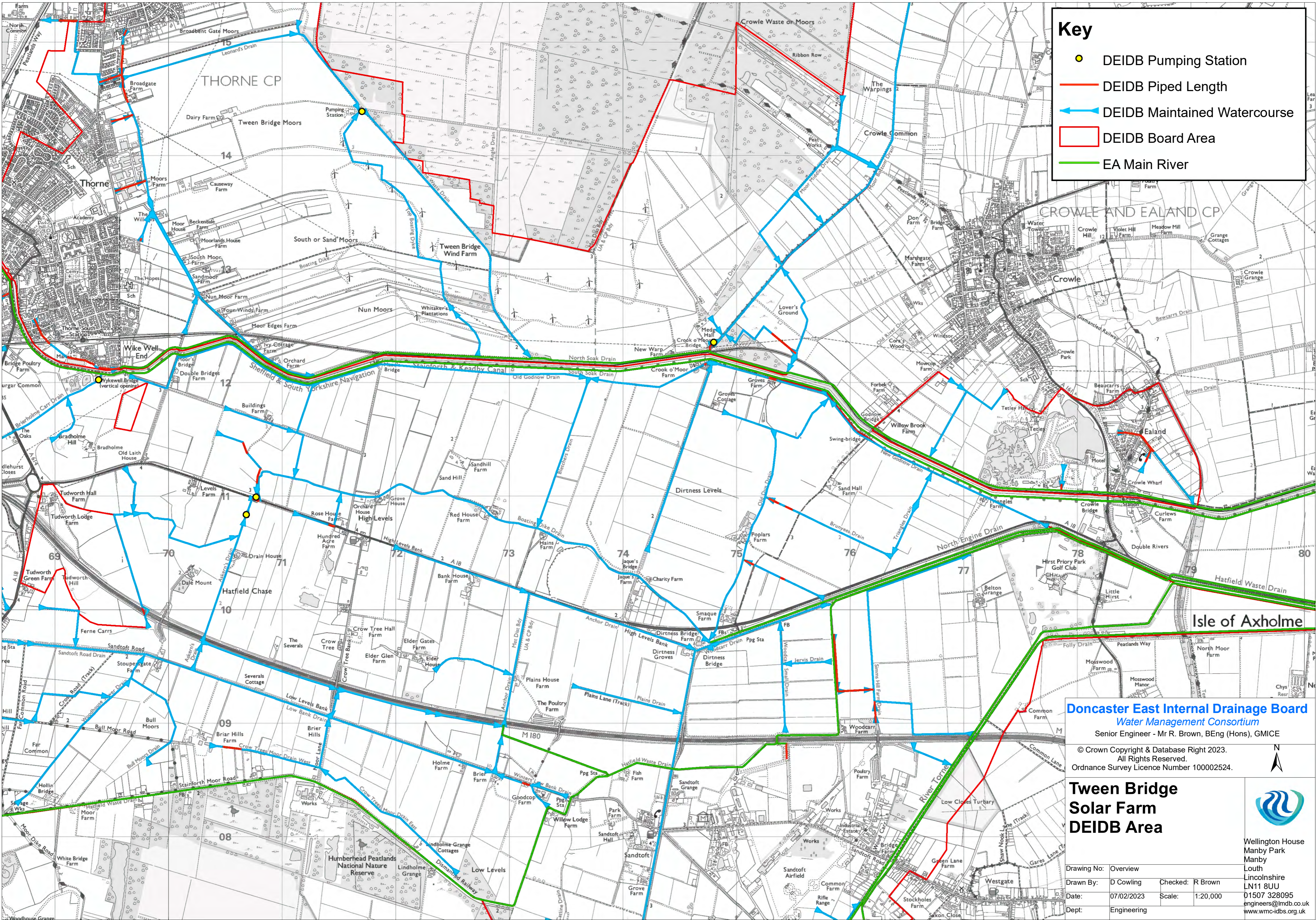
It should be noted that the Boards consent is required irrespective of any permission gained under the Town and Country Planning Act 1990. The Board's consent will only be granted where proposals are not detrimental to the flow or stability of the watercourse/ culvert or the Board's machinery access to the watercourse/ culvert which is required for annual maintenance, periodic improvement and emergency works.

I hope that the above is of assistance, I look forward to further ongoing detailed discussions regarding the proposal.

Yours sincerely

A solid black rectangular box used to redact the signature of Robert Brown.

Robert Brown,  
Senior Engineer.



**Key**

- DEIDB Pumping Station
- DEIDB Piped Length
- DEIDB Maintained Watercourse
- DEIDB Board Area
- EA Main River

**Doncaster East Internal Drainage Board**  
*Water Management Consortium*  
 Senior Engineer - Mr R. Brown, BEng (Hons), GIMCE  
 © Crown Copyright & Database Right 2023.  
 All Rights Reserved.  
 Ordnance Survey Licence Number 100002524.

**Tween Bridge  
 Solar Farm  
 DEIDB Area**

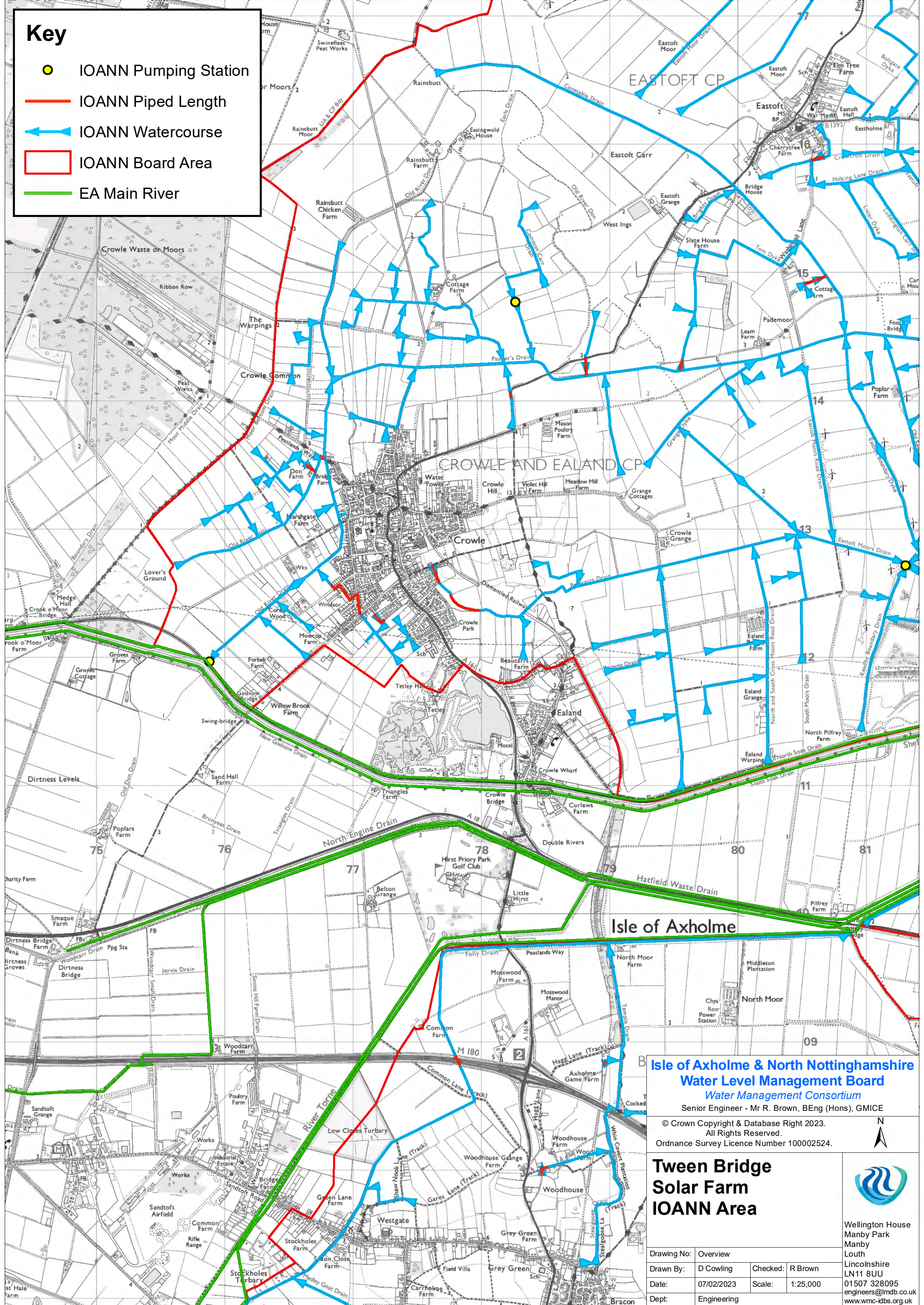
Drawing No: Overview  
 Drawn By: D Cowling    Checked: R Brown  
 Date: 07/02/2023    Scale: 1:20,000  
 Dept: Engineering

Wellington House  
 Manby Park  
 Manby  
 Louth  
 Lincolnshire  
 LN11 8JU  
 01507 328095  
 engineers@imdb.co.uk  
 www.wmc-idbs.org.uk



# Key

-  IOANN Pumping Station
-  IOANN Piped Length
-  IOANN Watercourse
-  IOANN Board Area
-  EA Main River



**Isle of Axholme & North Nottinghamshire Water Level Management Board**  
**Water Management Consortium**  
 Senior Engineer - Mr R. Brown, BEng (Hons), GMICE

© Crown Copyright & Database Right 2023.  
 All Rights Reserved.  
 Ordnance Survey Licence Number 100002524.

## Tween Bridge Solar Farm IOANN Area



Wellington House  
 Manby Park  
 Manby  
 Louth  
 Lincolnshire  
 LN11 8UU  
 01507 328095  
 engineers@lmbd.co.uk  
 www.wmc-idbs.org.uk

|             |             |
|-------------|-------------|
| Drawing No: | Overview    |
| Drawn By:   | D Cowling   |
| Date:       | 07/02/2023  |
| Dept:       | Engineering |

|          |          |
|----------|----------|
| Checked: | R Brown  |
| Scale:   | 1:25,000 |

**From:** [Matthew M. Sunman](#)  
**To:** [Tween Bridge](#)  
**Cc:** [Stephen Hunt](#); [James Chatfield](#); [Anna Wheldale](#)  
**Subject:** Re: Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification  
**Date:** 02 February 2023 17:19:30  
**Attachments:** [image002.png](#)  
[image004.png](#)  
[image006.png](#)  
[image003.png](#)  
[image005.png](#)  
[image008.jpg](#)  
[image001.png](#)  
[image007.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)  
[image012.png](#)  
[image013.png](#)  
[image014.jpg](#)  
[EN010148\\_Letter\\_to\\_stat\\_cons\\_Scoping\\_&\\_Reg\\_11\\_Notification.pdf](#)

---

Good Afternoon

Thank you for your email and attached letter regarding the above.

East Riding of Yorkshire Council notes this proposal is for a large solar farm between 50 and 600MW north of the M180 and east of the M18 between the villages of Moorsend near Woodhouse and Crowle near Scunthorpe. It's outside the East Riding of Yorkshire Council's administrative boundary, lying within and between Doncaster Council and North Lincs Council respective areas.

East Riding of Yorkshire Council also notes the proposal adjoins Thorne Moor SAC, Thorne and Hadfield Moors SPA, Thorne Crowle and Goole Moors SSSI sensitive areas. Humber Estuary designated site SPA, SAC, SSSI and Ramsar is approximately 6.2-7.6 km east of the application site that is also a designated sensitive area. The application site may contain functional linked land to these identified sensitive areas. This has been picked up in the EIA Scoping Opinion document and confirmed how this will be covered in the ES and DCO application.

East Riding of Yorkshire Council is happy with the scope of the assessment and has no further comments to make at this stage.

Kind Regards

Matthew Sunman  
Principal Planning Officer - Minerals and Waste

[REDACTED]  
CertHE, MPhysGeog (Hons), MSc Urban and Regional Planning,  
MRTPI

**From:** Stephen Hunt <[REDACTED]>

**Sent:** Thursday, February 2, 2023 4:29 PM

**To:** Matthew M. Sunman [REDACTED]; Anna Wheldale [REDACTED]; James Chatfield [REDACTED]

[REDACTED] Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification

**Stephen Hunt** MRTPI

Director of Planning and Development Management

[REDACTED]  
[www.eastriding.gov.uk](http://www.eastriding.gov.uk)



Emma Cottam  
Senior EIA Advisor  
Environmental Services  
Planning Inspectorate  
Central Operations  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

**Our ref:** AN/2023/134016/01-L01  
**Your ref:** EN010148-000003  
**Date:** 01 March 2023

(By email only to  
tweenbridge@planninginspectorate.gov.uk)

Dear Ms Cottam

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulations 10 and 11**

**Application by RWE Renewables Ltd (the Applicant) for an Order granting Development Consent for the Tween Bridge Solar Farm (the Proposed Development) - Scoping Consultation**

**Land either side of the M180, High Level Banks (the A18) and the Stainforth and Keadby Canal**

Thank you for consulting the Environment Agency regarding the above Environmental Impact Assessment Scoping Request, on 1 February 2023.

We have reviewed the submitted Scoping Report dated January 2023 and provide comments below on the following comments topics that fall within our remit:

- Nature conservation and biodiversity
- Ground conditions
- Hydrology and flood risk
- Waste

**Chapter 3 – EIA Methodology**

We are satisfied that the appropriate topics relevant to the Environment Agency have been scoped into the Environmental Impact Assessment (EIA).

## **Chapter 5 – Nature conservation and biodiversity**

We note the Thorne Moors SAC/SPA/SSSI to the north of the site, the local wildlife site of Stainforth and Keadby Canal Corridor and the surface watercourses including main rivers on the site.

In general we agree with the proposed approach and the biodiversity aspects scoped in.

We have the following comments to make in response to the details within the scoping document:

- Water vole surveys: The assessment should follow best practice guidelines and include two surveys at the recommended times of year. Using a dog is acceptable but we consider that the two surveys are still needed.
- Biodiversity net gain (BNG): Section 5.74 states that the EIA will seek to demonstrate 10% net gain. Whilst we acknowledge that it is not yet a mandatory requirement, we would encourage the project to make a commitment to delivering 10% as a minimum, given its scale.
- There may be opportunities for BNG and wider environmental gain in relation to controlled waters. The Environment Agency encourages opening up of culverts, improvement or re-naturalisation of watercourses, and the provision of other environmental infrastructure that would provide wider benefits, as well as helping deliver improvements in line with the Humber River Basin Management Plan.
- Please also see our comments below (Chapter 8) regarding Water Framework Directive (WFD) Assessment, which are relevant to both ecology and ground and surface water quality.

## **Chapter 7 – Ground conditions and Appendix 7.1**

We have reviewed these in relation to the protection of controlled waters.

The site is largely in a source protection zone 3 (SPZ3) for groundwater for a public water supply borehole in the south west corner of the site. It is possible that the site also slightly encroaches into an SPZ2.

Section 7.3 lists the guidance that will be used to inform the assessment. We would expect to see the Land Contamination Risk Management guidance ([Land contamination risk management \(LCRM\) - GOV.UK \(www.gov.uk\)](http://www.gov.uk)) listed here.

Section 7.13 states that there is no evidence for past potentially contaminative activities in the vicinity of the site. We point out that there is a Contaminated Land Special Site (determined under Part 2a of the Environmental Protection Act 1990) just outside the south west site boundary, in and adjacent to the Yorkshire Water public water supply compound. Further information about this can be sought from Doncaster Metropolitan Borough Council or the Environment Agency. The designation relates to groundwater contamination from a former petrol station; therefore, although it is outside the site boundary it may affect the groundwater beneath the development site. This may need to be taken into account if dewatering activities are planned in this area.

Section 7.15 states that “The Sherwood Sandstone bedrock at depth forms a Principal Aquifer, dipping eastwards and confined beneath increasingly thick Mercia Mudstone. Some of the superficial deposits form a Secondary A Aquifer. The peat deposits and Hemingbrough Formation at Tween Bridge Moors are Unproductive as an aquifer.

Overall groundwater vulnerability to pollution is Low or Medium.” We disagree with this statement: in some places it would be considered highly vulnerable, because of the presence of the SPZ3.

Section 7.30 discusses the installation of boreholes and directionally drilling. The applicant will need to consider the land quality in these locations and ensure that boreholes do not create pathways for the transmission of contaminants in areas of known contamination, such as in the location of the Contaminated Land Special Site near the southwestern extent of the site area.

Section 7.32 states that a Phase II Ground Investigation Report will be prepared, which we welcome.

#### Historic Landfills

There are 4 historic landfills within or close to the site boundary. We have limited information available for these:

- Brickworks  
SE 69200 14100  
No further information available.
- Long Meadow Farm  
SE 70300 12800  
Licensed between 1984 and 1993 for inert waste.  
No further information available.
- Tudworth Hall Farm  
SE 69100 11000  
Licence issued 1996 for inert waste.  
No further information available.
- Tudworth Landfill  
SE 68707 10510  
Licensed between 1993 and 2017.

The risks associated with landfill gas will depend on the controls in place to prevent uncontrolled release of landfill gas from the landfill site. Older landfill sites may have poorer controls in place and the level of risk may be higher or uncertain due to a lack of historical records of waste inputs or control measures.

#### **Chapter 8 - Hydrology and flood risk**

##### Ground and surface water quality and Water Framework Directive considerations

There is only one reference in the document to the Water Environment (Water Framework Directive) (England and Wales) Regulation 2017, in section 8.24. New development must be able to demonstrate that it will not cause deterioration and, where possible, should support measures to improve water bodies (both surface and ground waters) as set out in the Humber River Basin Management Plan. We recommend that a Water Framework Directive (WFD) Assessment be carried out and, where necessary, mitigation or other measures identified to meet WFD requirements.

##### Flood risk

Several main rivers cross or border on the site.

The site lies almost entirely within flood zone 3a. This is land assessed as having a 1 in

100 or greater annual probability of flooding from rivers (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%). A site specific flood risk assessment will therefore be required, either as an appendix to the ES or as a separate document.

The Order Limits include land within North Lincolnshire and within Doncaster District. The relevant strategic flood risk assessments are:

- [The North and North East Lincolnshire Strategic Flood Risk Assessment June 2022](#)
- [The Doncaster Strategic Flood Risk Assessment November 2015](#)

The site includes part of the Isle of Axholme. This is an area of land (the historic floodplain of the River Trent) that has been artificially drained, with water levels managed by a network of pumping stations.

Parts of the site lie within land that we consider as functional floodplain, flood zone 3b, defined as land where water has to flow or be stored in times of flood. Only water compatible uses and essential infrastructure that need to be in that location should be permitted in these areas. The site plans indicate that various substations, including the National Grid substation, and the battery energy storage system, lie within FZ3b. We advise that any critical infrastructure is sequentially located to areas of lower flood risk.

Essential infrastructure within flood zone 3b, must:

- remain operational and safe for users in times of flood
- result in no net loss of floodplain storage
- not impede water flows and not increase flood risk elsewhere

#### Flood management & mitigation measures

We recommend that the following measures are incorporated within the development proposals:

- Suitable easements should be established around all watercourses and any cable crossing points are agreed with the relevant parties. This is to include main rivers, ordinary watercourses and Internal Drainage Board assets.
- Critical infrastructure, panels and structures should be sequentially located to avoid areas of high fluvial flood risk and raised to a sufficient height to avoid floodwater over the lifetime of the development.
- All services within areas at risk should be designed where possible to be flood resilient.
- Any fencing should be designed to prevent minor obstructions occurring, allowing the continuation of flow routes (if present) unimpeded through the site.

#### Cabling works

We have the following initial recommendations:

- The launching and landing areas for the cabling installation works should be a minimum of 16 metres from the toe of any flood defences to limit the impact of the works.
- Permanent hazard markers should be erected on both banks of the main river(s).
- All excavated material not re-used on the site of the works should be removed from the floodplain.
- The works should seek to manage and mitigate against disturbance of the bed and banks of the main river.

We advise further discussion and early engagement with the Environment Agency in relation to this matter.

## **Waste**

We note that waste is scoped into the assessment and are satisfied with the proposals in the relevant section of table 3.4.

The Environmental Protection (Duty of Care) Regulations 1991 for dealing with waste materials are applicable to any off-site movements of wastes. The Duty of Care Code of Practice can be found here:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/506917/waste-duty-care-code-practice-2016.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/506917/waste-duty-care-code-practice-2016.pdf)

To register as a carrier of waste, advice is available here: <https://www.gov.uk/register-as-a-waste-carrier-broker-or-dealer-wales>.

## **Environmental permitting**

### Water abstraction

If dewatering is required it may require an environmental permit, unless it meets the criteria for an exemption in [The Water Abstraction and Impounding \(Exemptions\) Regulations 2017](#) Section 5: Small scale dewatering in the course of building or engineering works. Please also see [Temporary dewatering from excavations to surface water: RPS 261](#).

If a full abstraction licence is needed, the applicant should be aware that the Triassic Sandstone is closed for new consumptive abstractions in this area. More information can be found in the [Idle and Torne abstraction licensing strategy](#).

### Water discharge

It may be necessary to consider discharge of groundwater, especially if it is contaminated. More information can be found at [Discharges to surface water and groundwater: environmental permits](#)

For any foul sewage arising from the development, priority should be given to connecting the public sewer wherever possible, in accordance with the sewage disposal hierarchy. Should a connection to the public sewer be assessed as unviable, detailed evidence will need to be provided. A useful calculator for the amount of sewage likely to be produced can be found at [Sewage discharges: calculator for domestic properties - GOV.UK \(www.gov.uk\)](#). Any discharge from a package treatment plant or septic tank is likely to need an environmental permit.

At no point should any discharges be made, other than of clean uncontaminated surface water, to any surface or groundwater body, without the benefit of an environmental permit.

### Flood risk activities

The Environmental Permitting (England and Wales) Regulations 2016 require a permit or exemption to be obtained for any activities which will take place:

- on or within 8 metres of a main river (16 metres if tidal)
- on or within 8 metres of a flood defence structure or culverted main river (16 metres if tidal)
- on or within 16 metres of a sea defence

- involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
- in a floodplain more than 8 metres from the riverbank, culvert or flood defence structure (16 metres if it's a tidal main river) and you don't already have planning permission

For further guidance please visit <https://www.gov.uk/guidance/flood-risk-activities-environmental-permits> or contact our National Customer Contact Centre on 03702 422 549. The applicant should not assume that a permit will automatically be forthcoming once planning permission has been granted, and we advise them to consult with us at the earliest opportunity.

#### Disapplication of environmental legislation

The applicants should consider at an early stage whether they wish to disapply any of the environmental legislation relevant to the above activities.

#### **Environment Agency land ownership**

There are areas of Environment Agency owned land adjacent to certain watercourses running through the site. We do not have any specific concerns to raise at this stage but wish to make the applicant aware of this. Details can be provided on request.

#### **Further pre-application consultation**

Should the applicant wish us to review any technical documents or want further advice to address the environmental issues within our remit, we can do this as part of our charged for service.

Further engagement at the pre-application stage will speed up our formal response to their application and provide them with certainty as to what our response to the Development Consent Order application will be. It should also result in a better quality and more environmentally sensitive development. As part of our charged for service, we provide a dedicated project manager to act as a single point of contact to help resolve any problems. We currently charge £100 per hour, plus VAT. The terms and conditions of our charged for service are available at [Planning and marine licence advice: standard terms for our charges - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/planning-and-marine-licence-advices-standard-terms-for-our-charges).

The comments we set out above are without prejudice to future decisions we make regarding any applications subsequently made to us for permits for operations at the site.

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact me on the number below.

Yours sincerely

**Nicola Farr**  
**Sustainable Places - Planning Advisor**

Direct dial [REDACTED]

Direct e-mail [REDACTED]



For the attention of: Gary Chapman  
The Planning Inspectorate  
Temple Quay House  
Temple Quay  
Bristol  
BS1 6PN

Chemicals, Explosives and  
Microbiological Hazards  
Division – Unit 4

NSIP Consultations  
Land Use Planning Team  
Building 1.2,  
Redgrave Court,  
Bootle L20 7HS

**Date:** 20<sup>th</sup> February 2023

[NSIP.applications@hse.gov.uk](mailto:NSIP.applications@hse.gov.uk)

**References:** CM9 Ref: 4.2.1.7071.  
NSIP Ref: EN010148

<http://www.hse.gov.uk/>

Dear Mr Chapman,

**PROPOSED Tween Bridge Solar Farm  
PROPOSAL BY RWE Renewables Ltd  
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017  
(as amended) REGULATIONS 10 and 11**

Thank you for your letter of 1<sup>st</sup> February 2023 regarding the information to be provided in an environmental statement relating to the above project. HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

**HSE's land use planning advice**

Will the proposed development fall within any of HSE's consultation distances?

According to HSE's records, the proposed Tween Bridge Solar Farm project components as specified in the PEGASUS GROUP Environmental Impact Assessment Scoping Report, January 2023, document reference (SCO 01 Rev.1), (Figure 5.1, Page 38, Statutory Designated Site Study Area) cross the Consultation Zones of one Major Accident Hazard (MAH) site with the following operator.

- **HSE Ref #3319 operated by H Burtwistle & Sons, Causeway Farm Thorne, Doncaster South Yorkshire DN8 5RY.**

The Applicant should make contact with the above operator, to inform an assessment of whether or not the proposed development is vulnerable to a possible major accident.

There are no major accident hazard pipelines which are present in the proposed development area. Based on the information in the Environmental Impact Assessment Scoping Report, dated 26 January 2023, document reference (SCO 01 Rev.1), it is unlikely that HSE would advise against the development. Please note that the advice is based on HSE's existing policy for providing land-use planning advice and the information which has been provided. HSE's advice in response to a subsequent planning application may differ should HSE's policy or the scope of the development change by the time the Development Consent Order application is submitted.

Would Hazardous Substances Consent be needed?

It is not clear whether the applicant has considered the hazard classification of any chemicals that are proposed to be present at the development. Hazard classification is relevant to the potential for accidents. For example, hazardous substances planning consent is required to store or use any of the Categories of Substances or Named Hazardous Substances set out in Schedule 1 of The Planning (Hazardous Substances) Regulations 2015 as amended, if those hazardous substances will be present on, over or

under the land at or above the controlled quantities. There is an addition rule in the Schedule for below-threshold substances. If hazardous substances planning consent is required, please consult HSE on the application.

#### Consideration of risk assessments

Regulation 5(4) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the assessment of significant effects to include, where relevant, the expected significant effects arising from the proposed development's vulnerability to major accidents. HSE's role on NSIPs is summarised in the following Advice Note 11 Annex on the Planning Inspectorate's website - [Annex G – The Health and Safety Executive](#). This document includes consideration of risk assessments on page 3

#### **Explosives sites**

CEMHD 7's response is no comment to make as there are no HSE licenced explosive sites in the vicinity of the proposed development.

#### **Electrical safety**

No comment from a planning perspective

At this time, please send any further communication on this project directly to the HSE's designated e-mail account for NSIP applications at [nsip.applications@hse.gov.uk](mailto:nsip.applications@hse.gov.uk). We are currently unable to accept hard copies, as our offices have limited access.

Yours faithfully,

**CEMHD4**  
**NSIP Consultation Team**



Ms Emma Cottam  
The Planning Inspectorate  
Environmental Services, Central Operations  
Temple Quay House, 2 The Square  
Bristol  
Avon  
BS1 6PN

Direct Dial: [REDACTED]

Our ref: PL00792299

1 March 2023

Dear Ms Cottam

**REQUEST FOR ENVIRONMENTAL IMPACT ASSESSMENT (EIA) SCOPING  
OPINION FOR TWEEN BRIDGE SOLAR FARM, THORNE**

**Application No. EN010148-000003**

Thank you for your letter of 1 February 2023 consulting us about the above EIA Scoping Report.

This development could, potentially, have an impact upon a number of designated heritage assets<sup>1</sup> and their settings in the area around the site. In line with the advice in the National Planning Policy Framework (NPPF), we would expect the Environmental Statement (ES) to contain a thorough assessment of the likely effects which the proposed development might have upon those elements which contribute to the significance of these assets.

Given the extent of the proposed solar array and the topography of the application site, this development is likely to be visible across a very large area. As a result, it could affect the significance of heritage assets at some distance from the site itself. We would expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed.

Our initial assessment shows that there are numerous designated heritage assets within 5km of the proposed development. We would draw your attention, in particular, to the following:

- Peel Hill motte and bailey castle (Scheduled; NHLE 1013451),
- Sandhill Farmhouse (Grade II; NHLE 1151565),
- Grove House Farmhouse (Grade II; NHLE 1192943),
- Dirtness Cottage (Grade II; NHLE 1083285),

---

<sup>1</sup> A Designated Heritage Asset is defined in the National Planning Policy Framework as 'A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation'.





- Dirtiness Pumping Station (Grade II; 1083284),
- Sand Hall Lodge Cottage (Grade II; NHLE 1083264), and
- Thorne Conservation Area.

This is not an exhaustive or definitive list and we expect the ES to present a reasoned and appropriately detailed assessment of impact on designated and non-designated heritage assets.

As a general approach we would recommend the involvement of the Conservation Officer and archaeological staff of the Local Planning Authority in the development of this assessment. They are best placed to advise on:

- local historic environment issues and priorities;
- how the proposal can be tailored to avoid and minimise potential adverse impacts on the historic environment;
- the nature and design of any required mitigation measures; and,
- opportunities for securing wider benefits for the future conservation and management of heritage assets.

It is important that the assessment is designed to ensure that all impacts are fully understood. Section drawings and techniques such as photomontages are a useful part of this and should include both fixed and dynamic/kinetic viewpoints.

The assessment should also take account of the potential impact which associated activities (such as construction, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area. The assessment should also consider, where appropriate, the likelihood of alterations to drainage patterns. This might lead to *in situ* decomposition or destruction of below ground archaeological remains and deposits and can also lead to subsidence of buildings and monuments.

We have the following specific comments to make regarding the content of the final ES document:

- Reference should be made to Historic England 2021: *Commercial renewable energy development and the historic environment Historic England Advice Note 15*. Swindon, in Section 6.2 to inform and guide the assessment works.
- There is a lack of clarity concerning whether the proposed Setting Assessment will include non-designated Built Heritage assets. Section 6.17 refers to the setting of “*above assets will be considered* [Section 6.8] ...”, however, Section 6.8 only refers to designated Built Heritage assets. This inconsistency needs to be resolved and clearly presented in the final ES document.
- There is a lack of clarity concerning whether the proposed Setting Assessment will include a Desk-Based Assessment of Built Heritage assets. In addition,





there is a lack of clarity as to whether the proposed Setting Assessment would be informed by the Site Visit. The scope and methodology for Built Heritage assets has not been proposed within the ES document. The methodology and data need to be defined and agreed at an early stage and clearly presented in the final ES document.

- There is a lack of clarity in Section 6.10 as to whether the “*likely significant effects*” will be undertaken solely in relation to “*the setting of listed buildings*” rather than all Built Heritage assets, including non-designated Built Heritage assets. The proposed assessment scope and methodology will need to identify and evaluate the nature and likelihood of the impacts of the development on Built Heritage assets against clearly defined criteria (including in both the short and long term). The text of the ES document should reflect this change.
- There is a lack of clarity in Section 6.22 regarding the articulation of significance of a heritage asset in relation to non-designated heritage assets. The current assessment process conflates the criteria for statutory designation with the heritage significance of a heritage asset. Non-designated heritage assets of archaeological interest, which are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets. The methodology and data need to be defined and agreed at an early stage and clearly presented in the final ES document.
- The residual impacts following the implementation of these measures will then need to be defined and significance criteria applied. The scope and methodology need to be defined and agreed at an early stage and clearly presented in the final ES document.
- Cumulative effects on the significance of designated and non-designated heritage assets and the landscape character should be thoroughly analysed and presented in the ES. Cumulative effects of the development alongside those of other proposed developments in a defined geographic proximity to the project; and, cumulative effects for a single receptor where multiple impacts are predicted to arise from the scheme, should be considered.
- Potential impacts to the setting of the Peel Hill motte and bailey castle scheduled monument and Thorne Conservation Area should be assessed. Whilst Section 6.20 of the Scoping Report states that there is no inter-visibility between the scheduled monument and conservation area and the proposed development, both heritage assets lie partly within the zone of theoretical visibility shown on the figure contained with Appendix 4.1. This inconsistency needs to be resolved and clearly presented in the final ES document.





Historic England

If you have any queries about any of the above, or would like to discuss anything further, please contact me.

Yours sincerely

**Suzanne Lilley**

Inspector of Historic Buildings and Areas

E-mail: [REDACTED]



37 TANNER ROW YORK YO1 6WP

Telephone 01904 601948  
[HistoricEngland.org.uk](http://HistoricEngland.org.uk)



*Historic England is subject to both the Freedom of Information Act (2000) and Environmental Information Regulations (2004). Any Information held by the organisation can be requested for release under this legislation.*



**Defence  
Infrastructure  
Organisation**

Wendy Talbot  
Ministry of Defence  
Safeguarding Department  
St George's House  
DIO Headquarters  
DMS Whittington  
Lichfield  
Staffordshire  
WS14 9PY

Your Reference: EN010148-000003

MoD Telephone: [REDACTED]

E-mail: [REDACTED]

Our Reference: DIO10057948

Emma Cottam  
The Planning Inspectorate  
Environmental Services  
Central Operations  
Temple Quay House  
2 The Square  
BRISTOL  
BS1 6PN

22 February 2023

Dear Emma

**MOD Safeguarding – SITE OUTSIDE SAFEGUARDING AREA (SOSA)**

**Proposal:** Tween Bridge Solar Farm (Nationally Significant Infrastructure Project)

**Location:** Tween Bridge, nr Thorne

|                  |           |                 |                  |
|------------------|-----------|-----------------|------------------|
| <b>Grid Ref:</b> | Perimeter | Easting: 470289 | Northing: 415897 |
|                  |           | Easting: 473609 | Northing: 413132 |
|                  |           | Easting: 476292 | Northing: 412714 |
|                  |           | Easting: 468505 | Northing: 409743 |
|                  |           | Easting: 470787 | Northing: 408764 |
|                  |           | Easting: 477594 | Northing: 409684 |

Thank you for consulting the Ministry of Defence (MOD) on the above proposed development which was received by this office.

The Defence Infrastructure Organisation (DIO) Safeguarding Team represents the Ministry of Defence (MOD) as a consultee in UK planning and energy consenting systems to ensure that development does not compromise or degrade the operation of defence sites such as aerodromes, explosives storage sites, air weapon ranges, and technical sites or training resources such as the Military Low Flying System.

The application concerns a Scoping Report for a proposed Solar Farm and supporting infrastructure (capacity in excess of 50mW) across a 1100-1200 hectare site mainly used for agriculture and woodland.

This application relates to a site outside of Ministry of Defence safeguarding areas. I can therefore confirm that the Ministry of Defence has no safeguarding concerns for this proposal.

The MOD must emphasise that the advice provided within this letter is in response to the data and/or information detailed in the developer's document titled "Environmental Impact Assessment Scoping Report" dated January 2023. Any variation of the parameters (which include the location, dimensions, form, and finishing materials) detailed may significantly alter how the development relates to MOD safeguarding requirements and cause adverse impacts to safeguarded defence assets or capabilities. In the event that any amendment, whether considered material or not by the determining authority, is submitted for approval, the MOD should be consulted and provided with adequate time to carry out assessments and provide a formal response.

I trust this is clear however should you have any questions please do not hesitate to contact me.

Yours sincerely

Wendy Talbot  
Safeguarding Officer  
DIO safeguarding



**Complex Land Rights**

Ellie Laycock  
Development Liaison Officer  
UK Land and Property

Tel: + [REDACTED]

[www.nationalgrid.com](http://www.nationalgrid.com)

SUBMITTED ELECTRONICALLY:  
[tweenbridge@planninginspectorate.gov.uk](mailto:tweenbridge@planninginspectorate.gov.uk)

06 February 2023

Dear Sir/Madam

**APPLICATION BY RWE RENEWABLES LTD (THE APPLICANT) FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE TWEEN BRIDGE SOLAR FARM (THE PROPOSED DEVELOPMENT)**

**SCOPING CONSULTATION RESPONSE**

I refer to your letter dated 1<sup>st</sup> February 2023 in relation to the above proposed application. This is a response on behalf of National Grid Electricity Transmission PLC (NGET). Having reviewed the scoping report, I would like to make the following comments regarding NGET existing infrastructure within or in close proximity to the current red line boundary.

NGET has high voltage electricity overhead transmission lines within the scoping area. The overhead lines form an essential part of the electricity transmission network in England and Wales.

Overhead Lines

ZDA 400kV OHL                      Drax – Keadby – Thorpe Marsh

I enclose a plan showing the location of NGET's existing apparatus in the scoping area.

## Specific Comments – Electricity Infrastructure:

- NGET's Overhead Line/s is protected by a Deed of Easement/Wayleave Agreement which provides full right of access to retain, maintain, repair and inspect our asset
- Statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3m to the lowest conductor. NGET recommends that no permanent structures are built directly beneath overhead lines. These distances are set out in EN 43 – 8 Technical Specification for “overhead line clearances Issue 3 (2004)”.
- If any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances.
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive's ([www.hse.gov.uk](http://www.hse.gov.uk)) Guidance Note GS 6 “Avoidance of Danger from Overhead Electric Lines” and all relevant site staff should make sure that they are both aware of and understand this guidance.
- Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum “sag” and “swing” and overhead line profile (maximum “sag” and “swing”) drawings should be obtained using the contact details above.
- If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.
- Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or “pillars of support” of any existing tower. These foundations always extend beyond the base area of the existing tower and foundation (“pillar of support”) drawings can be obtained using the contact details above.
- NGET high voltage underground cables are protected by a Deed of Grant; Easement; Wayleave Agreement or the provisions of the New Roads and Street Works Act. These provisions provide NGET full right of access to retain, maintain, repair and inspect our assets. Hence we require that no permanent / temporary structures are to be built over our cables or within the easement strip. Any such proposals should be discussed and agreed with NGET prior to any works taking place.
- Ground levels above our cables must not be altered in any way. Any alterations to the depth of our cables will subsequently alter the rating of the circuit and can compromise the reliability, efficiency and safety of our electricity network and requires consultation with National Grid prior to any such changes in both level and construction being implemented.

To download a copy of the HSE Guidance HS(G)47, please use the following link:  
<http://www.hse.gov.uk/pubns/books/hsg47.htm>

## **Further Advice**

**We would request that the potential impact of the proposed scheme on NGET's existing assets as set out above and including any proposed diversions is considered in any subsequent reports, including in the Environmental Statement, and as part of any subsequent application.**

**Where any diversion of apparatus may be required to facilitate a scheme, NGET is unable to give any certainty with the regard to diversions until such time as adequate conceptual design studies have been undertaken by NGET. Further information relating to this can be obtained by contacting the email address below.**

**Where the promoter intends to acquire land, extinguish rights, or interfere with any of NGET apparatus, protective provisions will be required in a form acceptable to it to be included within the DCO.**

NGET requests to be consulted at the earliest stages to ensure that the most appropriate protective provisions are included within the DCO application to safeguard the integrity of our apparatus and to remove the requirement for objection. All consultations should be sent to the following email address: [box.landandacquisitions@nationalgrid.com](mailto:box.landandacquisitions@nationalgrid.com)

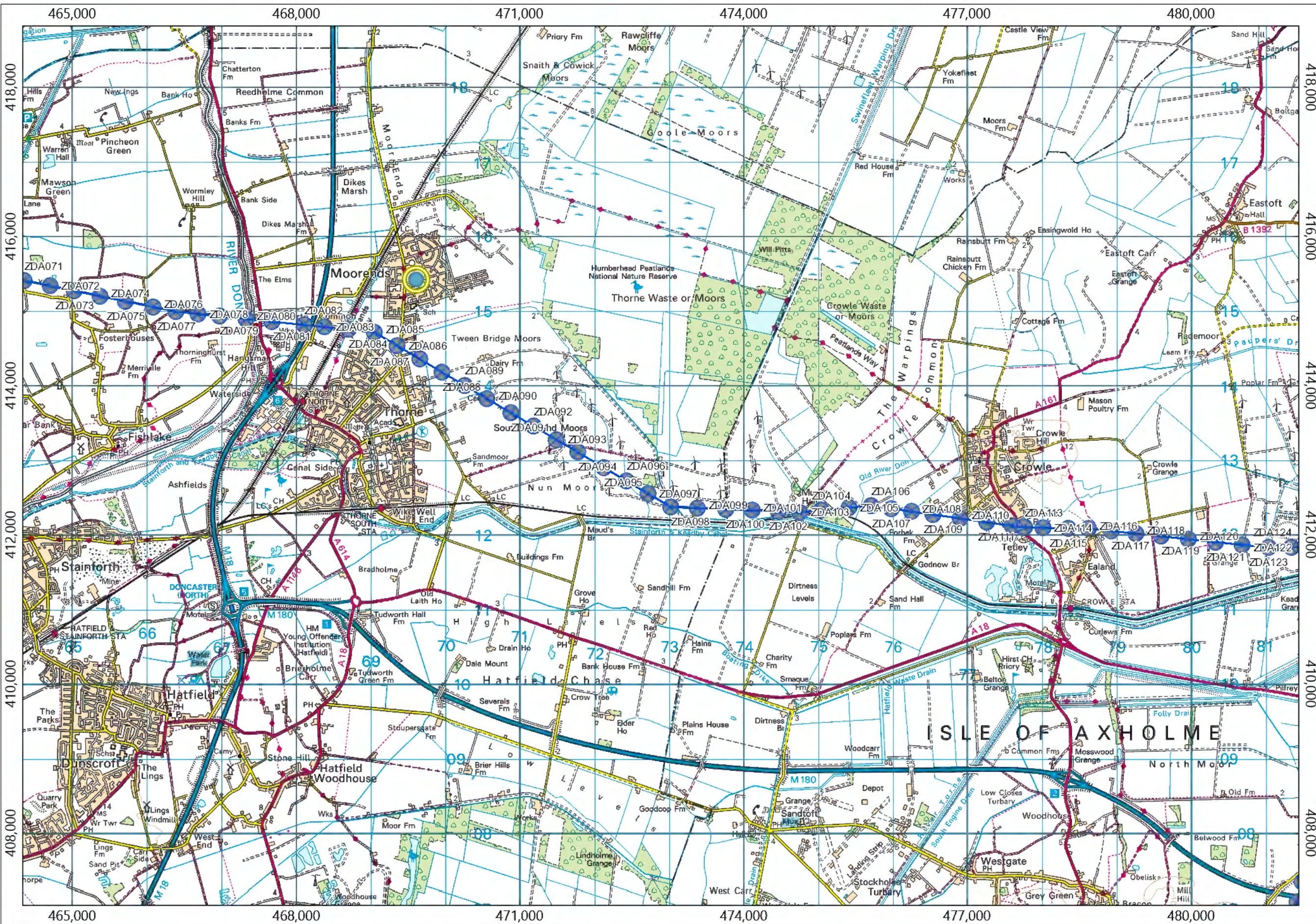
I hope the above information is useful. If you require any further information, please do not hesitate to contact me.

The information in this letter is provided notwithstanding any discussions taking place in relation to connections with electricity customer services.

Yours faithfully



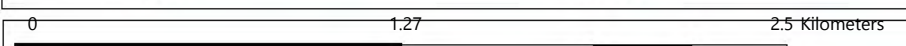
**Ellie Laycock**  
**Development Liaison Officer, Complex Land Rights**



- Legend:**
- Substations Commissioned
  - OHL 400Kv Commissioned
  - OHL 275Kv Commissioned
  - OHL 132Kv & Below Commissioned
  - Towers Commissioned
  - Buried Cable Commissioned
  - Fibre Cable Commissioned
  - Pilot Cable
  - Cable Tunnel

**Notes:**

TBSF NGET Assets



OS Disclaimer: Background Mapping information has been reproduced from the Ordnance Survey map by permission of Ordnance Survey on behalf of The controller of Her Majesty's Stationery Office. ©Crown Copyright Ordnance Survey National Grid UK Ltd -0100059731

Date: 06/02/2023  
 Time: 13:20:04  
 Page size: A3 Landscape  
 Print by: Laycock, Ellie  
 Scale: 1: 50,000



NG Disclaimer: National Grid UK Transmission. The asset position information represented on this map is the intellectual property of National Grid PLC (Warwick Technology Park, Warwick, CV346DA) and should not be used without prior authority of National Grid.  
 Note: Any sketches on the map are approximate and not captured to any particular level of precision.

**From:** [.box.assetprotection](#)  
**To:** [Tween Bridge](#)  
**Subject:** RE: [EXTERNAL] Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification  
**Date:** 28 February 2023 12:35:06  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[zda87-96\\_11216\\_2d.dxf](#)  
[zda87-96\\_11216\\_3d.dxf](#)

---

Hi Gary,

Please find attached CAD Drawings of the pylons that are in the vicinity of your works,

The 2D & 3D CAD models of the section ZDA 87-96 have been attached.

2D model:

Note the 15m tower stand off (green zone) required for access & maintenance. Must remain clear & free from physical obstructions.

Note the 30m tower stand off (red zone), advised any conductive material within this zone be adequately earthed.

3D model:

Shows the conductors at the maximum sag and swing; required clearances from ENA TS 43-8 must be maintained to the conductors at all times.

**Please could the you incorporate these into any plans submitted to National Grid going forward, to demonstrate that required clearances/stand-offs will be maintained.**

Best regards,

**Abdul-Basit Ali**

Asset Protection Technical Assistant  
Engineering Services  
[nationalgrid](#)

T 

National Grid House, Warwick Technology Park,  
Gallows Hill, Warwick, CV34 6DA (Floor B1)

**Please consider the environment before printing this email.**

**From:** .box.assetprotection <assetprotection@nationalgrid.com>

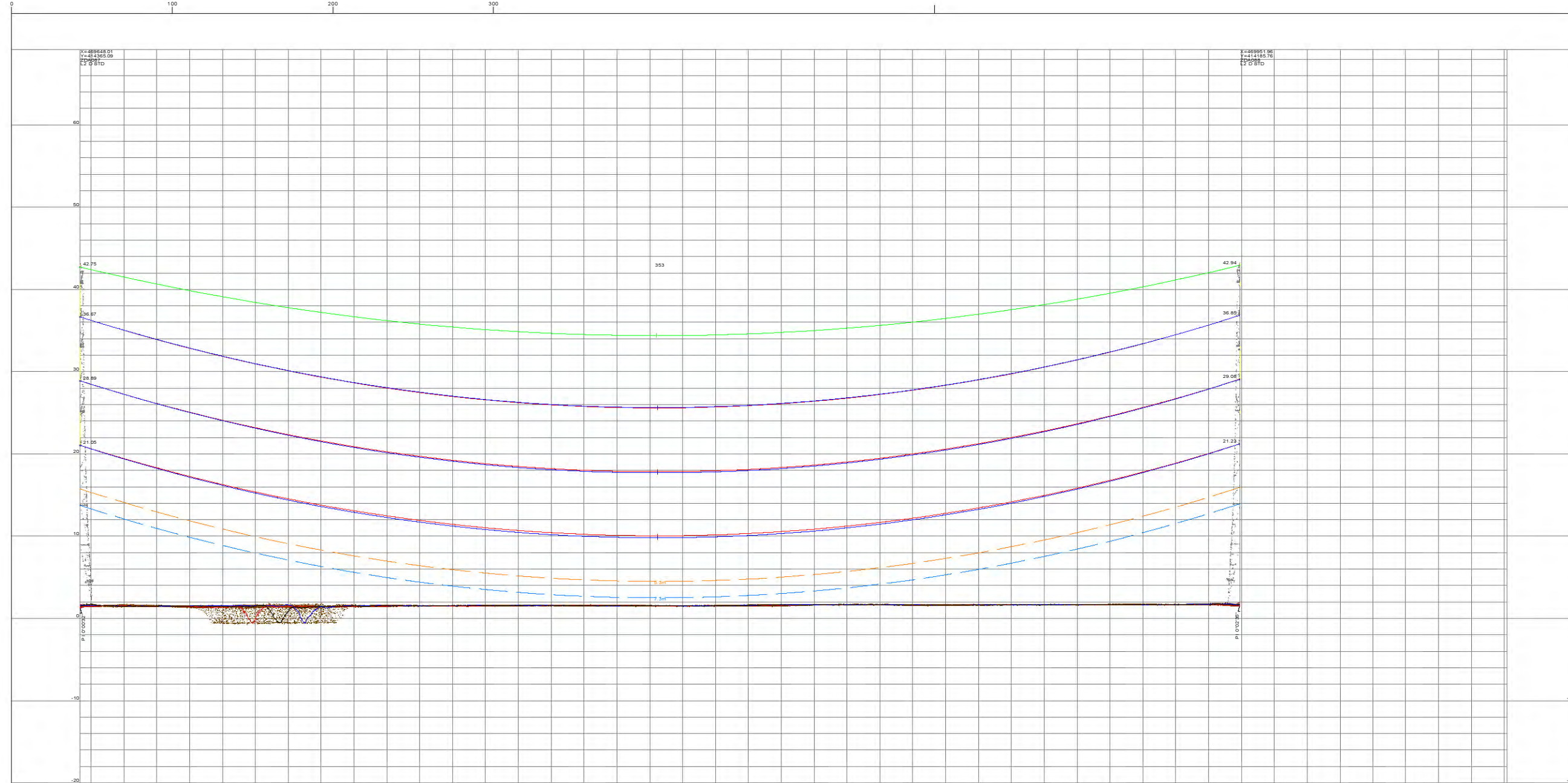
**Sent:** 02 February 2023 10:24

**To:** Tween Bridge <TweenBridge@planninginspectorate.gov.uk>

**Cc:** .box.assetprotection <assetprotection@nationalgrid.com>

**Subject:** RE: [EXTERNAL] Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification

Hi,



### National Grid Overhead Line Profiles

**Profile Description:**  
 This profile is derived from the use of LiDAR data and shows the position and status of the power line at the time of survey. Please note that ground levels may have changed since the survey date.

As the amount of power increases in the lines the conductors heat up and become longer, creating greater sag. A computer model has been applied to show the conductor at the maximum rated temperature. Please note that on an average day the conductors may not be at rated temperature and their height above ground is likely to change.

The profile states the lines current voltage. Any construction under the lines should allow for the likely possibility of upgrading of the line from 132kV to 275kV or 275kV to 400kV. Any permanent structures should adhere to the increased clearances.

It remains the responsibility of the third party to ensure the safety clearances are met by their proposed operations by using the bottom conductor attachment points as reference benchmarks.

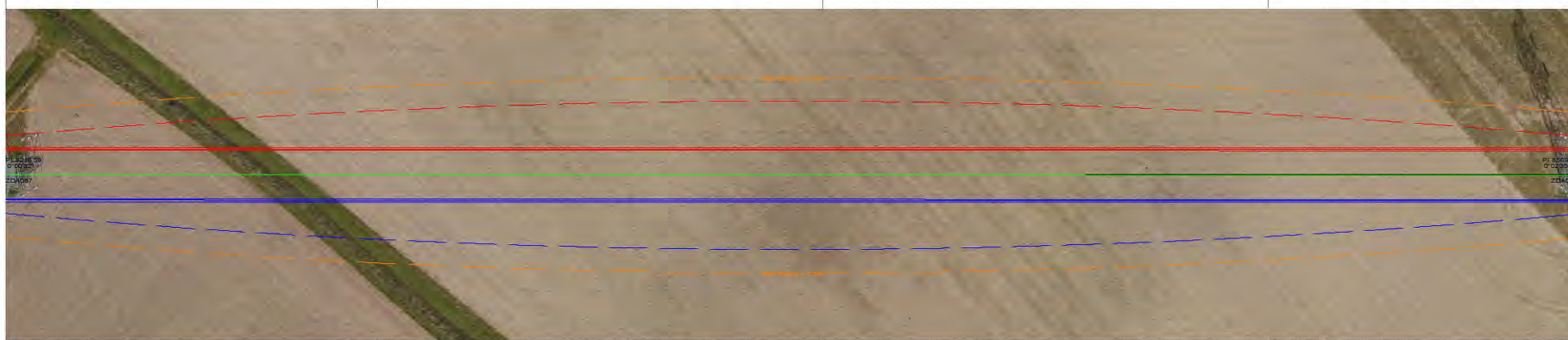
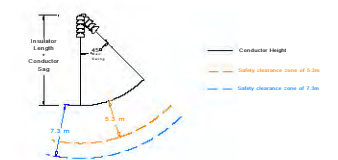
**Drawing Key:**  
 The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

**Feature Description**

- ⊗ Tower Base
- ⊗ Ground / Model Key Points
- ▬ Parallel Power Lines
- ▬ River Navigable
- ▬ Lake Navigable
- ▬ Pond Non-Navigable
- ▬ Swimming Pool
- ▬ Stream Non-Navigable
- ▬ Roads
- ▬ Driveways
- ▬ Footpath/Sidewalk/Track
- ▬ Motorways
- ▬ Railways
- ▬ Fences
- ▬ Wall
- ▬ Building
- ▬ Vegetation
- ▬ Power Line Crossing Wire
- ▬ Tower Footprint
- ▬ Power Line Crossing Structures
- ▬ Leisure Area
- ▬ Processing Plant / Industrial
- ▬ Substation
- ▬ Temporary Object
- ▬ Interpolated Ground Points

| Item | Description of Clearance  | Minimum Clearance (metres) at 400kV |
|------|---|-------------------------------------|
| 1    | To Ground   | 7.3                                 |
| 2    | To Normal Road Surface  | 8.1                                 |
| 3    | To road surface of designated "6.1 metres high load" routes   | 9.2                                 |
| 4    | To motorway or other road surface where "savecater" can be used   | 10.5                                |
| 5    | To motorway road surface where scaffolding is to be used on:<br>(i) Normal 3 lane motorways<br>(ii) Elevated 2 lane motorways   | 16.3<br>13.3                        |
| 6    | To any object/building on which a person may stand, including ladders, access platform, etc.  | 5.3                                 |
| 7    | To any object to which access is not required AND on which a person cannot stand or lean a ladder   | 3.1                                 |
| 8    | To trees under or adjacent to line and:<br>(i) Unable to support ladder/climber<br>(ii) Capable of supporting ladder/climber<br>(iii) Trees falling towards line with line conductors hanging vertically only | 3.1<br>5.3<br>3.1                   |
| 9    | To trees in orchards and hop gardens  | 5.3                                 |
| 10   | To irrigation, slurry guns and high pressure hoses  | 30.0                                |
| 11   | To street lighting standards with:<br>(i) Standard in normal upright position<br>(ii) Standard falling towards line with line conductors hanging vertically only<br>(iii) Standard falling towards line       | 4.0<br>4.0<br>1.9                   |

**Swing Clearances:**  
 The conductors may swing (blow-out) to a maximum of 45 Degrees during very strong winds, clearances need to be maintained for this situation.



ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV, 500mm² AAAC - Rubus (L) bundle of 2 Displayed Rated Temp 75 Creep PE

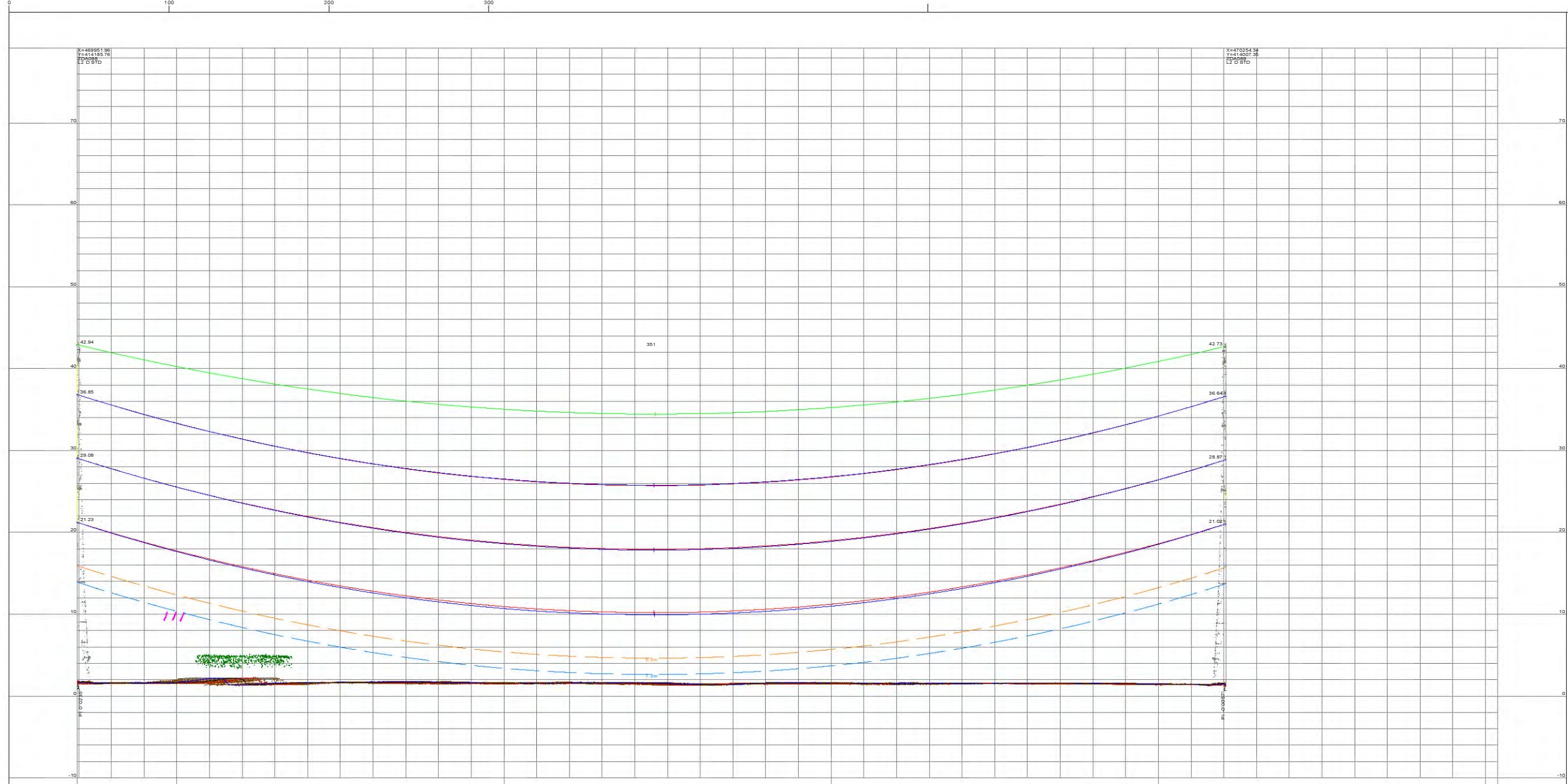
|          |                |
|----------|----------------|
| ISSUE    | <b>A</b>       |
| DRAWN    | Fugro 31/05/17 |
| CHECKED  | JB 21/12/18    |
| APPROVED |                |
|          | As Surveyed    |

NG Drawing Number: 28\_NG\_0350\_1 | Sheet No: 25 | No. of Sheets: 64

SCALE: --- | NG Project No: ---

National Grid plc owns the Copyright of this Document. It may not be reproduced or transmitted in any form or for any purpose, without the express written permission of National Grid plc

**National Grid plc** | UK Transmission  
 Warwick Technology Park, Galfords Hill, Warwick, CV34 6DA  
 Towers ZDA087 to ZDA088  
 Circuit: A37C  
 Chainage 8217 to 8570  
 Survey Date: 21/04/16  
 ZDA Fenwick Junction - Keadby  
 ZDA064-127a\_11216\_a  
 28\_NG\_0350\_1 | Sheet No: 25 | No. of Sheets: 64 | ISSUE: A



ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA085 - ZDA082 400kV 500mm<sup>2</sup> AAAC - Ribbus (L) bundle of 2 Displayed Rated Temp 75 Creep PE

National Grid Overhead Line Profiles

**Profile Description:**  
 This profile is derived from the use of LiDAR data and shows the position and status of the power line at the time of survey. Please note that ground levels may have changed since the survey date.

As the amount of power increases in the lines the conductors heat up and become longer, creating greater sag. A computer model has been applied to show the conductor at the maximum rated temperature. Please note that on an average day the conductors may not be at rated temperature and their height above ground is likely to change.

The profile states the lines current voltage. Any construction under the lines should allow for the likely possibility of upgrading of the line from 132kV to 275kV or 275kV to 400kV. Any permanent structures should adhere to the increased clearances

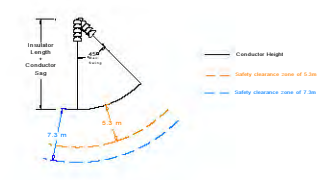
It remains the responsibility of the third party to ensure the safety clearances are met by their proposed operations by using the bottom conductor attachment points as reference benchmarks.

**Drawing Key:**  
 The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

- Feature Description**
- Tower Base
  - Ground / Model Key Points
  - Parallel Power Lines
  - River Navigable
  - Lake Navigable
  - Pond Non-Navigable
  - Swimming Pool
  - Stream Non-Navigable
  - Roads
  - Driveways
  - Footpath/Sidewalk/Track
  - Motorways
  - Railways
  - Fences
  - Walls
  - Buildings
  - Vegetation
  - Power Line Crossarm/Wire
  - Power Line Support Structures
  - Leisure Area
  - Processing Plant / Industrial
  - Substation
  - Temporary Object
  - Interpolated Ground Points

| Item | Description of Clearance  | Minimum Clearance (metres) at 400kV |
|------|---|-------------------------------------|
| 1    | To Ground   | 7.3                                 |
| 2    | To Normal Road Surface  | 8.1                                 |
| 3    | To road surface of designated "6.1 metres high load" routes   | 9.2                                 |
| 4    | To motorway or other road surface where "sawtooth" can be used  | 10.5                                |
| 5    | To motorway road surface where scaffolding is to be used on:<br>(i) Normal 3 lane motorways<br>(ii) Elevated 2 lane motorways   | 16.3<br>13.3                        |
| 6    | To any object/building on which a person may stand, including ladders, access platform, etc.  | 5.3                                 |
| 7    | To any object to which access is not required AND on which a person cannot stand or lean a ladder   | 3.1                                 |
| 8    | To trees under or adjacent to line and:<br>(i) Unable to support ladder/climber<br>(ii) Capable of supporting ladder/climber<br>(iii) Trees falling towards line with line conductors hanging vertically only | 3.1<br>5.3<br>3.1                   |
| 9    | To trees in orchards and hop gardens  | 5.3                                 |
| 10   | To irrigators, slurry guns and high pressure hoses  | 30.0                                |
| 11   | To street lighting standards with:<br>(i) Standard in normal upright position<br>(ii) Standard falling towards line with line conductors hanging vertically only<br>(iii) Standard falling towards line       | 4.0<br>4.0<br>1.9                   |

**Swing Clearances:**  
 The conductors may swing (blow-out) to a maximum of 45 Degrees during very strong winds, clearances need to be maintained for this situation.



|             |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| ISSUE       | A              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRAWN       | Fugro 31/05/17 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CHECKED     | JB 21/12/18    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| APPROVED    |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FIRST ISSUE | As Surveyed    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**National Grid plc** **UK Transmission**  
 Warwick Technology Park, Galloway Hill, Warwick, CV34 6DA

**Towers ZDA088 to ZDA089**  
 Circuit: A37C  
 Chainage 8570 to 8921  
 Survey Date: 21/04/16

Site: **ZDA Fenwick Junction - Keadby** A0

Originator Drawing Number: **zda064-127a\_11216\_a** CAD

NG Drawing Number: **28\_NG\_0350\_1** No. of Sheets: 64 ISSUE: A

SCALE: - NG Project No

National Grid Overhead Line Profiles

Profile Description:

This profile is derived from the use of LiDAR data and shows the position and status of the power line at the time of survey. Please note that ground levels may have changed since the survey date.

As the amount of power increases in the lines the conductors heat up and become longer, creating greater sag. A computer model has been applied to show the conductor at the maximum rated temperature. Please note that on an average day the conductors may not be at rated temperature and their height above ground is likely to change.

The profile states the lines current voltage. Any construction under the lines should allow for the likely possibility of upgrading of the line from 132kV to 275kV or 275kV to 400kV. Any permanent structures should adhere to the increased clearances

It remains the responsibility of the third party to ensure the safety clearances are met by their proposed operations by using the bottom conductor attachment points as reference benchmarks.

Drawing Key:

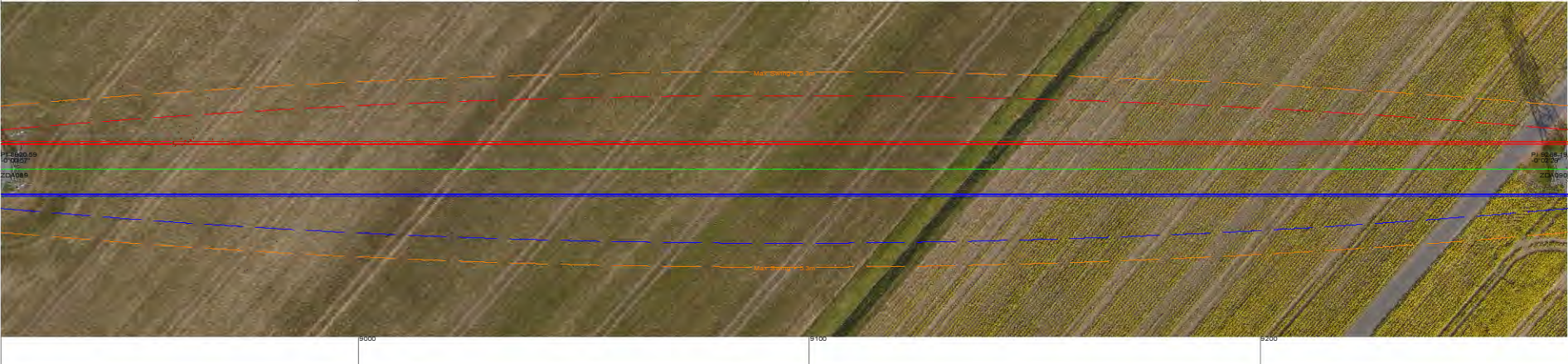
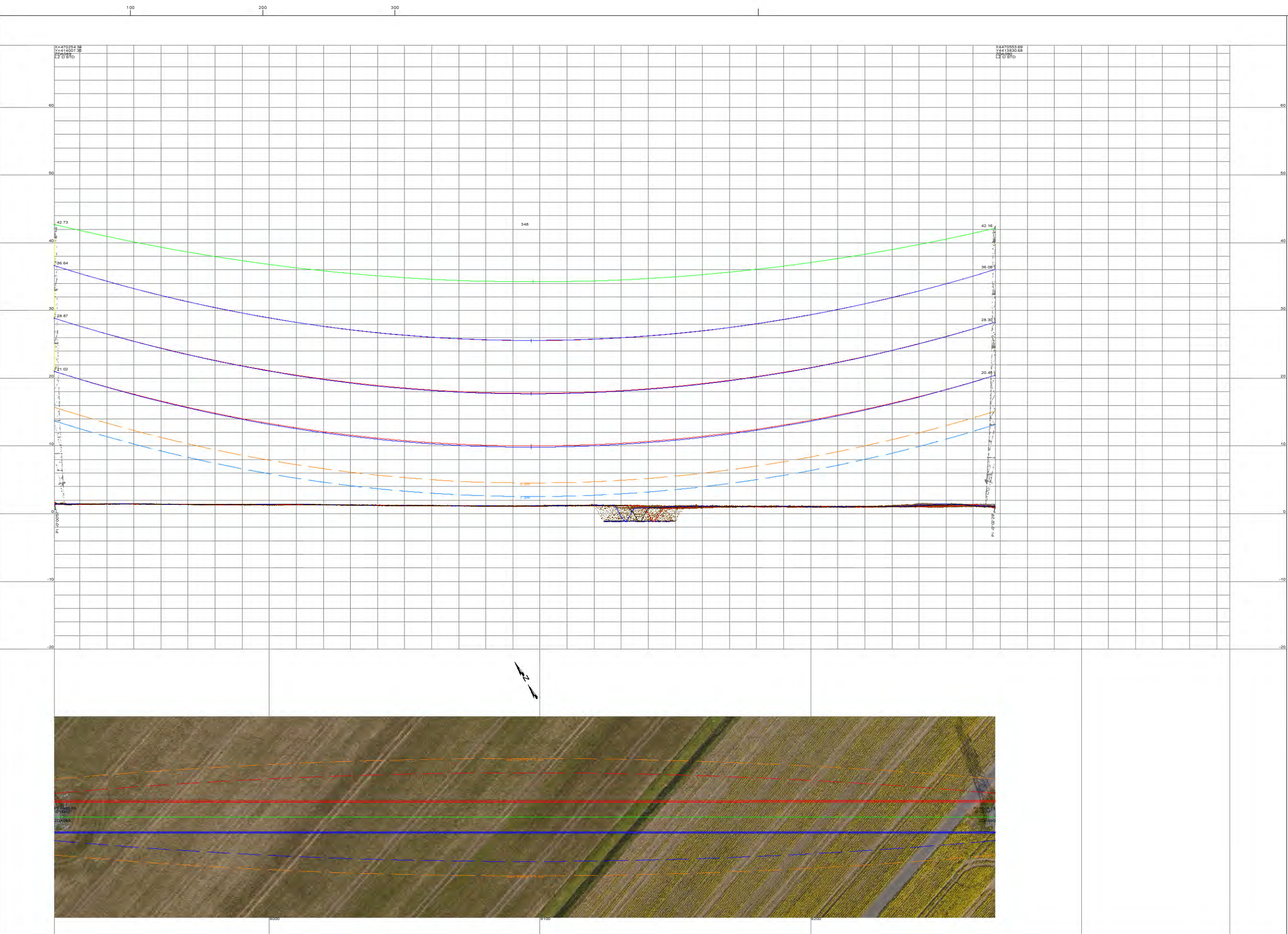
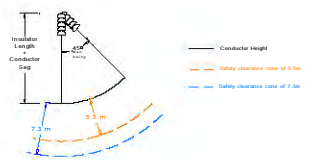
The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

Feature Description

- Tower Base
- Ground / Model Key Points
- Parallel Power Lines
- River Navigable
- Lake Navigable
- Pond Non-Navigable
- Swimming Pool
- Stream Non-Navigable
- Roads
- Driveways
- Footpaths/Sidewalk/Track
- Motorways
- Railways
- Fences
- Walls
- Buildings
- Vegetation
- Power Line Crossings/Wires
- Street Furniture
- Power Line Crossing Structures
- Leisure Area
- Processing Plant / Industrial
- Substation
- Temporary Object
- Interpolated Ground Points

| Item | Description of Clearance  | Minimum Clearance (metre) at 400kV |
|------|---|------------------------------------|
| 1    | To Ground   | 7.3                                |
| 2    | To Normal Road Surface  | 8.1                                |
| 3    | To road surface of designated "6.1 metres high load" routes   | 9.2                                |
| 4    | To motorway or other road surface where "sawtooth" can be used  | 10.5                               |
| 5    | To motorway road surface where scaffolding is to be used on:<br>(i) Normal 3 lane motorways<br>(ii) Elevated 2 lane motorways   | 16.3<br>13.3                       |
| 6    | To any object/building on which a person may stand, including ladders, access platform, etc.  | 5.3                                |
| 7    | To any object to which access is not required AND on which a person cannot stand or lean a ladder   | 3.1                                |
| 8    | To trees under or adjacent to line and:<br>(i) Unable to support ladder/climber<br>(ii) Capable of supporting ladder/climber<br>(iii) Trees falling towards line with line conductors hanging vertically only | 3.1<br>5.3<br>3.1                  |
| 9    | To trees in orchards and hop gardens  | 5.3                                |
| 10   | To irrigators, slurry guns and high pressure hoses  | 30.0                               |
| 11   | To street lighting standards with:<br>(i) Standard in normal upright position<br>(ii) Standard falling towards line with line conductors hanging vertically only<br>(iii) Standard falling towards line       | 4.0<br>4.0<br>1.9                  |

**Swing Clearances:**  
The conductors may swing (blow-out) to a maximum of 45 Degrees during very strong winds, clearances need to be maintained for this situation.



ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV, 500mm<sup>2</sup> AAAC - Ribus 5.1, bundle of 2, Displayed Rated Temp 75 Creep FE

|                          |  |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------|--|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <b>ISSUE</b><br><b>A</b> | DRAWN  | Fugro 31/05/17 | <b>FIRST ISSUE</b><br><b>As Surveyed</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                          | CHECKED  | JB 21/12/18    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                          | APPROVED   |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                          | National Grid plc owns the Copyright of this Document. It may not be reproduced or transmitted in any form or for any purpose, without the express written permission of National Grid plc |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|   |  |                          |                  |
|---|--|--------------------------|------------------|
| National Grid plc   |  | UK Transmission          |                  |
| Warwick Technology Park, Galloway Hill, Warwick, CV34 6DA |  |                          |                  |
| File Towers ZDA089 to ZDA090                              |  |                          |                  |
| Circuit: A37C   |  |                          |                  |
| Chainage 8921 to 9268                                     |  |                          |                  |
| Survey Date: 21/04/16                                     |  |                          |                  |
| Site ZDA Fenwick Junction - Keadby                        |  | A0                       |                  |
| Originator Drawing Number zda064-127a_11216_a             |  | CAD                      |                  |
| NG Drawing Number 28_NG_0350_1                            |  | Sheet No 27              | No. of Sheets 64 |
| SCALE:-   |  | NG Project No            |                  |
|   |  | <b>ISSUE</b><br><b>A</b> |                  |



### National Grid Overhead Line Profiles

#### Profile Description:

This profile is derived from the use of LiDAR data and shows the position and status of the power line at the time of survey. Please note that ground levels may have changed since the survey date.

As the amount of power increases in the lines the conductors heat up and become longer, creating greater sag. A computer model has been applied to show the conductor at the maximum rated temperature. Please note that on an average day the conductors may not be at rated temperature and their height above ground is likely to change.

The profile states the lines current voltage. Any construction under the lines should allow for the likely possibility of upgrading of the line from 132kV to 275kV or 275kV to 400kV. Any permanent structures should adhere to the increased clearances

It remains the responsibility of the third party to ensure the safety clearances are met by their proposed operations by using the bottom conductor attachment points as reference benchmarks.

#### Drawing Key:

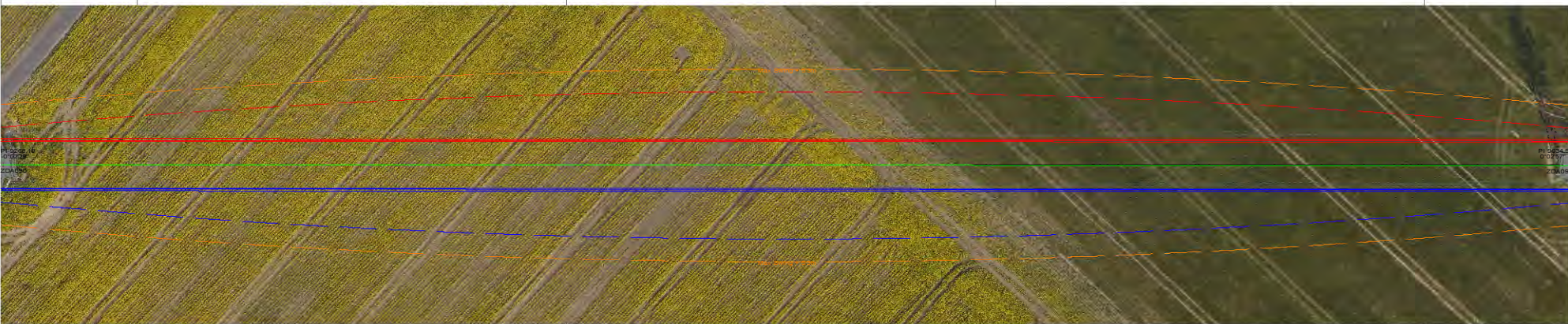
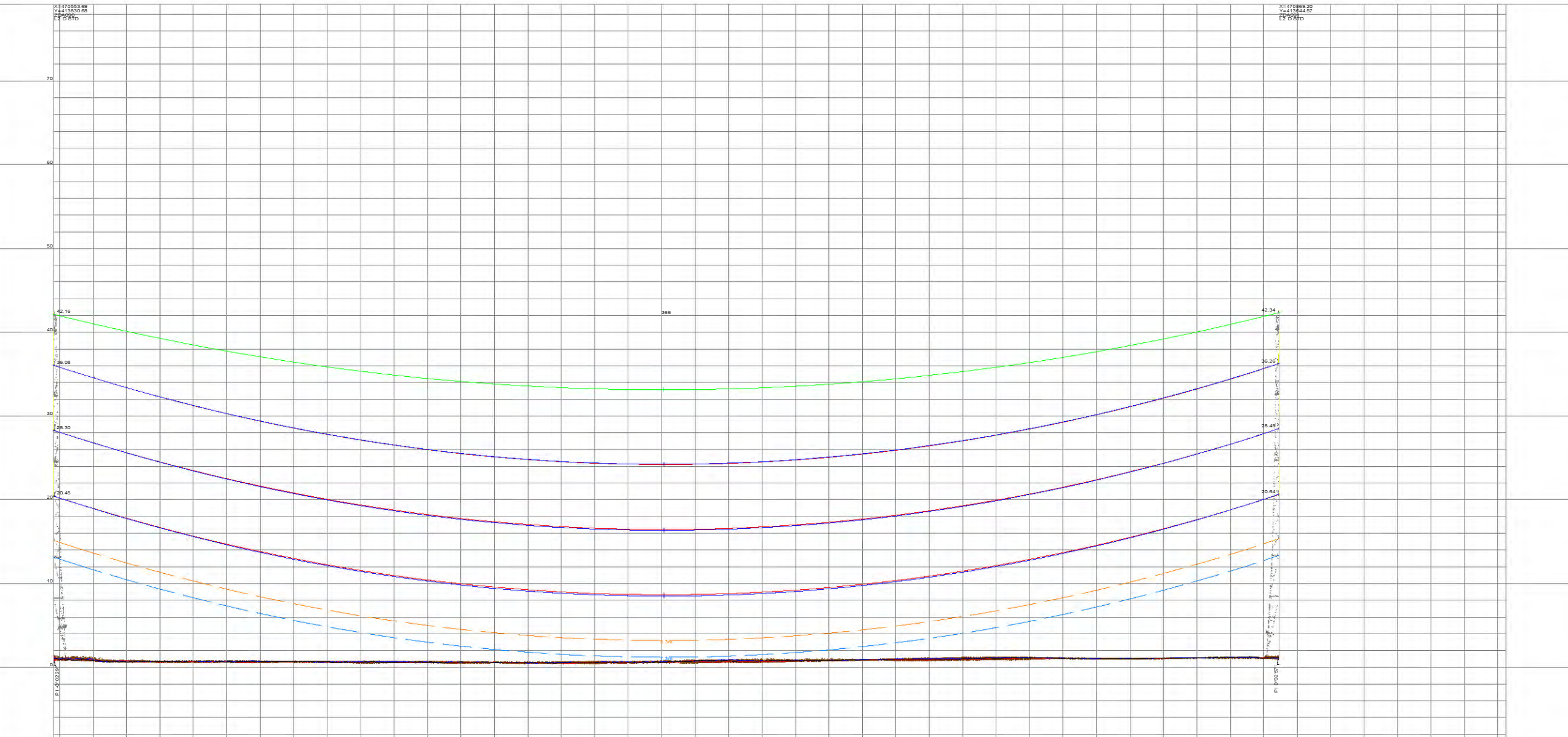
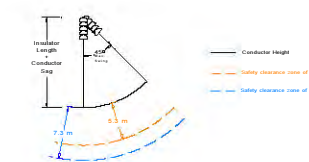
The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

#### Feature Description

- Tower Base
- Ground / Model Key Points
- Parallel Power Lines
- River Navigable
- Lake Navigable
- Pond Non-Navigable
- Swimming Pool
- Stream Non-Navigable
- Roads
- Driveways
- Footpath/Sidewalk/Track
- Motorways
- Railways
- Fence
- Wall
- Building
- Vegetation
- Power Line Crossage Wire
- Stover Furniture
- Power Line Crossing Structures
- Leisure Area
- Processing Plant / Industrial
- Substation
- Temporary Object
- Interpolated Ground Points

| Item | Description of Clearance   | Minimum Clearance (metres) at 400kV |
|------|--|-------------------------------------|
| 1    | To Ground  | 7.3                                 |
| 2    | To Normal Road Surface   | 8.1                                 |
| 3    | To road surface of designated "6.1 metres high load" routes  | 9.2                                 |
| 4    | To motorway or other road surface where "saverider" can be used  | 10.5                                |
| 5    | To motorway road surface where scaffolding is to be used on: (i) Normal 3 lane motorways (ii) Elevated 2 lane motorways  | 16.3<br>13.3                        |
| 6    | To any object/building on which a person may stand, including ladders, access platform, etc.   | 5.3                                 |
| 7    | To any object to which access is not required AND on which a person cannot stand or lean a ladder  | 3.1                                 |
| 8    | To trees under or adjacent to line and: (i) Unable to support ladder/climber (ii) Capable of supporting ladder/climber (iii) Trees falling towards line with line conductors hanging vertically only | 3.1<br>5.3<br>3.1                   |
| 9    | To trees in orchards and hop gardens   | 5.3                                 |
| 10   | To irrigators, slurry guns and high pressure hoses   | 30.0                                |
| 11   | To street lighting standards with: (i) Standard in normal upright position (ii) Standard falling towards line with line conductors hanging vertically only (iii) Standard falling towards line       | 4.0<br>4.0<br>1.9                   |

**Swing Clearances:**  
The conductors may swing (blow-out) to a maximum of 45 Degrees during very strong winds, clearances need to be maintained for this situation.



ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA095 - ZDA092 400kV, 500mm² AAAC - Ribus (L), bundle of 2, Displayed Rated Temp 75 Creep FE

|          |                |  |  |  |  |  |  |  |  |
|----------|----------------|--|--|--|--|--|--|--|--|
| ISSUE    | <b>A</b>       |  |  |  |  |  |  |  |  |
| DRAWN    | Fugro 31/05/17 |  |  |  |  |  |  |  |  |
| CHECKED  | JB 21/12/18    |  |  |  |  |  |  |  |  |
| APPROVED |                |  |  |  |  |  |  |  |  |
|          |                |  |  |  |  |  |  |  |  |
|          |                |  |  |  |  |  |  |  |  |
|          |                |  |  |  |  |  |  |  |  |
|          |                |  |  |  |  |  |  |  |  |
|          |                |  |  |  |  |  |  |  |  |
|          |                |  |  |  |  |  |  |  |  |

**National Grid plc** **UK Transmission**  
 Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

**Towers ZDA090 to ZDA091**  
 Circuit: A37C  
 Chainage 9268 to 9634  
 Survey Date: 21/04/16

Site: **ZDA Fenwick Junction - Keadby** A0  
 Originator Drawing Number: **zda064-127a\_11216\_a** CAD  
 NG Drawing Number: **28\_NG\_0350\_1** Sheet No. 28 No. of Sheets 64 ISSUE A  
 SCALE: - NG Project No

### National Grid Overhead Line Profiles

#### Profile Description:

This profile is derived from the use of LiDAR data and shows the position and status of the power line at the time of survey. Please note that ground levels may have changed since the survey date.

As the amount of power increases in the lines the conductors heat up and become longer, creating greater sag. A computer model has been applied to show the conductor at the maximum rated temperature. Please note that on an average day the conductors may not be at rated temperature and their height above ground is likely to change.

The profile states the lines current voltage. Any construction under the lines should allow for the likely possibility of upgrading of the line from 132kV to 275kV or 275kV to 400kV. Any permanent structures should adhere to the increased clearances

It remains the responsibility of the third party to ensure the safety clearances are met by their proposed operations by using the bottom conductor attachment points as reference benchmarks.

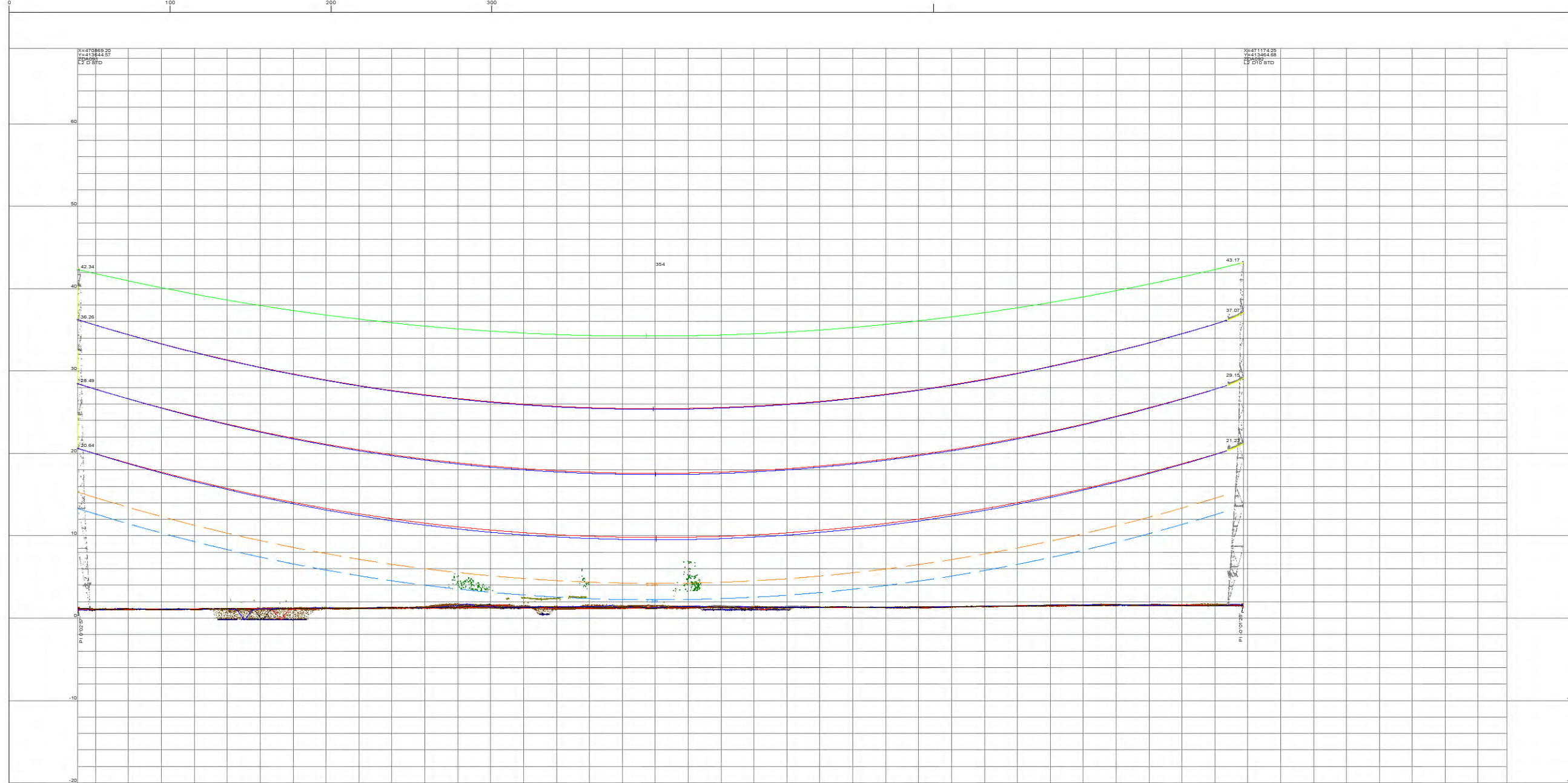
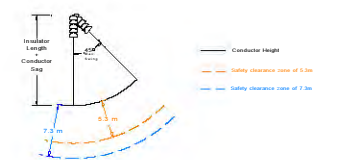
#### Drawing Key:

The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

| Feature Description            | Symbol   |
|--------------------------------|----------|
| Tower Base                     | [Symbol] |
| Ground / Model Key Points      | [Symbol] |
| Parallel Power Lines           | [Symbol] |
| River Navigable                | [Symbol] |
| Lake Navigable                 | [Symbol] |
| Pond Non-Navigable             | [Symbol] |
| Swimming Pool                  | [Symbol] |
| Stream Non-Navigable           | [Symbol] |
| Roads                          | [Symbol] |
| Driveways                      | [Symbol] |
| Footpaths/Sidewalk/Tracks      | [Symbol] |
| Motorways                      | [Symbol] |
| Railways                       | [Symbol] |
| Fences                         | [Symbol] |
| Walls                          | [Symbol] |
| Buildings                      | [Symbol] |
| Vegetation                     | [Symbol] |
| Power Line Crossings/Wires     | [Symbol] |
| Power Furniture                | [Symbol] |
| Power Line Crossing Structures | [Symbol] |
| Leisure Area                   | [Symbol] |
| Processing Plant / Industrial  | [Symbol] |
| Substation                     | [Symbol] |
| Temporary Object               | [Symbol] |
| Interpolated Ground Points     | [Symbol] |

| Item | Description of Clearance  | Minimum Clearance (metres) at 400kV |
|------|---|-------------------------------------|
| 1    | To Ground   | 7.3                                 |
| 2    | To Normal Road Surface  | 8.1                                 |
| 3    | To road surface of designated "6.1 metres high load" routes   | 9.2                                 |
| 4    | To motorway or other road surface where "scaffolder" can be used  | 10.5                                |
| 5    | To motorway road surface where scaffolding is to be used on:<br>(i) Normal 3 lane motorways<br>(ii) Elevated 2 lane motorways   | 16.3<br>13.3                        |
| 6    | To any object/building on which a person may stand, including ladders, access platform, etc.  | 5.3                                 |
| 7    | To any object to which access is not required AND on which a person cannot stand or lean a ladder   | 3.1                                 |
| 8    | To trees under or adjacent to line and:<br>(i) Unable to support ladder/climber<br>(ii) Capable of supporting ladder/climber<br>(iii) Trees falling towards line with line conductors hanging vertically only | 3.1<br>5.3<br>3.1                   |
| 9    | To trees in orchards and hop gardens  | 5.3                                 |
| 10   | To irrigators, slurry guns and high pressure hoses  | 30.0                                |
| 11   | To street lighting standards with:<br>(i) Standard in normal upright position<br>(ii) Standard falling towards line with line conductors hanging vertically only<br>(iii) Standard falling towards line       | 4.0<br>4.0<br>1.9                   |

**Swing Clearances:**  
The conductors may swing (blow-out) to a maximum of 45 Degrees during very strong winds, clearances need to be maintained for this situation.



ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA085 - ZDA092 400kV 500mm<sup>2</sup> AAC - Rubus (L) bundle of 2, Displayed Rated Temp 75 Creep FE

|             |             |          |  |  |  |  |  |  |  |  |  |  |
|-------------|-------------|----------|--|--|--|--|--|--|--|--|--|--|
| ISSUE       | <b>A</b>    |          |  |  |  |  |  |  |  |  |  |  |
| DRAWN       | Fugro       | 31/05/17 |  |  |  |  |  |  |  |  |  |  |
| CHECKED     | JB          | 21/12/18 |  |  |  |  |  |  |  |  |  |  |
| APPROVED    |             |          |  |  |  |  |  |  |  |  |  |  |
| FIRST ISSUE | As Surveyed |          |  |  |  |  |  |  |  |  |  |  |

**National Grid plc** UK Transmission  
 Warwick Technology Park, Galloway Hill, Warwick, CV34 6DA  
 Title: **Towers ZDA091 to ZDA092**  
 Circuit: A37C  
 Chainage 9634 to 9989  
 Survey Date: 21/04/16

Rev: **ZDA Fenwick Junction - Keadby** A0  
 Originator Drawing Number: **zda064-127a\_11216\_a** CAD  
 NG Drawing Number: **28\_NG\_0350\_1** Sheet No: **29** No. of Sheets: **64** ISSUE: **A**

SCALE: - NG Project No

National Grid Overhead Line Profiles

**Profile Description:**  
 This profile is derived from the use of LiDAR data and shows the position and status of the power line at the time of survey. Please note that ground levels may have changed since the survey date.

As the amount of power increases in the lines the conductors heat up and become longer, creating greater sag. A computer model has been applied to show the conductor at the maximum rated temperature. Please note that on an average day the conductors may not be at rated temperature and their height above ground is likely to change.

The profile states the lines current voltage. Any construction under the lines should allow for the likely possibility of upgrading of the line from 132kV to 275kV or 275kV to 400kV. Any permanent structures should adhere to the increased clearances

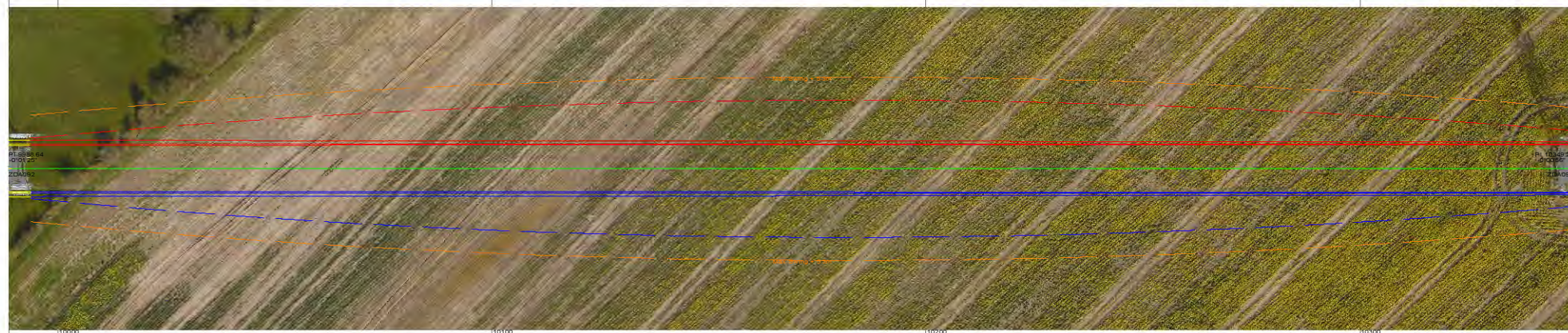
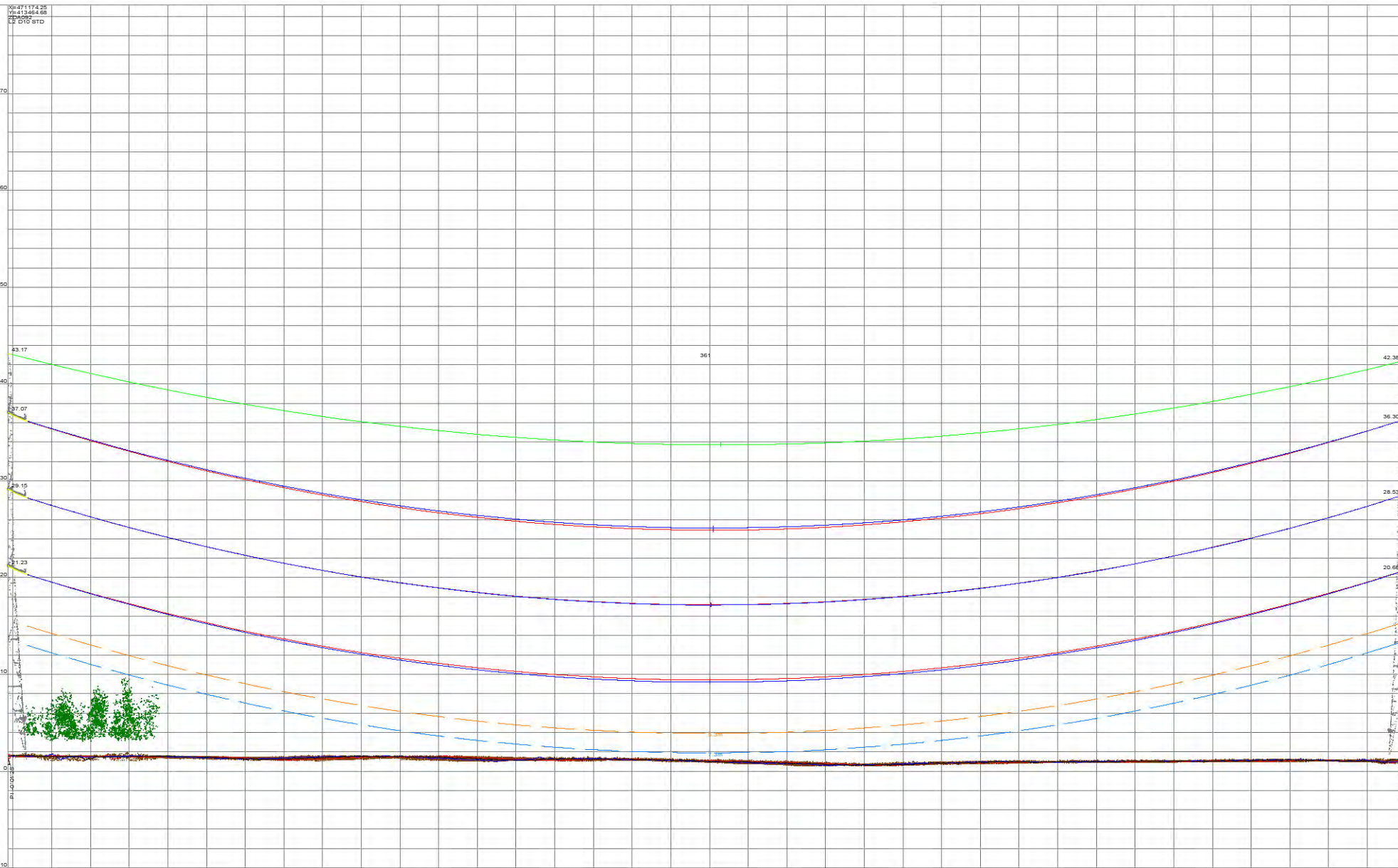
It remains the responsibility of the third party to ensure the safety clearances are met by their proposed operations by using the bottom conductor attachment points as reference benchmarks.

**Drawing Key:**  
 The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

| Feature Description            | Symbol               |
|--------------------------------|----------------------|
| Tower Base                     | [Red X]              |
| Ground / Model Key Points      | [Red Dashed Line]    |
| Parallel Power Lines           | [Purple Dashed Line] |
| River Navigable                | [Blue Dashed Line]   |
| Lake Navigable                 | [Blue Dashed Line]   |
| Pond Non-Navigable             | [Blue Dashed Line]   |
| Swimming Pool                  | [Blue Dashed Line]   |
| Stream Non-Navigable           | [Blue Dashed Line]   |
| Roads                          | [Orange Dashed Line] |
| Driveways                      | [Orange Dashed Line] |
| Footpath/Sidewalk/Track        | [Orange Dashed Line] |
| Motorways                      | [Orange Dashed Line] |
| Railways                       | [Orange Dashed Line] |
| Fences                         | [Orange Dashed Line] |
| Walls                          | [Orange Dashed Line] |
| Buildings                      | [Orange Dashed Line] |
| Vegetation                     | [Orange Dashed Line] |
| Power Line Crossing Wires      | [Orange Dashed Line] |
| Street Furniture               | [Orange Dashed Line] |
| Power Line Crossing Structures | [Orange Dashed Line] |
| Landscape Area                 | [Orange Dashed Line] |
| Proposed Plant / Industrial    | [Orange Dashed Line] |
| Substation                     | [Orange Dashed Line] |
| Temporary Object               | [Orange Dashed Line] |
| Interpolated Ground Points     | [Orange Dashed Line] |

| Item | Description of Clearance   | Minimum Clearance (metres) at 400kV |
|------|--|-------------------------------------|
| 1    | To Ground  | 7.3                                 |
| 2    | To Normal Road Surface   | 8.1                                 |
| 3    | To road surface of designated "6.1 metres high load" routes  | 9.2                                 |
| 4    | To motorway or other road surface where "sawcracker" can be used   | 10.5                                |
| 5    | To motorway road surface where scaffolding is to be used on:<br>(i) Normal 3 lane motorways<br>(ii) Elevated 2 lane motorways  | 16.3                                |
| 6    | To any object/building on which a person may stand, including ladders, access platform, etc.   | 5.3                                 |
| 7    | To any object to which access is not required AND on which a person cannot stand or lean a ladder  | 3.1                                 |
| 8    | To trees under or adjacent to line and:<br>(i) Unable to support ladder/climber<br>(ii) Capable of supporting ladder/climber<br>(iii) Trees falling towards line with the conductors hanging vertically only | 3.1                                 |
| 9    | To trees in orchards and hop gardens   | 5.3                                 |
| 10   | To irrigators, slurry guns and high pressure hoses   | 30.0                                |
| 11   | To street lighting standards with:<br>(i) Standard in normal upright position<br>(ii) Standard falling towards line with the conductors hanging vertically only<br>(iii) Standard falling towards line       | 4.0<br>4.0<br>1.9                   |

**Swing Clearances:**  
 The conductors may swing (blow-out) to a maximum of 45 Degrees during very strong winds, clearances need to be maintained for this situation.

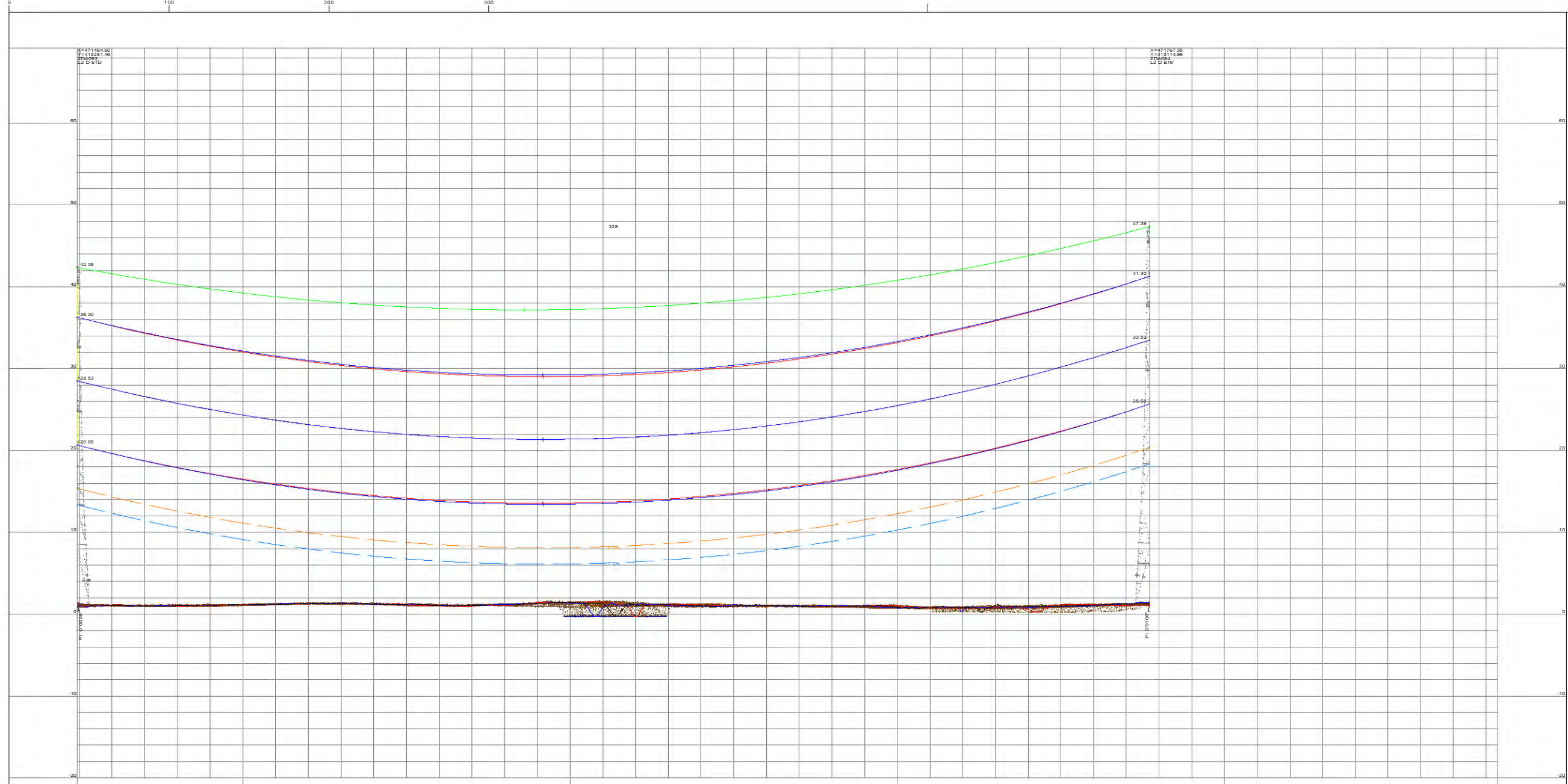


ZDA092 - ZDA098 400kV 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA092 - ZDA098 400kV 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA092 - ZDA098 400kV 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA092 - ZDA098 400kV 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA092 - ZDA098 400kV 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2 Displayed Rated Temp 75 Creep PE  
 ZDA092 - ZDA098 100V 160mm<sup>2</sup> AACBB - Keadby Displayed 10.1 (Imp C) Creep PE

|          |                |
|----------|----------------|
| ISSUE    | A              |
| DRAWN    | Fugro 31/05/17 |
| CHECKED  | JB 21/12/18    |
| APPROVED |                |

FIRST ISSUE  
 As Surveyed

|   |              |                   |          |
|---|--------------|-------------------|----------|
| National Grid plc   |              | UK Transmission   |          |
| Warwick Technology Park, Galloway Hill, Warwick, CV34 6DA |              |                   |          |
| Title: Towers ZDA092 to ZDA093                            |              |                   |          |
| Circuit: A37C   |              |                   |          |
| Chainage 9989 to 10349                                    |              |                   |          |
| Survey Date: 21/04/16                                     |              |                   |          |
| Site: ZDA Fenwick Junction - Keadby                       |              | A0                |          |
| Originator Drawing Number: zda064-127a_11216_a            |              | CAD               |          |
| NG Drawing Number: 28_NG_0350_1                           | Sheet No: 30 | No. of Sheets: 64 | ISSUE: A |
| SCALE: -  |              | NG Project No     |          |



**National Grid Overhead Line Profiles**

**Profile Description:**  
This profile is derived from the use of LiDAR data and shows the position and status of the power line at the time of survey. Please note that ground levels may have changed since the survey date.

As the amount of power increases in the lines the conductors heat up and become longer, creating greater sag. A computer model has been applied to show the conductor at the maximum rated temperature. Please note that on an average day the conductors may not be at rated temperature and their height above ground is likely to change.

The profile states the lines current voltage. Any construction under the lines should allow for the likely possibility of upgrading of the line from 132kV to 275kV or 275kV to 400kV. Any permanent structures should adhere to the increased clearances

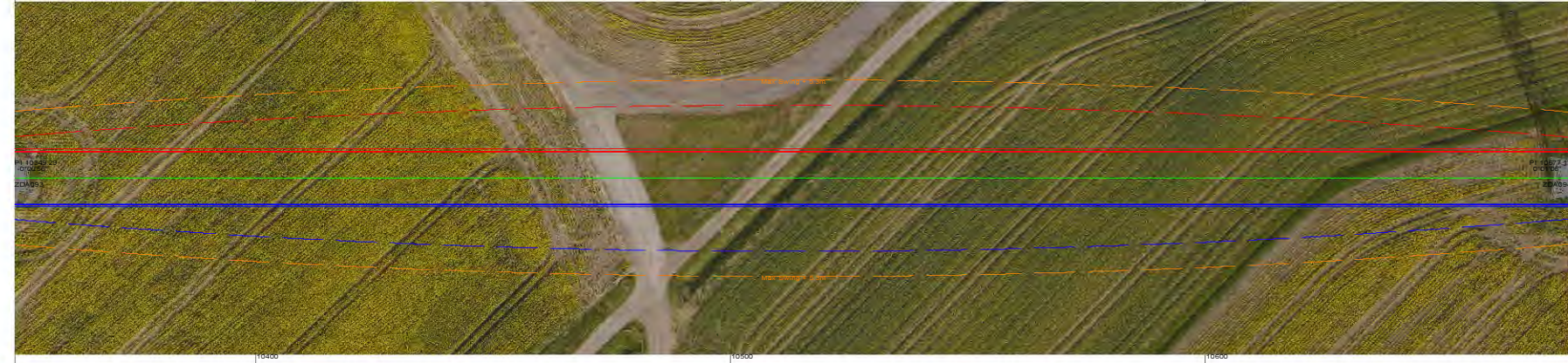
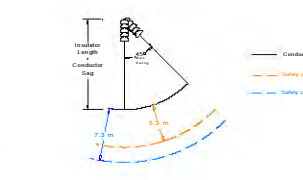
It remains the responsibility of the third party to ensure the safety clearances are met by their proposed operations by using the bottom conductor attachment points as reference benchmarks.

**Drawing Key:**  
The following clearances are derived from the Energy Networks Association Technical Specification 43-8.

- Feature Description**
- Tower Base
  - Ground / Model Key Points
  - Parallel Power Lines
  - River Navigable
  - Lake Navigable
  - Pond Non-Navigable
  - Swimming Pool
  - Stream Non-Navigable
  - Roads
  - Driveways
  - Footpath/Sidewalk/Track
  - Motorways
  - Railways
  - Fences
  - Walls
  - Buildings
  - Vegetation
  - Power Line Crossing Wire
  - Tower Furniture
  - Power Line Crossing Structures
  - Leisure Area
  - Processing Plant / Industrial
  - Substation
  - Temporary Object
  - Interpolated Ground Points

| Item | Description of Clearance  | Minimum Clearance (metre) at 400kV |
|------|---|------------------------------------|
| 1    | To Ground   | 7.3                                |
| 2    | To Normal Road Surface  | 8.1                                |
| 3    | To road surface of designated "6.1 metres high load" routes                                       | 9.2                                |
| 4    | To motorway or other road surface where "saverider" can be used                                   | 10.5                               |
| 5    | To motorway road surface where scaffolding is to be used on:                                      | 16.3                               |
|      | (i) Normal 3 lane motorways   | 13.3                               |
|      | (ii) Elevated 2 lane motorways  |                                    |
| 6    | To any object/building on which a person may stand, including ladders, access platform, etc.      | 5.3                                |
| 7    | To any object to which access is not required AND on which a person cannot stand or lean a ladder | 3.1                                |
| 8    | To trees under or adjacent to line and:   |                                    |
|      | (i) Unable to support ladder/climber  | 3.1                                |
|      | (ii) Capable of supporting ladder/climber   | 5.3                                |
|      | (iii) Trees falling towards line with line conductors hanging vertically only                     | 3.1                                |
| 9    | To trees in orchards and hop gardens  | 5.3                                |
| 10   | To irrigators, slurry guns and high pressure hoses  | 30.0                               |
| 11   | To street lighting standards with:  |                                    |
|      | (i) Standard in normal upright position   | 4.0                                |
|      | (ii) Standard falling towards line with line conductors hanging vertically only                   | 4.0                                |
|      | (iii) Standard falling towards line   | 1.9                                |

**Swing Clearances:**  
The conductors may swing (blow-out) to a maximum of 45 Degrees during very strong winds, clearances need to be maintained for this situation.



ZDA093 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA092 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA093 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA092 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA093 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA092 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA093 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA092 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA093 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE  
 ZDA092 - ZDA098, 400kV, 500mm<sup>2</sup> AAC - Ribus (L) bundle of 2, Displayed Rated Temp 75 Creep FE

|             |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| ISSUE       | <b>A</b>       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DRAWN       | Fugro 31/05/17 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CHECKED     | JB 21/12/18    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| APPROVED    |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FIRST ISSUE |                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|             | As Surveyed    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**National Grid plc** **UK Transmission**  
 Warwick Technology Park, Galloway Hill, Warwick, CV34 6DA

**Towers ZDA093 to ZDA094**  
 Circuit: A37C  
 Chainage 10349 to 10677  
 Survey Date: 21/04/16

Site: ZDA Fenwick Junction - Keadby A0  
 Originator Drawing Number: zda064-127a\_11216\_a CAD  
 NG Drawing Number: 28\_NG\_0350\_1 Sheet No. 31 No. of Sheets 64 ISSUE  
 SCALE: - NG Project No.

National Grid plc owns the Copyright of this Document. It may not be reproduced or transmitted in any form or for any purpose, without the express written permission of National Grid plc





**From:** [.box.assetprotection](#)  
**To:** [Tween Bridge](#)  
**Cc:** [.box.assetprotection](#)  
**Subject:** RE: [EXTERNAL] Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification  
**Date:** 02 February 2023 10:24:38  
**Attachments:** [image001.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

---

Hi,

Thank you for your email.

Regarding planning application EN010148 – Tween Bridge Solar Farm, there are no National Grid Gas assets affected in this area. I am forwarding this to National Grid Electricity for review.

If you would like to view if there are any other affected assets in this area, please raise an enquiry with [www.lsbud.co.uk](http://www.lsbud.co.uk). Additionally, if the location or works type changes, please raise an enquiry.

Kind regards

Asset Protection Team

**From:** Tween Bridge <TweenBridge@planninginspectorate.gov.uk>  
**Sent:** 01 February 2023 09:59  
**To:** .box.landandacquisitions <box.landandacquisitions@nationalgrid.com>  
**Cc:** Tween Bridge <TweenBridge@planninginspectorate.gov.uk>; Jefferies, Spencer <[REDACTED]>; .box.assetprotection <assetprotection@nationalgrid.com>  
**Subject:** [EXTERNAL] Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification

**CAUTION:** This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe. If you suspect this email is malicious, please use the 'Report Phish' button.

### FAO Spencer Jeffries

Dear Mr Jeffries,

Please see attached correspondence from The Planning Inspectorate (PINS) in relation to the proposed Tween Bridge Solar Farm (Nationally Significant Infrastructure Project).

Please note the deadline for consultation responses is **01 March 2023** and is a statutory requirement that cannot be extended.

# Tween Bridge Solar Farm – JSJV Scoping Review

|                       |                                    |
|-----------------------|------------------------------------|
| Prepared for:         | Cat Campbell (National Highways)   |
| Prepared by:          | Rory Alexander                     |
| Date:                 | 28 February 2023                   |
| Case Reference:       | DevSY0118                          |
| Document Reference:   | TM001                              |
| Reviewed/approved by: | Jonathan Parsons / Richard Edwards |

Limitation: This document has been prepared on behalf of, and for the exclusive use of National Highways, and is subject to, and issued in accordance with, the provisions of the National Spatial Planning Contract. We accept no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this document by any third party.

---

## Overview

The Jacobs Systra Joint Venture [JSJV] have been tasked by National Highways to review an Environmental Impact Assessment Scoping Report [the Report] (dated January 2023) prepared by Pegasus Group [Pegasus], on behalf of RWE Renewables [the Applicant] in relation to the Tween Bridge Solar Farm development.

The Report has been submitted to the Planning Inspectorate, and National Highways as a statutory consultee, have been consulted on scoping for the development proposals (reference: EN010148).

The development proposals are in close proximity to the M180 and M18, which form part of the Strategic Road Network [SRN], hence the need to review the Report to ensure that the development proposals do not materially impact upon the capacity, operation and safety of the SRN.

This Technical Memorandum [TM] reviews the contents of the Report to ensure that the potential impact at the SRN is considered within subsequent documentation and assessment provided by RWE Renewables as part of a planning application.

A summary and conclusions are provided at the end of this TM.

## EIA Scoping Report Review

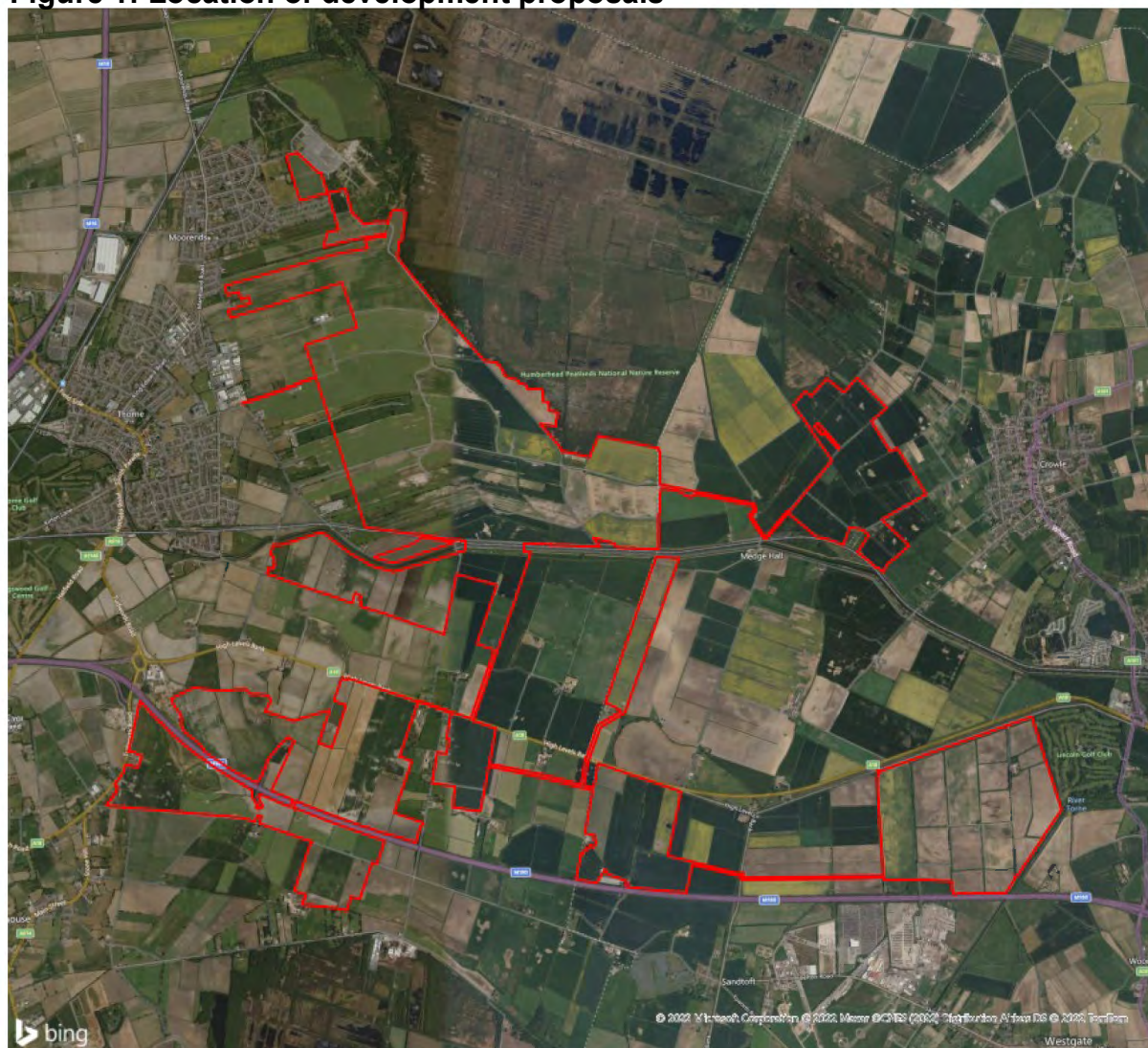
### Development Site

The location of the development proposals can be seen in Figure 1.

The Report states that the proposed development extends over 1,500ha, centred at approximately 10km to the northeast of Doncaster and 14km to the west of Scunthorpe. The scheme includes areas within the administrative boundaries of Doncaster Council and North Lincolnshire Council. The Report states that, at this stage, it is proposed that the Environmental Statement will employ a 'maximum design envelope'.



**Figure 1: Location of development proposals**



*(Source: EIA Scoping Report, Appendix 1.1)*

The Report states that the overall development site area includes a series of large solar PhotoVoltaic [PV] module areas in an irregular layout. These solar PV module areas will be connected by stretches of cabling. The site area covers a maximum east-west distance of approximately 8km and a maximum north-south distance of approximately 7km.

In addition, it is considered that given the size of the site area, there are multiple areas where the development proposals may have an impact on the SRN. As such, JSJV note that the development proposals have the potential to impact the following sections of the SRN:

- M180: The M180 runs east-west towards the southern extent of the site area. Solar PV module areas will directly border stretches of the M180 mainline between M180 Junction 1 and Junction 2. The solar PV module areas straddle the M180, bordering the mainline to the north and south. It appears that cabling will cross underneath the mainline to connect to the module area to the south of the road. It is likely that M180 Junctions 1 and 2 may be used for vehicular access to the development site; and
- M18: The M18 runs north-south to the west of the site. It is likely that M18 junctions 5 and 6 may be used for vehicular access to the development site.

Given the proximity of the proposals to the M180 mainline, and the likelihood that traffic accessing the development proposals may route through the M18 and M180, it is considered by JSJV that the SRN should be included within the study area for the development proposals, to enable National Highways to take a view on the impact at the SRN.

## Development Proposals

The Report states that the main element of the proposal is the construction, operation, maintenance and decommissioning of a ground-mounted solar park with an export capacity of over 50MW with associated development.

Furthermore, it is stated that a single main substation compound will serve the whole development, and this will be required for the duration of the scheme and retained thereafter. The substation compound would be located within the main development area, to the north of the Stainforth and Keadby Canal, adjacent to the existing overhead electricity pylons which traverse the site.

It is anticipated that the scheme would comprise the following works:

- Arrays of ground-mounted solar PV panels;
- Battery Energy Storage System;
- Formation of ecological corridor and green infrastructure;
- Substation building and compounds;
- Upgrade to main access track;
- Temporary construction and decommissioning compounds;
- Open trench cabling works;
- Directional drilling for cable works under the extant canal, railway and adopted highway, including the M180;
- Fencing and security measures; and
- Upgrade to existing culverts.

This is noted by JSJV.

The Report provides some further detail on the likely design specifications for the above components of the development, but no further detail is provided on the dimensions of each of the constituent sites of the development. However, it is considered by JSJV that more detail on the development proposals will emerge in due course.

## Development Life-Cycle Phases

The Report provides an overview of the development life-cycle phases. This includes the construction, operational and decommissioning lifespan phases.

In addition, the Report states that the Environmental Statement will consider the options of the scheme being constructed through either a single phase or multiple phases, i.e. a phased approach to the construction of the solar arrays / development parcels. If all elements were constructed at the same time, then it is anticipated that the main construction phase would last around 24 to 36 months. It is stated that the Environmental Statement will provide a full description of the construction, operational and decommissioning variances. The Report goes on to state that the construction of the solar arrays would not take place in a singular continuous phase.

The Report states that during the construction phase, one main construction compound will serve the scheme, and this will be located off the main site entrance. It is stated that the Environmental Statement will include a detailed description of the construction compound(s) including its/their size and duration required on site.

Regarding the operational lifespan of the development, the Report states that an operational lifespan of 45 years would be sought, with the operational period following the final commissioning for the full scheme. During the operational phase, activities on site would amount to servicing maintenance of plant and equipment associated with the scheme, including solar panels, inverters, transformers, substation compound and vegetation and biodiversity management.

It is noted by JSJV that no details have been provided on the decommissioning phase of the development.

The overview of the construction and operational phases that has been presented in the Report is acknowledged by JSJV. JSJV recognise that, at the scoping stage of the application process, more specific detail on the development phases may not be available. However, JSJV note that further detail is required to support scoping and preliminary assessments in advance of the undertaking of the full Environmental Statement.

JSJV note that the construction, operational and decommissioning phases of the proposed development are each required to be assessed by RWE Renewables, with appropriate documentation provided to demonstrate the impact of these phases and how they will be mitigated.

## EIA Scoping

The Report provides preliminary assessments of the potential environmental impacts of the proposed development. The specific topics covered, which have been ‘scoped in’ for the Environmental Statement, and of interest to National Highways, are:

- Landscape and Visual; and
- Transport and Access.

The Report states that glint and glare has been scoped out of the EIA, stating that the Applicant proposes to present a Glint & Glare Assessment as a standalone report submitted as a technical appendix to the Environmental Statement Chapter 4 – Development Description.

This is noted by JSJV and details are provided within this TM regarding National Highways’ requirements for the Glint & Glare Assessment.

## Traffic and Transport

### Proposed Approach

Chapter 10 of the Scoping Report, ‘Transport and Access’, sets out how transport and access will be addressed within the EIA. The Report states that the proposed methodology would consider the potential effects of the scheme on the local and strategic highway network.

JSJV takes this opportunity, before responding to the Note, to draw Pegasus’ attention to the fact that Department for Transport [DfT] released a new document setting out the policy of the Secretary of State in relation to the Strategic Road Network (SRN) on 23 December 2022. The document, entitled “Strategic road network and the delivery

of sustainable development”, (and referenced as DfT Circular 01/2022<sup>1</sup>), replaces the policies in the Department for Transport Circular 02/2013 of the same title with immediate effect. As such, any transport documentation prepared to support the development proposals should be prepared in line with the updated policy position.

### **Preliminary Assessment of Baseline Conditions**

The Report states that the Transport and Access chapter would consider baseline transportation conditions, including traffic flows and highway safety.

It is proposed that the Annual Average Daily Traffic will be assessed at 18 points on the local highway network. A combination of DfT traffic count data and proposed Automatic Traffic Count surveys will be used to provide the baseline traffic flows at each link. The proposed link extents have been indicatively shown within Appendix 10.1 of the Report alongside the indicative access locations, and it is considered by JSJV that the appropriate sections of the SRN have been included within this. However, it is considered that Pegasus should approach National Highways if further scoping is required.

The Report states that given the temporary nature of the construction traffic, it is considered appropriate to consider the impacts of the scheme against the baseline survey year, which is anticipated to be 2023. A future year of 2029 is proposed for the consideration of operational traffic, on the basis that all construction activities at the site will be complete. The TEMPro growth rates will be determined through dialogue with the local highway authorities in due course.

In broad terms, it is considered by JSJV that this approach is sound, however, as stated above, this chapter should be prepared in line with the updated policy position. Notwithstanding, it will be important for Pegasus to clear set out the timescales for construction to take place, so the appropriate assessments can be undertaken.

### **Potential Impacts / Effects**

The Report states that, due to the size of the site, access is proposed via multiple new and upgraded junctions. These accesses will be used for construction purposes with some, but not all, accesses retained for operational purposes.

The proposals will be supported by a Transport Statement – although it is considered by JSJV that given the scale of the development proposals that a Transport Assessment [TA] will be more appropriate, and that National Highways should be consulted on the scope of – and a Construction Traffic Management Plan [CTMP]. This approach is accepted by JSJV.

The CTMP will summarise the traffic movements anticipated throughout the construction period and the associated mitigation measures to be agreed with the local highway authorities at North Lincolnshire Council and Doncaster Council as well as National Highways. This is noted by JSJV and details are provided later within the TM regarding the requirements for the CTMP.

### **Scope and Methodology of Assessment**

The Report sets out the proposed scope and methodology for the assessment of the transport impacts of the development. Whilst this provides an overview of the approach to the assessment of the transport impact of the proposed development, JSJV note that it is lacking in detail on the specific assessments which are expected

---

<sup>1</sup> <https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development/strategic-road-network-and-the-delivery-of-sustainable-development>.

to take place; and also, JSJV highlights below the key requirements for said assessments.

## Collision Data

JSJV note that no reference has been made to any forthcoming assessment of collision data in the surrounding area, including the SRN.

An assessment of Personal Injury Collision data will be required to identify any existing clusters of collisions on the surrounding highway network. The study area for the collision data analysis must include the sections and junctions of the SRN in the vicinity of the development proposals which have the potential to be impacted by the development.

Personal Injury Collision data should be sourced from the relevant highway authorities, with five years of data required that doesn't include time periods where Covid-19 restrictions were in place.

## Transport Assessment

With regard to the TA, JSJV consider the following parameters need to be given due cognisance within the assessment:

### **Trip Generation and Distribution**

- Traffic Generation and Distribution for all phases of the development;
- Number of Abnormal Indivisible Loads [AILs] (i.e. length, width, height etc.);
- Number of HGV movements;
- Distribution of construction vehicles, AIL routing and staff / operational movements; and
- Timings of vehicle movements.

### **Construction / Operational / Decommissioning**

- AIL route options via the SRN to site;
- Details of measures to mitigate AIL movements; and
- Drawings required for proposed improvements (if required).

### **Geometric / operational constraints on proposed routes**

- Geometry and visibility at access point(s) to / from SRN;
- Accident record at access point(s) to / from SRN; and
- Vehicle Swept Path Analysis;

Furthermore, the TA must capture the physical impacts of the development proposals such as earthworks, drainage, structures, boundary treatment and any construction safeguards that may need to be put in place, in relation to where the development proposals interface with the SRN.

## Construction Traffic Management Plan

JSJV consider that the following parameters need to be taken into account in the CTMP, in addition to the comments made previously in this TM:

- Identification of the approved haul routes to site (including AIL routes) and identification of measures to prevent the use of any unauthorised routes;

- Identification of the site access strategy;
- Details of the expected traffic generation associated with the construction period including maximum daily HGV trips;
- Identification of the proposed works programme by construction task;
- Identification of workforce numbers for the site and details of workforce travel arrangements;
- Details of site working hours and details of any exceptions (concrete pours etc);
- Measures to minimise wherever possible the use of public roads at peak periods whenever practicable (Morning and Evening Peak Hours and school start / finish times);
- Details of measures to reduce the number of delivery trips to site such as a combination of consolidated ordering, rationalising suppliers and consolidated deliveries;
- Details of measures to reduce on-site waste such as recycling and re-use of materials to minimise the number of collections from site;
- Provision of wheel washing facilities (or mechanical rumble devices where mains water is not available) on all site exits;
- Vehicles carrying soil and other dusty materials to be fully sheeted when travelling to or leaving site;
- Use of on approved mechanical road sweeper to clean the surrounding road network of any mud or debris deposited by site vehicles. The road sweeper should be available whenever needed;
- Measures to safely manage pedestrians;
- Details for the use of any traffic lights on public roads for safety. If used, traffic queues will require monitoring and sequences to reduce potential congestion;
- Details for any temporary traffic management and warning signs;
- Details for publicising the movement of abnormal loads;
- Details of a site liaison officer who will act as point of contact for the CTMP; and

Details regarding the monitoring the success of the CTMP and the monitoring of the CTMP.

## Glint and Glare

The Report states that whilst Glint and Glare have been scoped out of the EIA, it is proposed to present a Glint and Glare Assessment as a standalone report submitted as a technical appendix to the Environmental Statement Chapter 4 – Development Description. The Report States that the Applicant does not propose the provision of a ‘technical chapter’ on glint and glare.

The Report sets out the proposed approach for the Glint and Glare Assessment, which will describe and identify the potential level of effects arising as a result of the scheme in relation to road users, specifically the SRN.

JSJV note that it is important that the following information should be provided within the Glint and Glare Assessment:

- Outline of the site context, including location, proximity to SRN, topography and height above sea level; and
- Outline of proposal details, including scale, site boundary, site map, mounting arrangements and orientation.

In addition, it is considered by JSJV that the following information should be provided where it is considered that glint and glare has the potential to impact upon users of the SRN:

- Overview of sun movements, including time, date, latitude and longitude, as well as the relative reflections;
- Identification of potential receptors of concern. For National Highways the primary concern will be the reflection of the sun from the solar panels towards surrounding road users;
- Identification of representative locations approximately every 100m along the surrounding road network where the solar development may be visible, if only marginally;
- Undertake geometric calculations to determine whether a solar reflection may occur for each of the identified road-based receptors from the proposed development. A height of between 1.05m and 2.0m should be added to the overall ground height at a particular location to reflect the estimated eye level of a road user, in line with the visibility envelopes in CD109;
- Height differences between the solar panels and the SRN in question need to be considered. If the road-based receptors are below the envisaged reflection, then there is no need for a Visual Impact Assessment;
- Where it has been calculated that a reflection may occur for road receptors, consideration should be made of the location of the solar reflection with respect to the location of the sun in the sky, its angle above the horizontal and the time of day at which a reflection could occur;
- Provide a breakdown of the significance of the impacts and determine whether the solar reflection is likely to be a significant nuisance or a hazard to safety;
- Consider the influence of appropriate measures such as screening, revised use of materials and orientation to mitigate the potential impact on road users; and
- Consider the impact on signage and gantries at the SRN which may impair driver decision-making.

In addition, there are a number of further considerations which the applicant will be required to consider:

- Does the panel elevation angle provided by the applicant represent the elevation angle for all of the panels within the development;
- Does the assessment consider not only the reflection from panel faces, but also from the frame or reverse of the panel, as these can often be comprised of materials with reflective capability;
- Does the assessment consider an appropriate number of receptors, rather than a singular location; and
- Is street view imagery and satellite mapping used for the purpose of desk-based studies up to date.

## SRN Boundary

As sections of the proposed development will directly border the SRN at the M180, JSJV note that further information is required on how these boundaries will be treated. This information must include the following:

- **Boundary Treatment** – Further information is required with regards to the specifics of the physical site boundaries at and how these will be implemented in relation to the existing land under National Highways ownership. Further information is also required in relation to how access to this boundary will be obtained throughout development construction and maintenance, whilst noting that highway land cannot be used for these purposes. Moreover, confirmation should be provided as to the extent of the land under the ownership of the Applicant up to the point where this land meets the National Highways boundary;
- **Drainage Proposals** – National Highways require confirmation from the Applicant that the development will have no relationship with the SRN drainage system associated with the M180;
- **Stability of M180 Embankments** – National Highways will require confirmation from the Applicant that the existing M180 embankments to the boundaries of the site can safely accommodate the development proposals. In addition, it is noted that there is potential for cables to be routed under the M180 and information needs to be provided by the Applicant on this matter; and
- **Construction Safeguarding** – Further information is required with regards to the specific construction safeguards that will be implemented by the Applicant to ensure that the construction of the development at the site's boundaries does not impact the SRN in any way.

## Summary and Conclusions

On the basis of this review, the recommendation to National Highways in relation to these development proposals is:

JSJV, on behalf of National Highways, have reviewed an Environmental Impact Assessment Scoping Report (dated January 2023) prepared by Pegasus Group, on behalf of RWE Renewables in relation to the Tween Bridge Solar Farm development.

The Report was submitted to the Planning Inspectorate, and National Highways have been consulted on scoping for the development proposals (reference: EN010148).

The development proposals are in close proximity to the M180 and M18, which form part of the Strategic Road Network, hence the need to review the Report to ensure that the development proposals do not materially impact upon the capacity, operation and safety of the SRN.

This Technical Memorandum has reviewed the contents of the Report to ensure that the potential impact at the SRN is considered within subsequent documentation and assessment provided by RWE Renewables as part of a planning application. Furthermore, it is considered that further scoping needs to be undertaken by the applicant, and that National Highways should be consulted and engaged with throughout this process, to identify and assess any impacts at the SRN that may arise.

**Pre-application / Scoping Response** – comments are made on the pre-application / scoping in order to assist defining an appropriate assessment of the Strategic Road Network.



**From:** [NATS Safeguarding](#)  
**To:** [Tween Bridge](#)  
**Subject:** RE: Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification [SG34744]  
**Date:** 01 February 2023 16:11:51  
**Attachments:** [~WRD1775.jpg](#)  
[image003.png](#)  
[image005.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)  
[image012.png](#)  
[image013.png](#)  
[image014.png](#)  
[image015.png](#)  
[image016.png](#)

---

Our Ref: SG34744

Dear Sir/Madam

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours faithfully



**NATS Safeguarding**

E: [natssafeguarding@nats.co.uk](mailto:natssafeguarding@nats.co.uk)

4000 Parkway, Whiteley,  
Fareham, Hants PO15 7FL  
[www.nats.co.uk](http://www.nats.co.uk)



NATS Public

---

**From:** Tween Bridge <TweenBridge@planninginspectorate.gov.uk>

**Sent:** 01 February 2023 09:49

Date: 01 March 2023  
Our ref: 420998  
Your ref: EN010148



The Planning Inspectorate  
Environmental Services  
Central Operations  
Temple Quay House  
2 The Square  
Bristol, BS1 6PN  
[tweenbridge@planninginspectorate.gov.uk](mailto:tweenbridge@planninginspectorate.gov.uk)

Consultations  
Hornbeam House  
Crewe Business Park  
Electra Way  
Crewe  
Cheshire  
CW1 6GJ

T 0300 060 900

**BY EMAIL ONLY**

Dear Sir/Madam

**Environmental Impact Assessment Scoping consultation under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulation 11**

**Proposal:** Tween Bridge Solar Farm

**Location:** Between Doncaster and North Lincolnshire

Thank you for seeking our advice on the scope of the Environmental Statement (ES) in the consultation dated 01 February 2023, received on the same date.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

A robust assessment of environmental impacts and opportunities, based on relevant and up to date environmental information, should be undertaken prior to an application for a Development Consent Order. Annex A to this letter provides Natural England's advice on the scope of the Environmental Impact Assessment (EIA) for the proposed development.

Detailed advice on scoping the Environmental Statement (ES) is available in the attached Annex.

Natural England notes that it has not had any previous engagement from the applicant on the project.

For any further advice on this consultation please contact [consultations@naturalengland.org.uk](mailto:consultations@naturalengland.org.uk).

Yours sincerely

Emma Brading

Lead Adviser  
Sustainable Development  
Yorkshire and Northern Lincolnshire Area Team

## **Annex A – Natural England Advice on EIA Scoping**

### **1. General Principles**

1.1 Regulation 11 of the Infrastructure Planning Regulations 2017 - (The EIA Regulations) sets out the information that should be included in an Environmental Statement (ES) to assess impacts on the natural environment. This includes:

- A description of the development – including physical characteristics and the full land use requirements of the site during construction and operational phases
- Appropriately scaled and referenced plans which clearly show the information and features associated with the development
- An assessment of alternatives and clear reasoning as to why the preferred option has been chosen
- A description of the aspects and matters requested to be scoped out of further assessment with adequate justification provided<sup>1</sup>.
- Expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation etc.) resulting from the operation of the proposed development
- A description of the aspects of the environment likely to be significantly affected by the development including biodiversity (for example fauna and flora), land, including land take, soil, water, air, climate (for example greenhouse gas emissions, impacts relevant to adaptation, cultural heritage and landscape and the interrelationship between the above factors
- A description of the likely significant effects of the development on the environment – this should cover direct effects but also any indirect, secondary, cumulative, short, medium, and long term, permanent and temporary, positive, and negative effects. Effects should relate to the existence of the development, the use of natural resources (in particular land, soil, water and biodiversity) and the emissions from pollutants. This should also include a description of the forecasting methods to predict the likely effects on the environment
- A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment
- An outline of the structure of the proposed ES

1.2 It will be important for any assessment to consider the potential cumulative effects of this proposal, including all supporting infrastructure, with other similar proposals and a thorough assessment of the ‘in combination’ effects of the proposed development with any existing developments and current applications. A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

### **2. Cumulative and in-combination effects**

2.1 A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

2.2 The ES should include an impact assessment to identify, describe and evaluate the effects that are likely to result from the project in combination with other projects and activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment, (subject to available information):

---

<sup>1</sup> National Infrastructure Planning (planninginsepectorate.gov.uk) Insert 2 – information to be provided with a scoping request, Advice Note Seven, Environmental Impact Assessment, Process, Preliminary Environmental Information and Environmental Statements

- a. existing completed projects;
- b. approved but uncompleted projects;
- c. ongoing activities;
- d. plans or projects for which an application has been made and which are under consideration by the consenting authorities; and
- e. plans and projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.

### **3. Biodiversity and Geodiversity**

3.1 The assessment will need to include potential impacts of the proposal upon sites and features of nature conservation interest as well as opportunities for nature recovery through biodiversity net gain (BNG). There might also be strategic approaches to take into account.

3.2 Ecological Impact Assessment (EclA) is the process of identifying, quantifying, and evaluating the potential impacts of defined actions on ecosystems or their components. EclA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal. Guidelines have been developed by the Chartered Institute of Ecology and Environmental Management (CIEEM).

3.3 For additional information relating to Solar Parks please refer to the Technical Information Note at the link below, which provides a summary of advice about their siting, their potential impacts and mitigation requirements for the safeguarding of the natural environment. [Solar parks: maximising environmental benefits \(TIN101\)](#).

### **4. International and European sites**

4.1 The development site is within or may impact on the following European/internationally designated nature conservation sites:

- Thorne and Hatfield Moors Special Protection Area (SPA)
- Thorne Moor Special Area of Conservation (SAC)
- Hatfield Moor Special Area of Conservation (SAC)
- Humber Estuary Special Protection Area (SPA)
- Humber Estuary Special Area of Conservation (SAC)
- Humber Estuary Ramsar

4.2 The ES should thoroughly assess the potential for the proposal to affect internationally designated sites of nature conservation importance / European sites, including marine sites where relevant. This includes Special Protection Areas (SPA), Special Areas of Conservation (SAC), listed Ramsar sites, candidate SAC and proposed SPA.

4.3 Article 6 (3) of the Habitats Directive requires an appropriate assessment where a plan or project is likely to have a significant effect upon a European Site, either individually or in combination with other plans or projects.

**Table 1: Potential risk to International designated sites:** the development is within or may impact on the following European/Internationally designated site(s)

| Site name(s) (with link to Conservation Objectives and Citation)  | Potential impact pathways where further information/assessment is required  |
|---|---|
| <p>1. Humber Estuary Special Protection Area (SPA)<br/> <a href="#">European Site Conservation Objectives for Humber Estuary SPA - UK9006111</a><br/> <a href="#">(naturalengland.org.uk)</a></p> <p>2. Humber Estuary Ramsar<br/> <a href="#">Designated Sites View</a><br/> <a href="#">(naturalengland.org.uk)</a></p> | <p><u>Potential impacts to functionally linked land</u></p> <p>Potential impacts that may arise from the proposal relate to the presence of mobile SPA interest features that are located outside the site boundary. Natural England advises that the potential for offsite impacts should be considered in assessing what, if any, potential impacts the proposal may have on European sites.</p> <p>Natural England advises the HRA should consider:</p> <ul style="list-style-type: none"> <li>• any impacts due to potential direct loss of functionally linked feeding habitat for Humber Estuary SPA bird species;</li> <li>• the potential for loss of functionally linked land which is adjacent to the project due to disruption of open vistas;</li> <li>• the potential for noise and visual disturbance impacts on functionally linked land during construction and operation.</li> </ul> <p>Natural England notes that in paragraph 5.14 of the Tween Bridge Solar Farm Scoping Report (dated January 2023) reference is made to detailed passage/wintering bird surveys (September 2022 to March 2023 [ongoing]) and breeding bird surveys (April to July 2022).</p> <p>We welcome that passage/wintering bird surveys have been carried out and we will provide detailed advice once these are available to view.</p> <p>The surveys should cover different tidal states and consideration should also be given to surveys in poor weather/ visibility conditions as large movements of birds can be observed at this time. Surveys may also need to take account of surveys at dusk and dawn, depending upon the bird species (i.e. geese and swans). If geese and swans have the potential to use the development site or surrounding area, we would expect to see surveys 1 hour before and 1 hour after, dusk and dawn during the respective bird survey season (i.e. winter, spring and autumn passage).</p> <p>We note that paragraph 5.31 and 5.33 states that Humber Estuary SPA qualifying species have been recorded within the site. We advise that these results are assessed in more detail, with consideration given to the advice on assessing Humber Estuary SPA main component species (see Annex B).</p> <p>Please note that the HRA likely significant effect test identifies whether there is a credible risk that the project might undermine the conservation objectives for a European site. In this case, we</p> |

advise that likely significant effect from loss of functionally linked land cannot be ruled out at the screening stage, due to the presence of significant numbers of SPA/Ramsar birds (5.33 of the Scoping Report states peak numbers of 753 pink-footed geese, 390 lapwing and 480 golden plover have been recorded on site). Therefore, we advise that the bird survey results, and other relevant data, should be considered at the appropriate assessment stage of the HRA.

Natural England has generally advised that if  $\geq 1\%$  of a Humber Estuary bird species population could be affected by a proposal, alone or in combination with other plans or projects, then further consideration is required. However, where species are particularly vulnerable due to declines in the Humber population, then it may not be appropriate to rely on the 1% of the estuary population as the critical threshold. Mitigation measures may be required where lower numbers of vulnerable species are using a site that is proposed for development.

Natural England notes in paragraph 5.50 that there is a potential for “wintering bird mitigation areas (focussed on qualifying features of SPA designated sites) details for which will be dependent on survey results”. Natural England would welcome further engagement from the applicant on this, once the bird surveys have been completed.

The required provision of mitigation should be informed by the survey results.

Natural England has produced a review paper which includes information on the impacts of solar farms on birds, we recommend that this is considered when undertaking the assessment ([NEER012](#)).

#### Potential water quality and water supply impacts

Natural England considers that the proposed site could be hydrologically connected to the Humber Estuary SPA/Ramsar. Therefore, we advise that potential hydrological changes and water quality impacts need to be assessed, including potential for increased nutrient and other pollutant inputs.

#### Potential air quality impacts

See section 12 below.

#### Potential lighting impacts

Natural England notes that paragraph 5.71 has scoped out potential lighting effects during construction, operation and decommissioning. However, due to the potential for surrounding areas to support Humber Estuary SPA qualifying species, we advise that potential lighting impacts are further assessed in the HRA. We highlight that measures intended to avoid or reduce the

|   |   |
|---|---|
|   | likely harmful effects on a European site(s) should be assessed at the appropriate assessment stage of the HRA.   |
| <p>1. Thorne and Hatfield Moor Special Protection Area (SPA) <a href="#">European Site Conservation Objectives for Thorne &amp; Hatfield Moors SPA - UK9005171</a> (<a href="http://naturalengland.org.uk">naturalengland.org.uk</a>)</p> | <p><u>Potential impacts to functionally linked land</u></p> <p>Potential impacts that may arise from the proposal relate to the presence of mobile SPA interest features that are located outside the site boundary. Natural England advises that the potential for offsite impacts should be considered in assessing what, if any, potential impacts the proposal may have on European sites.</p> <p>Natural England considers that the proposed development has the potential to impact on birds using functionally linked land associated with the Thorne and Hatfield Moors SPA.</p> <p>Thorne and Hatfield Moors SPA is designated for supporting more than 1% of Great Britain’s population of breeding pairs of nightjar. On-going survey of the nightjar populations on the SPA has revealed that feeding flights are not confined to the SPA, with the hinterland around the edge of the SPA being utilised extensively by feeding birds. The Conservation Objectives Supplementary Advice (COSA) for the Thorne and Hatfield Moors SPA details a number of targets which relate to <i>“Supporting habitat (both within and outside the SPA).”</i> We highlight that the COSA should be used to inform the HRA, considering potential impacts on the SPA.</p> <p>Natural England advises that the HRA should consider:</p> <ul style="list-style-type: none"> <li>• potential loss of functionally linked feeding habitat for nightjar;</li> <li>• potential disturbance impacts on functionally linked land during construction and operation;</li> <li>• potential impacts on connectivity with supporting habitats;</li> <li>• potential impacts on food availability within supporting habitat.</li> </ul> <p>In particular, we recommend you obtain the following information to support the HRA:</p> <ul style="list-style-type: none"> <li>• nightjar surveys to determine bird usage of the application site and adjacent areas by nightjar;</li> <li>• a data search from the Local Ecological Data Centre;</li> <li>• consultation with the Council’s Ecologist;</li> <li>• consultation with local bird groups and other organisations that may hold relevant information; and</li> <li>• a desk-based assessment - using aerial photography, mapping, habitat maps and relevant ecological literature – of the suitability for nightjar of the habitats present on the proposed site and adjacent fields.</li> </ul> |

|  |  |
|--|--|
|  | <p>We highlight that Policy 30(E) of the Doncaster Local Plan states: <i>“in order to ensure development does not negatively impact on nightjar populations, proposals located within 3km of Thorne and Hatfield Moors Special Protection Area, that impact habitats that nightjars may use for feeding on, will only be supported where they deliver a net gain in nightjar foraging habitat.”</i></p> <p><u>Potential water quality and water supply impacts</u></p> <p>Natural England considers that the proposed site could be hydrologically connected to the Thorne and Hatfield Moors SPA. Therefore, we advise that potential hydrological changes and water quality impacts need to be assessed, including potential for increased nutrient and other pollutant inputs.</p> <p><u>Potential air quality impacts</u></p> <p>See section 12 below.</p> <p><u>Potential dust impacts</u></p> <p>Potential for impacts from dust on Thorne and Hatfield Moor SPA within 200m of the construction area will need to be assessed.</p> <p><u>Potential lighting impacts</u></p> <p>Natural England notes that paragraph 5.71 has scoped out potential lighting effects during construction, operation, and decommissioning. However, due to close proximity to Thorne and Hatfield Moor SPA we advise that potential lighting impacts are further assessed in the HRA. We highlight that measures intended to avoid or reduce the likely harmful effects on a European site(s) should be assessed at the appropriate assessment stage of the HRA.</p> |
| <p>1. Humber Estuary Special Area of Conservation (SAC)</p> <p><a href="#">European Site Conservation Objectives for Humber Estuary SAC - UK00300170 (naturalengland.org.uk)</a></p> | <p><u>Potential water quality and water supply impacts</u></p> <p>Natural England considers that the proposed site could be hydrologically connected to the Humber Estuary SAC. Therefore, we advise that potential hydrological changes and water quality impacts need to be assessed, including potential for increased nutrient and other pollutant inputs.</p> <p><u>Potential air quality impacts</u></p> <p>See section 12 below.</p>  |
| <p>1. Thorne Moor Special Area of Conservation (SAC)</p> <p><a href="#">European Site Conservation Objectives for Thorne</a></p>   | <p><u>Potential water quality and water supply impacts</u></p> <p>Natural England considers that the proposed site could be hydrologically connected to the Thorne Moor SAC. Therefore, we advise that potential hydrological changes and water quality impacts need to be assessed, including potential for increased</p>   |



|  |   |
|--|---|
| <p><a href="#">Moor SAC - UK0012915 (naturalengland.org.uk)</a></p> <p>2. Hatfield Moor Special Area of Conservation (SAC) <a href="#">European Site Conservation Objectives for Hatfield Moor SAC - UK0030166 (naturalengland.org.uk)</a></p> | <p>nutrient and other pollutant inputs.</p> <p>Natural England highlights that the north boundary of the application site borders Thorne Moor SAC. Management of land within the application site may have the potential to affect the hydrology of the SAC and this will need to be assessed. Any land management would need to limit further drying of the adjacent component vegetation communities of the SAC designated feature and demonstrate that there would be no potential to undermine the conservation objectives for the site.</p> <p><u>Potential air quality impacts</u></p> <p>See section 12 below.</p> <p><u>Potential dust impacts</u></p> <p>Potential for impacts from dust on Thorne Moor SAC and Hatfield Moor SAC within 200m of the construction area will need to be assessed.</p> |
|--|---|

#### 4. Nationally designated sites - Sites of Special Scientific Interest

4.1 Sites of Special Scientific Interest are protected under the Wildlife and Countryside Act 1981 (as amended). Further information on the SSSI and its special interest features can be found at [www.magic.gov](http://www.magic.gov).

4.2 The development site is within or may impact the following Site of Special Scientific Interests:

- Thorne, Crowle & Goole Moors SSSI
- Hatfield Moor SSSI
- Hatfield Chase Ditches SSSI
- Humber Estuary SSSI

4.3 Natural England notes paragraph 5.18 of the Tween Bridge Solar Farm Scoping Report (dated January 2023) that Hatfield Chase Ditches SSSI is within the application site. The site is designated for its lowland ditch system with features including a rich assemblage of aquatic and emergent plants, nationally scarce reed beetles, and a population of water vole. Therefore, potential impact pathways need to be assessed such as direct habitat loss, water quality, water supply, air quality and disturbance.

4.4 Our advice regarding the potential impact pathways upon the other SSSIs listed above broadly coincides with those set out in Table 1 above for their corresponding European sites. However, we highlight that Thorne, Crowle & Goole Moors SSSI and Hatfield Moor SSSI are designated for additional features including assemblages of breeding birds (mixed: lowland damp grassland, lowland heath, scrub, woodland) and invertebrate assemblage. Therefore, potential impacts on these features should also be considered in the relevant assessment.

4.5 The Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within the SSSI and identify appropriate mitigation measures to avoid, minimise or reduce any adverse significant effects.

## 5. Protected Species

- 5.1 The ES should assess the impact of all phases of the proposal on protected species (including, for example, great crested newts, reptiles, birds, water voles, badgers and bats). Natural England does not hold comprehensive information regarding the locations of species protected by law. Records of protected species should be obtained from appropriate local biological record centres, nature conservation organisations and local groups. Consideration should be given to the wider context of the site, for example in terms of habitat linkages and protected species' populations in the wider area.
- 5.2 The area likely to be affected by the development should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES. Surveys should always be carried out in optimal survey time periods and to current guidance by suitably qualified and, where necessary, licensed, consultants.
- 5.3 Natural England has adopted [standing advice](#) for protected species, which includes guidance on survey and mitigation measures. A separate protected species licence from Natural England or Defra may also be required. Applicants can make use of Natural England's charged [Pre Submission Screening Service](#) for a review of a draft wildlife licence application.

## 6. District Level Licensing for Great Crested Newts

- 6.1 We note in the Scoping report that further surveys for great crested newts (GCN) have been suggested, we advise that you may wish to consider district level licensing. Where strategic approaches such as district level licensing (DLL) for great crested newts (GCN) are used, a letter of no impediment (LONI) will not be required. Instead, the developer will need to provide evidence to the Examining Authority (ExA) on how and where this approach has been used in relation to the proposal, which must include a counter-signed Impact Assessment and Conservation Payment Certificate (IACPC) from Natural England, or a similar approval from an alternative DLL provider.
- 6.2 The DLL approach is underpinned by a strategic area assessment which includes the identification of risk zones, strategic opportunity area maps and a mechanism to ensure adequate compensation is provided regardless of the level of impact. In addition, Natural England (or an alternative DLL provider) will undertake an impact assessment, the outcome of which will be documented in the IACPC (or equivalent).
- 6.3 If no GCN surveys have been undertaken, Natural England's risk zone modelling may be relied upon. During the impact assessment, Natural England will inform the Applicant whether their scheme is within one of the amber risk zones and therefore whether the Proposed Development is likely to have a significant effect on GCN.
- 6.4 The IACPC will also provide additional detail including information on the Proposed Development's impact on GCN and the appropriate compensation required.
- 6.5 By demonstrating that the [DLL scheme for GCN](#) will be used, consideration of GCN in the ES can be restricted to cross-referring to the Natural England (or alternative provider) IACPC as a justification as to why significant effects on GCN populations as a result of the Proposed Development would be avoided.

## 7. Priority Habitats and Species

- 7.1 Priority Habitats and Species are of particular importance for nature conservation and included in the England Biodiversity List published under section 41 of the Natural Environment and Rural Communities Act 2006. Most priority habitats will be mapped either as Sites of Special Scientific Interest, on the Magic website or as Local Wildlife Sites. Lists of priority habitats and species can be found [here](#). Natural England does not routinely hold species data. Such data should be collected when impacts on priority habitats or species are considered likely.
- 7.2 Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land. Sites can be checked against the (draft) national Open Mosaic Habitat (OMH) inventory published by Natural England and freely available to [download](#). Further information is also available [here](#).
- 7.3 An appropriate level habitat survey should be carried out on the site, to identify any important habitats present. In addition, ornithological, botanical, and invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present.
- 7.4 The Environmental Statement should include details of:
- Any historical data for the site affected by the proposal (e.g. from previous surveys)
  - Additional surveys carried out as part of this proposal
  - The habitats and species present
  - The status of these habitats and species (e.g. whether priority species or habitat)
  - The direct and indirect effects of the development upon those habitats and species
  - Full details of any mitigation or compensation measures
  - Opportunities for biodiversity net gain or other environmental enhancement

## 8. Ancient Woodland, ancient and veteran trees

- 8.1 The ES should assess the impacts of the proposal on any ancient and veteran trees, and the scope to avoid and mitigate for adverse impacts. It should also consider opportunities for enhancement.
- 8.2 Ancient woodland and ancient and veteran trees are irreplaceable habitats of great importance for its wildlife, its history, and the contribution it makes to our diverse landscapes. Paragraph 180 of the NPPF sets out the highest level of protection for irreplaceable habitats and development should be refused unless there are wholly exceptional reasons, and a suitable compensation strategy exists.
- 8.3 Natural England and the Forestry Commission have prepared [standing advice](#) on ancient woodland, ancient and veteran trees.

## 9. Biodiversity net gain (BNG)

- 9.1 Natural England notes and supports the applicant's aspiration to deliver 10% Biodiversity Net Gain measured utilising the Biodiversity Metric 3.1 stated within the scoping report. However, given the scale of the project and a history of successful delivery of BNG for solar projects. Natural England encourages the applicant to commit to delivery of 10% BNG in all habitat types identified within the order limits, in accordance with the Environment Act 2021. Natural England considers that major infrastructure

developments should set the highest environmental standard. They should lead by example in showing how investment in sustainable infrastructure can better serve communities, including through the delivery of environmental goals, such as flood resilience, expanding natural habitats and contributing toward Net Zero greenhouse gas emissions. Nature-based solutions built into infrastructure schemes provide one means for setting in place the government's 25 Year Environment Plan.

9.2 Natural England recognises the high opportunity for the development to deliver Biodiversity Net Gain (BNG) on-site and it is recommended that the following guidance is applied in order to achieve this:

- [Biodiversity Net Gain: Good Practice Principals for Development](#)
- [BS 8683: 2021 Process for designing and implementing Biodiversity Net Gain. Specification.](#)

9.3 In addition, the applicant should be aware of forthcoming guidance and legislation in relation to the Environment Act 2021, which may be released in the interim prior to submission of the DCO application.

9.4 In order to maximise nature recovery and target habitat enhancement where it will have the greatest local benefit it is recommended that locally identified opportunities should be acknowledged and incorporated into the design of BNG (both on and off-site). This should include any locally mapped ecological networks and priority habitats identified by East Riding of Yorkshire Council. In addition, Local Nature Recovery Strategies (LNRS) are a new mandatory system of spatial strategies for nature established by the Environment Act 2021 which will contribute to the national Nature Recovery Network (NRN). Work is currently underway to develop these strategies, which will identify strategic priorities for nature protection, recovery, and enhancement. Given the size, scale and opportunities afforded by the application is therefore recommended that engagement with relevant local planning authorities, responsible authorities and statutory consultees (including Natural England) is undertaken to align habitat enhancement through the development with any emerging plans and policies in relation to LNRS.

## **10. Connecting People with nature**

10.1 The ES should consider potential impacts on access land, common land, public rights of way and, where appropriate, the England Coast Path and coastal access routes and coastal margin in the vicinity of the development, in line with NPPF paragraph 100 and there will be reference in the relevant National Policy Statement. It should assess the scope to mitigate for any adverse impacts. Rights of Way Improvement Plans (ROWIP) can be used to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced.

10.2 Measures to help people to better access the countryside for quiet enjoyment and opportunities to connect with nature should be considered. Such measures could include reinstating existing footpaths or the creation of new footpaths, cycleways, and bridleways. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure. Access to nature within the development site should also be considered, including the role that natural links have in connecting habitats and providing potential pathways for movements of species.

## 11. Soils and Agricultural Land Quality

- 11.1 Soils are a valuable, finite natural resource and should also be considered for the ecosystem services they provide, including for food production, water storage and flood mitigation, as a carbon store, reservoir of biodiversity and buffer against pollution. It is therefore important that the soil resources are protected and sustainably managed. Impacts from the development on soils and best and most versatile (BMV) agricultural land should be considered in line paragraphs 5.168, 5.167 and 5.179 of the NPS for National Networks. Further guidance is set out in the Natural England [Guide to assessing development proposals on agricultural land](#).
- 11.2 The following issues should be considered and, where appropriate, included as part of the Environmental Statement (ES):
- The degree to which soils would be disturbed or damaged as part of the development
  - The extent to which agricultural land would be disturbed or lost as part of this development, including whether any best and most versatile (BMV) agricultural land would be impacted.
- 11.3 This may require a detailed Agricultural Land Classification (ALC) survey if one is not already available. For information on the availability of existing ALC information see [www.magic.gov.uk](http://www.magic.gov.uk).
- Where an ALC and soil survey of the land is required, this should normally be at a detailed level, e.g. one auger boring per hectare, (or more detailed for a small site) supported by pits dug in each main soil type to confirm the physical characteristics of the full depth of the soil resource, i.e. 1.2 metres. The survey data can inform suitable soil handling methods and appropriate reuse of the soil resource where required (e.g. agricultural reinstatement, habitat creation, landscaping, allotments and public open space).
  - The ES should set out details of how any adverse impacts on BMV agricultural land can be minimised through site design/masterplan.
  - The ES should set out details of how any adverse impacts on soils can be avoided or minimised and demonstrate how soils will be sustainably used and managed, including consideration in site design and master planning, and areas for green infrastructure or biodiversity net gain. The aim will be to minimise soil handling and maximise the sustainable use and management of the available soil to achieve successful after-uses and minimise off-site impacts.
- 11.4 Further information is available in the [Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites](#) and The British Society of Soil Science Guidance Note [Benefitting from Soil Management in Development and Construction](#).

## 12. Air Quality

- 12.1 Air quality in the UK has improved over recent decades but air pollution remains a significant issue. For example, approximately 85% of protected nature conservation sites are currently in exceedance of nitrogen levels where harm is expected (critical load) and approximately 87% of sites exceed the level of ammonia where harm is expected for

lower plants (critical level of 1µg) <sup>2</sup>. A priority action in the England Biodiversity Strategy is to reduce air pollution impacts on biodiversity. The Government's Clean Air Strategy also has a number of targets to reduce emissions including to reduce damaging deposition of reactive forms of nitrogen by 17% over England's protected priority sensitive habitats by 2030, to reduce emissions of ammonia against the 2005 baseline by 16% by 2030 and to reduce emissions of NO<sub>x</sub> and SO<sub>2</sub> against a 2005 baseline of 73% and 88% respectively by 2030. Shared Nitrogen Action Plans (SNAPs) have also been identified as a tool to reduce environmental damage from air pollution.

12.2 The planning system plays a key role in determining the location of developments which may give rise to pollution, either directly, or from traffic generation, and hence planning decisions can have a significant impact on the quality of air, water and land. Further information on air pollution impacts and the sensitivity of different habitats/designated sites can be found on the Air Pollution Information System ([www.apis.ac.uk](http://www.apis.ac.uk)).

### Habitats Regulations Assessment

12.3 Natural England welcomes that paragraph 12.43 of the Tween Bridge Solar Farm Scoping Report (dated January 2023) states that air quality impacts from increased vehicle emissions, dust and Non-Road Mobile Machinery during the construction phase and vehicle emissions during the operation stage will be considered in the HRA.

12.4 Natural England has produced guidance for public bodies to help assess the impacts of road traffic emissions to air quality capable of affecting European Sites. [Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations - NEA001](#)

12.5 In addition, ammonia can be emitted from vehicle exhaust emissions as a by-product of the catalytic conversion process designed to reduce emissions of nitrogen oxide.

12.6 Natural England therefore advises that ammonia sourced from traffic emissions should be included for assessment within the HRA. For further information please see this [report](#) from Air Quality Consultants (AQC) that looks at ammonia emissions from roads for assessing impacts on nitrogen-sensitive habitats. The current CREAM model created by AQC used to assess ammonia emissions from road traffic has not been peer reviewed, however, at this time it has been recognised as a Best Available Tool and we deem it appropriate to be used where any caveats associated with this model are also considered within the assessment.

## **13. Climate Change**

13.1 The England Biodiversity Strategy published by Defra establishes principles for the consideration of biodiversity and the effects of climate change. The ES should reflect these principles and identify how the development's effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained. The NPPF requires that the planning system should contribute to the enhancement of the natural environment 'by establishing coherent ecological networks that are more resilient to current and future pressures' (NPPF Para 174), which should be demonstrated through the ES.

---

<sup>[1]</sup> [Report: Trends Report 2020: Trends in critical load and critical level exceedances in the UK - Defra, UK](#)

## **Annex B - Humber Estuary Special Protection Area: non-breeding waterbird assemblage**

The Humber Estuary Special Protection Area (SPA) qualifies under article 4.2 of the European Commission Bird Directive (79/409/EEC) in that it supports an internationally important assemblage of waterbirds. Confusion can arise concerning which species to consider when assessing the Humber Estuary SPA non-breeding, waterbird assemblage feature.

Natural England recommends focusing on what is referred to as the 'main component species' of the assemblage. Main component species are defined as:

- a) All species listed individually under the assemblage feature on the SPA citation (i.e. the species that qualified in 2004 when the site was designated).
- b) Species which might not be listed on the SPA citation but occur at site levels of more than 1% of the national population according to the most recent Humber Estuary Wetland Bird Survey (WeBS) 5-year average count.
- c) Species where more than 2000 individuals are present according to the most recent Humber Estuary WeBS count.

The assemblage qualification is therefore subject to change as species' populations change. It should be noted that species listed on the citation under the assemblage features, whose populations have fallen to less than 1% of the national population, retain their status as a main component species and should be considered when assessing the impacts of a project or plan on the Humber Estuary SPA.

Natural England advises that the main component species of the Humber Estuary SPA non-breeding waterbird assemblage include (October 2022):

a) *Species listed individually under the assemblage feature on the SPA citation:*

- Avocet, *Recurvirostra avosetta* (non-breeding)
- Bar-tailed godwit, *Limosa lapponica* (non-breeding)
- Bittern, *Botaurus stellaris* (non-breeding)
- **Black-tailed godwit, *Limosa limosa islandica* (non-breeding)<sub>1</sub>**
- **Brent goose, *Branta bernicla* (non-breeding)<sub>1</sub>**
- **Curlew, *N. arquata* (non-breeding)<sub>1</sub>**
- **Dunlin, *Calidris alpina alpina* (non-breeding)<sub>1</sub>**
- **Golden plover, *Pluvialis apricaria* (non-breeding)<sub>1</sub>**
- Goldeneye, *Bucephala clangula* (non-breeding)
- Greenshank, *T. nebularia* (non-breeding)
- Grey plover, *P. squatarola* (non-breeding)
- Knot, *Calidris canutus* (non-breeding)
- **Lapwing, *Vanellus vanellus* (non-breeding)<sub>1</sub>**
- **Mallard, *Anas platyrhynchos* (non-breeding)<sub>1</sub>**
- Oystercatcher, *Haematopus ostralegus* (non-breeding)
- Pochard, *Aythya farina* (non-breeding)
- **Redshank, *Tringa totanus* (non-breeding)<sub>1</sub>**
- Ringed plover, *Charadrius hiaticula* (non-breeding)
- **Ruff, *Philomachus pugnax* (non-breeding)<sub>1</sub>**

- Sanderling, *Calidris alba* (non-breeding)
- Scaup, *Aythya marila* (non-breeding)
- **Shelduck, *Tadorna tadorna* (non-breeding) 1**
- **Teal, *Anas crecca* (non-breeding) 1**
- Turnstone, *Arenaria interpres* (non-breeding)
- **Wimbrel, *Numenius phaeopus* (non-breeding)1**
- **Wigeon, *Anas Penelope* (non-breeding)1**

And

b) Species which are not listed on the SPA citation but occur at site levels of more than 1% of the national population according to the most recent Humber Estuary Wetland Bird Survey (WeBS) 5-year average count:

- Green sandpiper, *Tringa ochropus* (non-breeding)
- **Greylag goose, *Anser anser* (non-breeding)1**
- **Little egret, *Egretta garzetta* (non-breeding)1**
- **Pink-footed goose, *Anser brachyrhynchus* (non-breeding)1**
- Shoveler, *Anas clypeata* (non-breeding)
- **White-fronted goose, *Anser albifrons* (non-breeding)1**

As stated above, the assemblage qualification is subject to change as species' populations change; therefore, the appropriate WeBS data should be considered in any assessment and the above list should be used as a guide only.

Please note, the advice set out above should be considered when assessing potential impacts on the waterbird assemblage feature. You will also need to consider potential impacts on species which are not considered to be non-breeding waterbirds but are listed on the citation qualifying under article 4.1 and 4.2 of the Directive. These include:

- **Hen harrier, *Circus cyaneus* (non-breeding)1**
- **Marsh Harrier, *Circus aeruginosus* (breeding)1**
- Little tern, *Sterna albifrons* (breeding)
- Avocet, *Recurvirostra avosetta* (breeding)
- Bittern, *Botaurus stellaris* (breeding)

The species marked 1 in bold text are known to use non-wetland habitats (e.g. arable farmland and/or grassland/pasture) and may therefore be the most relevant for assessing potential impacts of a proposed plan/project on birds using functionally linked land associated with the Humber Estuary SPA. However, please note that this list should be used as a guide only; usage may depend on factors such as the habitats available on the site and distance to the Humber Estuary etc. Therefore, assessments of potential impacts on SPA birds should consider all relevant species and clear justification should be provided if any species are excluded from the assessment.



**From:** [Aaron Walsh](#) on behalf of [Town Planning LNE](#)  
**To:** [Tween Bridge](#)  
**Subject:** EN010148-000003 - Scoping Opinion for Tween Bridge Solar Farm  
**Date:** 24 February 2023 15:40:09  
**Attachments:** [image001.png](#)

---

OFFICIAL

**FAO – Planning Inspectorate**  
**Ref – EN010148-000003**  
**Proposal – Scoping Opinion for Tween Bridge Solar Farm**  
**Location – Tween Bridge Solar Farm**

Thank you for your letter of 1<sup>st</sup> February 2023 providing Network Rail with an opportunity to comment on the abovementioned Scoping Opinion.

With reference to the protection of the railway, the Environmental Statement should consider any impact of the scheme upon the railway infrastructure and upon operational railway safety. In particular, it should include a Glint and Glare study assessing the impact of the scheme upon train drivers (including distraction from glare and potential for conflict with railway signals). It should also include a Transport Assessment to identify any HGV traffic/haulage routes that may utilise railway assets such as bridges and level crossings during the construction and operation of the site.

Please note that if the intention is to install cabling for the grid connection through railway land, the developer will need an easement from Network Rail and we would recommend that they engage with us early in the planning of their scheme in order to discuss and agree this element of the proposals.

Kind regards



**Aaron Walsh**  
Graduate  
Network Rail Property (Eastern Region)  
George Stephenson House, Toft Green, York, YO1 6JT

\*\*\*\*\*  
\*\*\*\*\*

The content of this email (and any attachment) is confidential. It may also be legally privileged or otherwise protected from disclosure.

This email should not be used by anyone who is not an original intended recipient, nor may it be copied or disclosed to anyone who is not an original intended recipient.

If you have received this email by mistake, please notify us by emailing the sender, and then delete the email and any copies from your system.

Liability cannot be accepted for statements made which are clearly the sender's own and not made on behalf of Network Rail.

Network Rail Infrastructure Limited registered in England and Wales No. 2904587, registered office Network Rail, 2nd Floor, One Eversholt Street, London, NW1 2DN.

\*\*\*\*\*  
\*\*\*\*\*

**From:** [Cheryl Jarvis \(EQUANS\)](#)  
**To:** [Tween Bridge](#)  
**Cc:** [Carol Pedersen \(EQUANS\)](#); [Martin Dixon \(EQUANS\)](#)  
**Subject:** RE: Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification  
**Date:** 10 February 2023 19:47:53  
**Attachments:** [image005.jpg](#)  
[image008.jpg](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)  
[image012.png](#)  
[image013.png](#)  
[image014.jpg](#)

---

Good evening,

I can confirm receipt and that we do not wish to make any comments.

Kind Regards

**Cheryl Jarvis FD, MSc, MRTPI**  
Development Manager  
Development Management - Planning  
Places & Communities – NEL

Tel. [REDACTED]  
Mob. [REDACTED]



[equans.co.uk](http://equans.co.uk)

New Oxford House, George Street  
Grimsby, North East Lincolnshire, DN31 1HB

**From:** Planning - IGE (ENGIE) <planning@nelincs.gov.uk>  
**Sent:** 06 February 2023 15:50  
**To:** Martin Dixon (EQUANS) <[REDACTED]>; Cheryl Jarvis (EQUANS) <[REDACTED]>  
**Cc:** Carol Pedersen (EQUANS) <[REDACTED]>  
**Subject:** FW: Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification

Kind Regards,

**Ellie Mitchell**  
Business Support Assistant  
Planning  
Places & Communities North – NEL  
Tel. [REDACTED]

**From:** [Before You Dig](#)  
**To:** [Tween Bridge](#)  
**Subject:** RE: EXT:Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification  
**Date:** 01 February 2023 10:04:39  
**Attachments:** [~WRD0000.jpg](#)  
[image003.png](#)  
[image005.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)

---

Good Morning,

NGN has a number of gas assets in the vicinity of some of the identified “site development” locations. It is a possibility that some of these sites could be recorded as Major Accident Hazard Pipelines(MAHP), whilst other sites could contain High Pressure gas and as such there are Industry recognised restrictions associated to these installations which would effectively preclude close and certain types of development. The regulations now include “Population Density Restrictions” or limits within certain distances of some of our “HP” assets.

The gas assets mentioned above form part of the Northern Gas Networks “bulk supply” High Pressure Gas Transmission” system and are registered with the HSE as Major Accident Hazard Pipelines.

Any damage or disruption to these assets is likely to give rise to grave safety, environmental and security of supply issues.

NGN would expect you or anyone involved with the site (or any future developer) to take these restrictions into account and apply them as necessary in consultation with ourselves. We would be happy to discuss specific sites further or provide more details at your locations as necessary.

If you give specific site locations, we would be happy to provide gas maps of the area which include the locations of our assets.

(In terms of High Pressure gas pipelines, the routes of our MAHP’s have already been lodged with members of the local Council’s Planning Department)

Kind regards,

**Lucy McMahon**

**Administration Assistant  
Before You Dig  
Northern Gas Networks  
1st Floor, 1 Emperor Way  
Doxford Park  
Sunderland  
SR3 3XR**

Before You Dig: 0800 040 7766 (option 5)

[www.northerngasnetworks.co.uk](http://www.northerngasnetworks.co.uk)

[facebook.com/northerngasnetworks](https://facebook.com/northerngasnetworks)

[twitter.com/ngngas](https://twitter.com/ngngas)

Alternative contact:

[beforeyoudig@northerngas.co.uk](mailto:beforeyoudig@northerngas.co.uk)



**Get involved! Have your say in the future of your gas network and win great prizes, by taking part in our BIG customer survey at [together.northerngasnetworks.co.uk](http://together.northerngasnetworks.co.uk) Keep posted to take part in a range of activities from workshops to roadshows. Together, we are the network.**

Northern Gas Networks Limited (05167070) | Northern Gas Networks Operations Limited (03528783) | Northern Gas Networks Holdings Limited (05213525) | Northern Gas Networks Pensions Trustee Limited (05424249) | Northern Gas Networks Finance Plc (05575923). **Registered address:** 1100 Century Way, Thorpe Park Business Park, Colton, Leeds LS15 8TU. Northern Gas Networks Pension Funding Limited Partnership (SL032251). **Registered address:** 1st Floor Citypoint, 65 Haymarket Terrace, Edinburgh, Scotland, EH12 5HD. **For information on how we use your details please read our [Personal Data Privacy Notice](#)**

---

**From:** Tween Bridge <TweenBridge@planninginspectorate.gov.uk>

**Sent:** 01 February 2023 09:49

**To:** Tween Bridge <TweenBridge@planninginspectorate.gov.uk>

**Subject:** EXT:Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification

You don't often get email from tweenbridge@planninginspectorate.gov.uk. [Learn why this is important](#)

External email! - Think before you click

Dear Sir / Madam,

Please see attached correspondence from The Planning Inspectorate (PINS) in relation to the proposed Tween Bridge Solar Farm (Nationally Significant Infrastructure Project).

Please note the deadline for consultation responses is **01 March 2023** and is a statutory requirement that cannot be extended.

Thank You

**From:** [Nina Wilson](#)  
**To:** [Tween Bridge](#)  
**Subject:** Tweenbridge Solar Farm - Reg10 & 11 Notification  
**Date:** 07 February 2023 09:42:32

---

Hi,

Thank you for consulting Nottinghamshire County Council on the above project, we have no comments to make at this stage.

For future reference I will be the main contact for this project moving forward.

Regards

Nina  
Principal Planner (Policy)  
Place, Nottinghamshire County Council  
County Hall  
West Bridgford  
NG2 7QP



---

Nottinghamshire County Council is committed to protecting your privacy and ensuring all personal information is kept confidential and safe – for more details see <https://www.nottinghamshire.gov.uk/global-content/privacy>

---

Emails and any attachments from Nottinghamshire County Council are confidential. If you are not the intended recipient, please notify the sender immediately by replying to the email, and then delete it without making copies or using it in any other way. Senders and recipients of email should be aware that, under the Data Protection Act 2018 and the Freedom of Information Act 2000, the contents may have to be disclosed in response to a request.

Although any attachments to the message will have been checked for viruses before transmission, you are urged to carry out your own virus check before opening attachments, since the County Council accepts no responsibility for loss or damage caused by software viruses. You can view our privacy notice at: <https://www.nottinghamshire.gov.uk/global-content/privacy>

Nottinghamshire County Council Legal Disclaimer.

---

# SELBY

DISTRICT COUNCIL

The Planning Inspectorate  
Environmental Services  
Central Operations  
Temple Quay House  
2 The Square  
Bristol, BS1 6PN

**Contact:** Martin Evans  
**Tel:** [REDACTED]  
**Email:** [REDACTED]  
**SDC ref:** 2023/0116/CPO  
**PINS** EN010148-000003  
**ref:**  
**Date:** 13/2/2023

By email only

Dear Emma Cottam,

**Planning Act 2008 (as amended) and The Infrastructure Planning  
(Environmental Impact Assessment) Regulations 2017 (the EIA Regulations)  
– Regulations 10 and 11**

**Application by RWE Renewables Ltd (the Applicant) for an Order granting  
Development Consent for the Tween Bridge Solar Farm (the Proposed  
Development)**

**Scoping consultation and notification of the Applicant's contact details and  
duty to make available information to the Applicant if requested**

Thank you for your letter dated 1/2/2023. Selby District Council does not have any comments to make.

I trust this is satisfactory, however should you require any further information then please do not hesitate to contact this office.

Yours faithfully



Mr M Grainger  
Head Of Planning

**From:** [Asset.Protection](#)  
**To:** [Tween Bridge](#)  
**Subject:** N010148-000003 Tween Bridge Solar Farm J-230207-21115  
**Date:** 13 February 2023 13:13:15  
**Attachments:** [image001.jpg](#)  
[STW Asset Protection Precautions.pdf](#)

---

ST Classification: UNMARKED

Dear Sir/Madam

Please be advised that there are no Seven Trent assets shown on our records within the red line site boundary, within the EIA scoping report. Therefore we have no comments at this time.

Please see attached our general precautions.

Kind regards  
Anna Cheung

Waste Water Technician  
Asset Protection  
Asset Strategy & Planning  
Chief Engineer  
image001



Severn Trent Plc (registered number 2366619) and Severn Trent Water Limited (registered number 2366686) (together the "Companies") are both limited companies registered in England & Wales with their registered office at Severn Trent Centre, 2 St John's Street, Coventry, CV1 2LZ This email (which includes any files attached to it) is not contractually binding on its own, is intended solely for the named recipient and may contain CONFIDENTIAL, legally privileged or trade secret information protected by law. If you have received this message in error please delete it and notify us immediately by telephoning +44 2477715000. If you are not the intended recipient you must not use, disclose, distribute, reproduce, retransmit, retain or rely on any information contained in this email. Please note the Companies reserve the right to monitor email communications in accordance with applicable law and regulations. To the extent permitted by law, neither the Companies or any of their subsidiaries, nor any employee, director or officer thereof, accepts any liability whatsoever in relation to this email including liability arising from any external breach of security or confidentiality or for virus infection or for statements made by the sender as these are not necessarily made on behalf of the Companies. Reduce waste! Please consider the environment before printing this email



## **SEVERN TRENT WATER**

### **GENERAL CONDITIONS AND PRECAUTIONS TO BE TAKEN WHEN CARRYING OUT WORK ADJACENT TO SEVERN TRENT WATER'S APPARATUS**

Please ensure that a copy of these conditions is passed to your representative and/or your Contractor on site. If any damage is caused to STW apparatus, the person, Contractor or Subcontractor responsible must inform STW immediately on:

**0800 783 4444 (24 hours)**

These general conditions and precautions apply to the public sewerage, water distribution and telemetry systems. The conditions include sewers which are the subject of an Agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the Agreement for the self construction of water mains. Please be aware that due to The Private Sewers Transfer Regulations June 2011, the number of public sewers has increased, but many of these are not shown on the public sewer record. However, some idea of their positions may be obtained from the position of inspection covers and their existence must be anticipated.

On request, STW will issue a copy of the plan showing the approximate locations of STW apparatus although in certain instances a charge will be made. The position of private drains, private sewers and water service pipes to properties are not normally shown but their presence must be anticipated. This plan is furnished as a general guide only and no warranty as to its accuracy is given or implied. The plan must not be relied upon in the event of excavations or other works in the vicinity of STW apparatus. No person or Company shall be relieved from liability for damage caused by reason of the actual position and/or depths of STW apparatus being different from those shown on the plan.

In order to achieve safe working conditions adjacent to any apparatus the following should be observed:

1. All STW apparatus should be located by hand digging prior to the use of mechanical excavators.
2. All information set out in any plans received from us, or given by our staff at the site of the works, about the position and depth of the mains, is approximate. Every possible precaution should be taken to avoid damage to our apparatus. You or your contractor must ensure the safety of our equipment and will be responsible for the cost of repairing any damage caused.
3. Water mains are normally laid at a depth of 900mm. No records are kept of customer service pipes which are normally laid at a depth of 750mm; but some idea of their positions may be obtained from the position of stop tap covers and their existence must be anticipated.
4. During construction work, where heavy plant will cross the line of STW apparatus, specific crossing points must be agreed with the Company and suitably reinforced where required. These crossing points should be clearly marked and crossing of the line of STW apparatus at other locations must be prevented.
5. Where it is proposed to carry out piling or boring within 20 metres of any STW apparatus, STW should be consulted to enable any affected STW apparatus to be surveyed prior to the works commencing.
6. Where excavation of trenches adjacent to any STW apparatus affects its support, the STW apparatus must be supported to the satisfaction of STW. Water mains and some sewers are pressurised and can fail if excavation removes support to thrust blocks to bends and other fittings.
7. Where a trench is excavated crossing or parallel to the line of any STW apparatus, the backfill should be adequately compacted to prevent any settlement which could subsequently cause





damage to the STW apparatus. In special cases, it may be necessary to provide permanent support to STW apparatus which has been exposed over a length of the excavation before backfilling and reinstatement is carried out. There should be no concrete backfill in contact with the STW apparatus.

8. No apparatus should be laid along the line of STW apparatus irrespective of clearance. Above ground apparatus must not be located within a minimum of 3 metres either side of the centre line of STW apparatus for smaller sized pipes and 6 metres either side for larger sized pipes without prior approval. No manhole or chamber shall be built over or around any STW apparatus.
9. A minimum radial clearance of 300 millimetres should be allowed between any plant being installed and existing STW apparatus. - We reserve the right to increase this distance where strategic assets are affected.
10. Where any STW apparatus coated with a special wrapping is damaged, even to a minor extent, STW must be notified and the trench left open until the damage has been inspected and the necessary repairs have been carried out. In the case of any material damage to any STW apparatus causing leakage, weakening of the mechanical strength of the pipe or corrosion-protection damage, the necessary remedial work will be recharged.
11. It may be necessary to adjust the finished level of any surface boxes which may fall within your proposed construction. Please ensure that these are not damaged, buried or otherwise rendered inaccessible as a result of the works and that all stop taps, valves, hydrants, etc. remain accessible and operable. Minor reduction in existing levels may result in conflict with apparatus such as valve spindles or tops of hydrants housed under the surface boxes. Checks should be made during site investigations to ascertain the level of such apparatus in order to determine any necessary alterations in advance of the works.
12. With regard to any proposed resurfacing works, you are required to contact STW on the number given above to arrange a site inspection to establish the condition of any STW apparatus in the nature of surface boxes or manhole covers and frames affected by the works. STW will then advise on any measures to be taken, in the event of this a proportionate charge will be made.
13. You are advised that Severn Trent Water Limited will not agree to either the erection of posts, directly over or within 1.0 metre of valves and hydrants,
14. No explosives are to be used in the vicinity of any STW apparatus without prior consultation with STW.

### **TREE PLANTING RESTRICTIONS**

There are many problems with the location of trees adjacent to sewers, water mains and other STW apparatus and these can lead to the loss of trees and hence amenity to the area which many people may have become used to. It is best if the problem is not created in the first place. Set out below are the recommendations for tree planting in close proximity to public sewers, water mains and other STW apparatus.

15. Please ensure that, in relation to STW apparatus, the mature root systems and canopies of any tree planted do not and will not encroach within the recommended distances specified in the notes below.
16. Both Poplar and Willow trees have extensive root systems and should not be planted within 12 metres of a sewer, water main or other STW apparatus.
17. The following trees and those of similar size, be they deciduous or evergreen, should not be planted within 6 metres of a sewer, water main or other STW apparatus. E.g. Ash, Beech, Birch, most Conifers, Elm, Horse Chestnut, Lime, Oak, Sycamore, Apple and Pear.



18. STW personnel require a clear path to conduct surveys etc. No shrubs or bushes should be planted within 2 metre of the centre line of a sewer, water main or other STW apparatus.
19. In certain circumstances, both the Company and landowners may wish to plant shrubs/bushes in close proximity to a sewer, water main or other STW apparatus for screening purposes. The following are shallow rooting and are suitable for this purpose: Blackthorn, Broom, Cotoneaster, Elder, Hazel, Laurel, Privet, Quickthorn, Snowberry, and most ornamental flowering shrubs.

**From:** [Ryan Shepherd](#)  
**To:** [Tween Bridge](#)  
**Subject:** RE: Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification  
**Date:** 10 February 2023 11:17:59  
**Attachments:** [image004.png](#)  
[image006.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)  
[image012.png](#)  
[image013.png](#)  
[image014.png](#)  
[image015.jpg](#)

---

Dear Gary

Thank you for consulting us regarding the Environmental Statement in relation to the above proposal. I can confirm that we have no comments to make at this stage.

I trust this is helpful.

Regards

Ryan Shepherd MRTPI CMgr MCFI  
**Senior Development Manager - Development & Planning**



T: [REDACTED]  
E: [REDACTED]  
[www.southyorkshire-ca.gov.uk](http://www.southyorkshire-ca.gov.uk)

South Yorkshire Mayoral Combined Authority Executive  
11 Broad Street West, Sheffield, S1 2BQ



---

**From:** Tween Bridge <[TweenBridge@planninginspectorate.gov.uk](mailto:TweenBridge@planninginspectorate.gov.uk)>  
**Sent:** 01 February 2023 10:05  
**To:** Enquiries <[enquiries@southyorkshire-ca.gov.uk](mailto:enquiries@southyorkshire-ca.gov.uk)>  
**Cc:** Tween Bridge <[TweenBridge@planninginspectorate.gov.uk](mailto:TweenBridge@planninginspectorate.gov.uk)>  
**Subject:** Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification

**FAO: Head of planning**

Jess Duffield  
Planning Department  
Doncaster Metropolitan Borough Council  
Civic Office  
Waterdale  
Doncaster  
DN1 3BU



9<sup>th</sup> February 2023

## PLANNING CONSULTATION RESPONSE

|                       |   |
|-----------------------|---|
| <b>Application No</b> | 22/00218/CON  |
| <b>Proposal</b>       | Environmental Impact Assessment (EIA) Scoping Report for the Tween Bridge Solar Farm for construction, operation and decommissioning of ground mounted solar photovoltaic electricity generating panels with a gross electrical output of more than 50 megawatts (megawatts) alternating current (AC). Associated development would include an electrical storage facility, electrical equipment, substations, and cabling, landscaping and biodiversity measures |
| <b>Address</b>        | Tween Bridge Solar Farm   |

Thank you for giving South Yorkshire Police Designing out Crime Officers the opportunity to review this planning application.

I would recommend that the site has a 3 metre '358' weld mesh perimeter fence conforming to LPS1175 SR3 as a minimum. The fence should be fixed/concreted into the ground. Access gates should be the same height and standards as the perimeter fence. The fence should have additional security toppings and a monitored Perimeter Intruder Detection system (PID's).

Any container with windows should have solid hinged shutters that can be closed and secured when staff are not on site.

Doors that can facilitate lock shrouds should do so.

All fire doors should be void of any external door furniture.

Ventilation grills should be robustly constructed and secured into the fabric of the building, alternatively protected with security grills to prevent removal and unlawful entry.

Any external cabling should be buried or protected by conduit.

The installation of a CCTV system on site is recommended. It is vital that the installing company is a member of one of the CCTV accredited bodies such as the

NSI or the SSAIB and that the system is installed following the completion of an operational requirement. This will be used for the design, performance specification and functionality of the CCTV system. A useful reference to help achieve this goal is the CCTV Operational Requirements manual 2009 ISBN 978-84726-902-7 Published April 2009 by the Home Office Scientific Development Branch.

The design of the CCTV system should be co-ordinated with the planned lighting system to ensure that the quality of lighting is sufficient to support the CCTV when activated.

The CCTV must be remotely monitored and a detector system installed to alert the operator of the presence of anyone on site. Cameras and lighting elements should all be within vandal resistant bulkheads.


Any exposed CCTV poles should have 'Anti Climb Spiked Collars' fitted.

It is important to have all the security interventions installed and working prior to any further installations.

Even though the Designing our Crime officer has no further comments to make regarding this application, other comments which may not support the application may be made by other Police departments.

[Any planning applications that may fall under the remit of Protect Duty/PAL's will generate a DOCO notification to SYP CTSA's who may wish to make further comment.](#)

Regards

**Eamonn Larkin BA (Hons) Cert Ed. IOSH**  
**Designing out Crime / Crime Reduction Officer**  
**South Yorkshire Police**  
**Doncaster**  
**South Yorkshire**  
**DN1 3HX**  
e-mail: 



UK Health  
Security  
Agency

Environmental Hazards and Emergencies Department  
Seaton House, City Link  
London Road  
Nottingham, NG2 4LA

[nsipconsultations@ukhsa.gov.uk](mailto:nsipconsultations@ukhsa.gov.uk)  
[www.gov.uk/ukhsa](http://www.gov.uk/ukhsa)

Your Ref: EN010148-000003  
Our Ref: 62999CIRIS

The Planning Inspectorate  
Environmental Services Central Operations  
Temple Quay House  
2 The Square  
Bristol, BS1 6PN

22<sup>nd</sup> February 2023

Dear Ms Cottam

### **Nationally Significant Infrastructure Project Tween Bridge Solar Farm - Scoping Consultation Stage**

Thank you for including the UK Health Security Agency (UKHSA) in the scoping consultation phase of the above application. ***Please note that we request views from the Office for Health Improvement and Disparities (OHID) and the response provided below is sent on behalf of both UKHSA and OHID.*** The response is impartial and independent.

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. Although assessing impacts on health beyond direct effects from for example emissions to air or road traffic incidents is complex, there is a need to ensure a proportionate assessment focused on an application's significant effects.

Having considered the submitted scoping report we wish to make the following specific comments and recommendations:

#### **Environmental Public Health**

We understand that the promoter will wish to avoid unnecessary duplication and that many issues including air quality, emissions to water, waste, contaminated land etc. will be covered elsewhere in the Environmental Statement (ES). We believe the summation of relevant issues into a specific section of the report provides a focus which ensures that public health is given adequate consideration. The section should summarise key

information, risk assessments, proposed mitigation measures, conclusions and residual impacts, relating to human health. Compliance with the requirements of National Policy Statements and relevant guidance and standards should also be highlighted.

In terms of the level of detail to be included in an ES, we recognise that the differing nature of projects is such that their impacts will vary. UKHSA and OHID's predecessor organisation, Public Health England, produced an advice document *Advice on the content of Environmental Statements accompanying an application under the NSIP Regime*<sup>1</sup>, setting out aspects to be addressed within the Environmental Statement<sup>1</sup>. This advice document and its recommendations are still valid and should be considered when preparing an ES. Please note that where impacts relating to health and/or further assessments are scoped out, promoters should fully explain and justify this within the submitted documentation.

### **Recommendation**

Our position is that pollutants associated with road traffic or combustion, particularly particulate matter and oxides of nitrogen are non-threshold, i.e., an exposed population is likely to be subject to potential harm at any level and that reducing public exposure to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards will have potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure) and maximise co-benefits (such as physical exercise). We encourage their consideration during development design, environmental and health impact assessment, and development consent.

### **Human Health and Wellbeing**

This section of OHID's response, identifies the wider determinants of health and wellbeing we expect the Environmental Statement (ES) to address, to demonstrate whether they are likely to give rise to significant effects. OHID has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements. The four themes are:

- Access
- Traffic and Transport
- Socioeconomic
- Land Use

---

<sup>1</sup> Cave, B., Claßen, T., Fischer-Bonde, B., Humboldt-Dachroeden, S., Martín-Olmedo, P., Mekel, O., Pyper, R., Silva, F., Viliani, F., Xiao, Y. 2020. Human health: Ensuring a high level of protection. A reference paper on addressing Human Health in Environmental Impact Assessment. As per EU Directive 2011/92/EU amended by 2014/52/EU. International Association for Impact Assessment and European Public Health Association.  
<https://khub.net/documents/135939561/390856715/Advice+on+the+content+of+environmental+statements+accompanying+an+application+under+the+Nationally+Significant+Infrastructure+Planning+Regime.pdf/a86b5521-46cc-98e4-4cad-f81a6c58f2e2?t=1615998516658>

Having considered the submitted scoping report OHID wish to make the following specific comments and recommendations:

### **Population and Human health assessment**

It is noted that population and human health will be considered within existing chapters and not form a separate chapter within the ES. Given the current knowledge of the scheme and potential impacts this appears to be a proportionate approach. This should be kept under review as more information becomes available and a separate population and human health chapter may be justified as the assessments develop.

### **Vulnerable populations**

An approach to the identification of vulnerable populations has not been provided. The impacts on health and wellbeing and health inequalities of the scheme may have particular effect on vulnerable or disadvantaged populations, including those that fall within the list of protected characteristics.

The identification of vulnerable populations and sensitive populations should be considered.

### **Recommendation**

Baseline data should be provided, which is adequate to identify any local sensitivity or specific vulnerable populations. The identification of vulnerable populations should be based on the list provided by the Welsh Health Impact Assessment Support Unit<sup>2</sup> and the International Association of Impact Assessment (IAIA)<sup>3</sup>

### **Electromagnetic Fields (EMFs)**

It is noted that the current proposals do not appear to consider possible health impacts of Electric and Magnetic Fields (EMF).

### **Recommendation**

The applicant should assess the potential public health impact of EMFs arising from any electrical equipment associated with the development. Alternatively, a statement should be provided explaining why EMFs can be scoped out. For more information on how to carry out the assessment, please see the accompanying guidance document for details<sup>1</sup>.

Yours sincerely

On behalf of UK Health Security Agency

[nsipconsultations@ukhsa.gov.uk](mailto:nsipconsultations@ukhsa.gov.uk)

*Please mark any correspondence for the attention of National Infrastructure Planning Administration.*

---

<sup>2</sup> [WHIASU \(2020\). Health Impact Assessment – A Practical Guide](#)

<sup>3</sup> Cave, B., Claßen, T., Fischer-Bonde, B., Humboldt-Dachroeden, S., Martín-Olmedo, P., Mekel, O., Pyper, R., Silva, F., Vilianni, F., Xiao, Y. 2020. Human health: Ensuring a high level of protection. A reference paper on addressing Human Health in Environmental Impact Assessment. As per EU Directive 2011/92/EU amended by 2014/52/EU. International Association for Impact Assessment and European Public Health Association.



**From:** [Development Control](#)  
**To:** [Tween Bridge](#)  
**Subject:** FW: Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification  
**Date:** 01 February 2023 13:38:58  
**Attachments:** [image003.png](#)  
[image005.png](#)  
[image008.png](#)  
[image009.png](#)  
[image010.png](#)  
[image011.png](#)

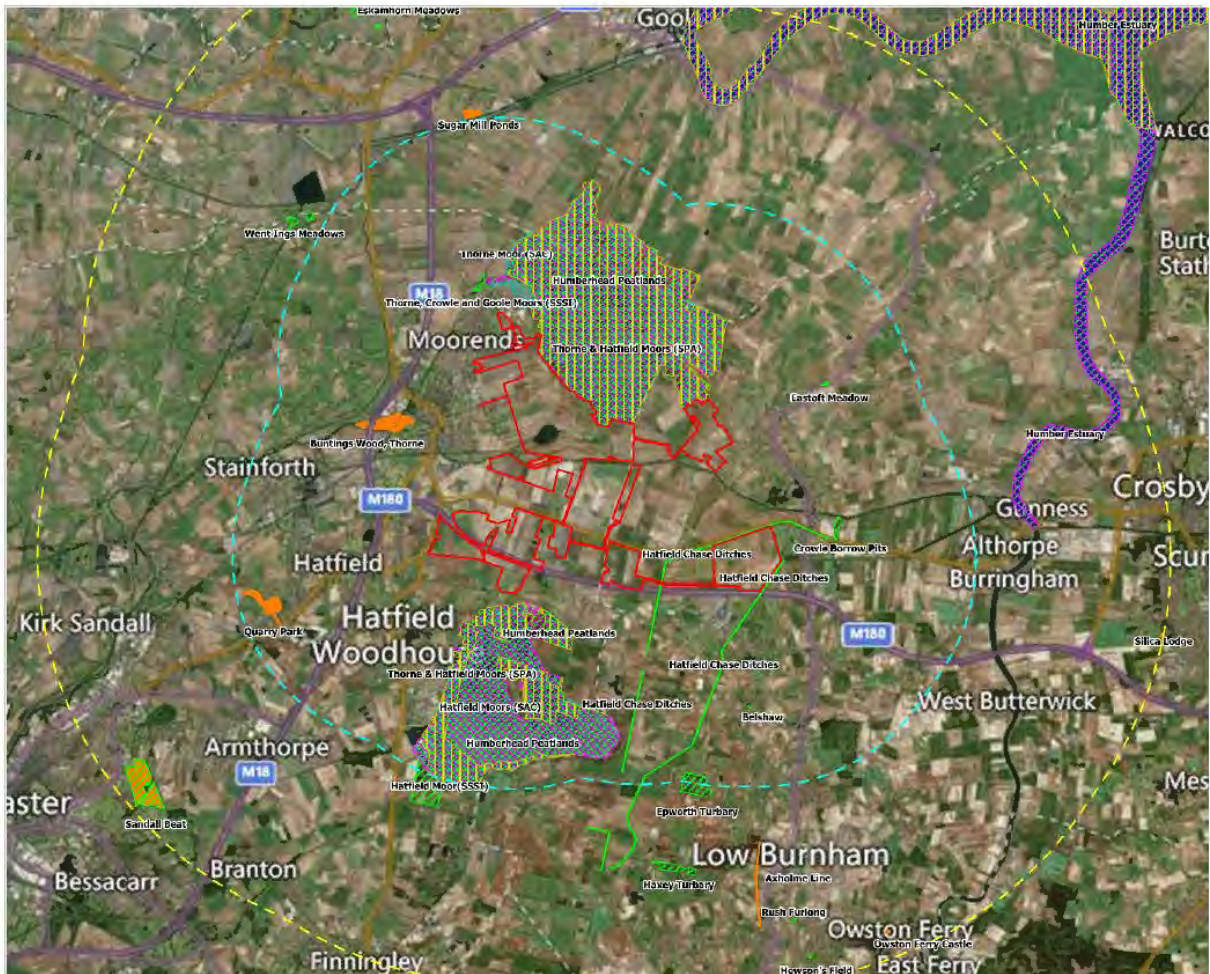
For your information

Mrs Deborah Barnes  
Planning Service Support Co-ordinator  
Development Management  
Planning Services  
Wakefield Council  
Wakefield One  
PO Box 700, Burton Street, Wakefield, WF1 2EB

Contact: [REDACTED]  
Website: [www.wakefield.gov.uk](http://www.wakefield.gov.uk)  
Contact Centre (24 Hr) 03458 506 506

**From:** Long, James [REDACTED] >  
**Sent:** 01 February 2023 13:18  
**To:** Development Control <Devcontrol@wakefield.gov.uk>; Thackray, Ruth <[REDACTED]>; Knowles, Fiona <[REDACTED]>; Garratt, Ian <[REDACTED]>; Pollard, Ian <[REDACTED]>  
**Subject:** RE: Planning Inspectorate - EN010148 – Tween Bridge Solar Farm – Reg 10 Consultation and Reg 11 Notification

Thanks Debbie, I am not sure we would make any comments, as its quite some distance from our boundary, its located to the north east of Doncaster; below is a snip of the location, with the site outlined in red



James Long  
Principal Planning Officer- Service Delivery  
Development Management  
Planning Services  
Wakefield Council  
Wakefield One  
PO Box 700, Burton Street, Wakefield, WF1 2EB

Email: [REDACTED]  
Mobile: [REDACTED]  
Website: [www.wakefield.gov.uk](http://www.wakefield.gov.uk)  
Contact Centre (24 Hr) 03458 506 506

