



# Tween Bridge Solar Farm

A Nationally Significant Infrastructure Project in the Energy Sector

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## Preliminary Environmental Information Report

### Technical Appendix 14.1 – Air Quality Impacts on Designated Ecological Sites

October 2023



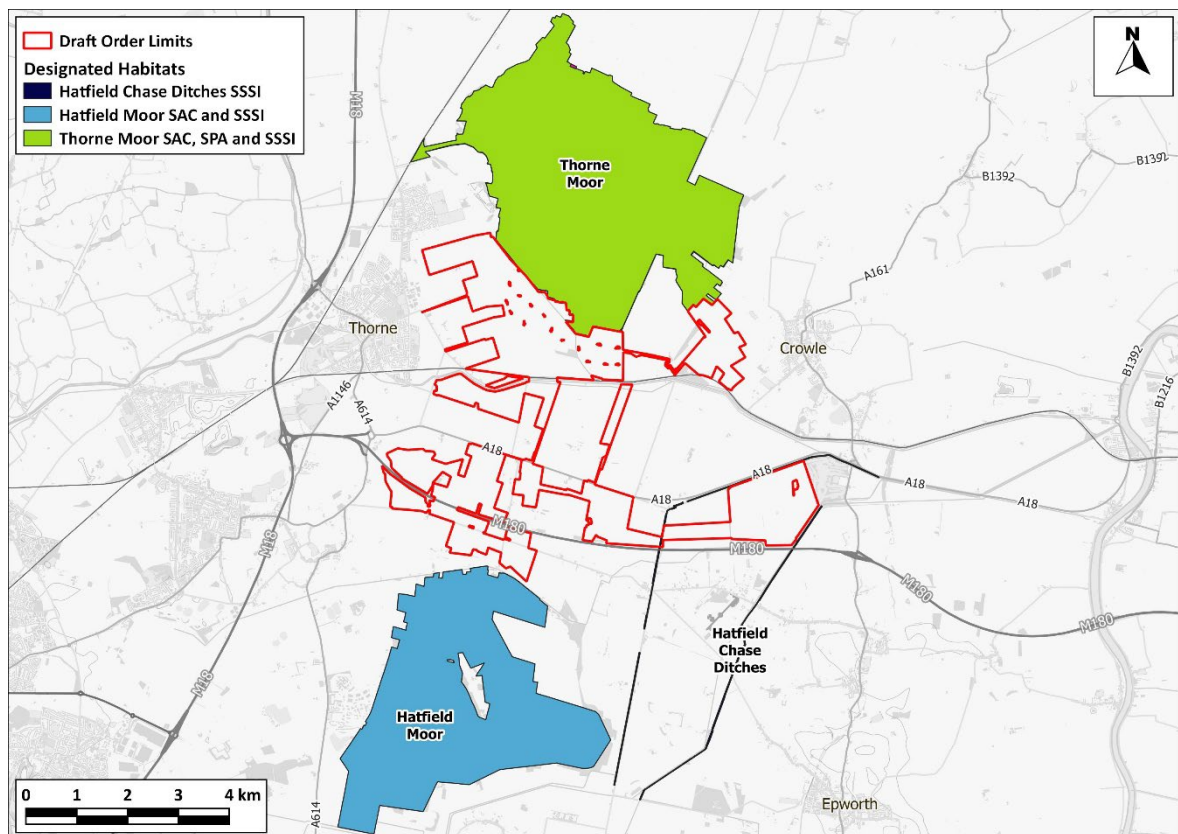
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## 14.1 Air Quality Impacts on Designated Ecological Sites

14.1.1 Chapter 7: Nature Conservation and Biodiversity of the PEIR assesses the effects of the Scheme on the following designated ecological receptors:

- Thorne Moor Special Area of Conservation (SAC), Thorne and Hatfield Moors Special Protection Area (SPA) and Thorne, Crowle and Goole Moors Site of Special Scientific Interest (SSSI);
- Hatfield Moor SAC and SSSI; and
- Hatfield Chase Ditches SSSI.

14.1.2 The locations of the designated habitats<sup>1</sup> relative to the Scheme are shown in Figure 14.1.1.



**Figure 14.1.1: Locations of Designated Habitats in the Study Area**

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14.1.3 Once construction is complete, the residual traffic associated with the Scheme will be minimal (estimated to be one vehicle daily on average), but there is a need to consider the potential effects

<sup>1</sup> The Hatfield Chase Ditches SSSI run adjacent and perpendicular to the A18 and M180.

of emissions from construction traffic albeit that any effects will be temporary (taking place over 30 months).

## Assessment Approach

### *Natural England Guidance*

- 14.1.4 The potential for impacts on designated habitats listed in Paragraph 14.1.1 has initially been screened based on the presence of qualifying features sensitive to air pollution within 200 m of roads subject to changes in emissions<sup>2</sup>, following Natural England guidance (which recommends the use of the criteria within National Highway's Design Manual for Roads and Bridges<sup>3</sup>). If there are no qualifying features within 200 m of an affected road, then no further assessment is required.

### *Joint Nature Conservation Committee (JNCC) Guidance*

- 14.1.5 The Joint Nature Conservation Committee (JNCC) has published Decision-Making Thresholds (DMTs) for air pollution<sup>4</sup>. The thresholds define changes caused by individual projects (i.e. not in combination with other projects and plans) which can be discounted as not significant without additional work. The DMT for road traffic is set at 0.15% of the existing Annual Average Daily Traffic (AADT) on roads within 200 m of a relevant designated site. No further assessment is needed whenever a development generates less traffic than this. Further work is needed (such as using the criteria described subsequently in this section) where the criterion is exceeded.
- 14.1.6 The JNCC guidance makes clear that the study area for the assessment of impacts from road traffic should not extend more than 10 km from a plan boundary, and furthermore that impacts alongside the Strategic Road Network (SRN)<sup>5</sup> only require consideration for road infrastructure schemes. This reflects the fact that development-generated traffic which reaches the SRN is likely to be broadly similar irrespective of precisely where in a region that development is located. Such traffic growth is thus more effectively considered at a strategic level than in individual planning decisions.

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<sup>2</sup> Beyond 200 m, the contribution from road traffic emissions is not discernible from fluctuations in background concentrations.

<sup>3</sup> Highways England (2019), Design Manual for Roads and Bridges LA 105 Air Quality.

<sup>4</sup> Chapman and Kite (2021), Guidance on Decision-Making Thresholds for Air Pollution, JNCC Report No., JNCC, Peterborough, ISSN 0963-9091

<sup>5</sup> [Our roads - Highways England](#),

## Impact Assessment

### ***Thorne Moor SAC, Thorne and Hatfield Moors SPA and Thorne, Crowle and Goole Moors SSSI***

- 14.1.7 The boundary of the SAC, SPA and SSSI is over 200 m from any existing road that will be used by construction vehicles to access the primary construction compounds, for example Moor Edges Road and Marsh Road. On this basis, no further assessment is required.
- 14.1.8 There will be access tracks throughout the Scheme to enable construction vehicles to transport material between land parcels. The routes between the primary compounds and the smaller parcels will be available for the next iteration of the PEIR, however, it is anticipated that these will be over 200 m from the boundary of the designated site.

### ***Hatfield Moor SAC and SSSI***

- 14.1.9 The boundary of the SAC and SSSI is over 200 m from any existing road that will be used by construction vehicles to access the primary construction compounds, for example Sandtoft Road. On this basis, no further assessment is required.
- 14.1.10 A small portion of the Draft Order Limits (~4.5 hectares) to the south adjacent to Moor Lane is within 200 m of the SAC and SSSI; however, it is unlikely that the internal access tracks will be built in this area, although this will be confirmed in the next iteration of the PEIR. On this basis, no further assessment is required.

### ***Hatfield Chase Ditches SSSI***

- 14.1.11 The boundary of the SSSI is within 200 m of an unnamed road, the A18 and M180 which will be used by construction vehicles. The M180 is part of the Strategic Road Network managed by National Highways and therefore is discounted from further consideration (Paragraph 14.1.6).
- 14.1.12 Daily traffic flows on the A18 were approximately 6,000 in 2022; the corresponding DMT is, therefore, nine additional trips (0.15% of 6,000). Baseline traffic flows in 2022 on the unnamed road are not currently available.
- 14.1.13 The number of vehicles utilising the unnamed road and the A18 will be available for the next iteration of the PEIR to enable a comparison with the corresponding DMTs. Where the construction traffic volumes exceed 0.15% of the baseline flow on either road, it will also be necessary to consider impacts at the Hatfield Chase Ditches SSSI in combination with other projects in the next iteration of the PEIR.

