



Tween Bridge Solar Farm

A Nationally Significant Infrastructure Project in the Energy Sector

Preliminary Environmental Information Report

Chapter 1 – Introduction

October 2023



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1. Introduction

1.1. Introduction

1.1.1. This document is the working draft Preliminary Environmental Information Report ('PEIR') for the Tween Bridge Solar Farm (herein 'the Scheme'). The PEIR has been prepared on behalf of RWE Renewables ('the Applicant'). It presents the preliminary findings of the Environmental Impact Assessment ('EIA') process for the proposal of a ground mounted solar photovoltaic (PV) electricity generation and energy storage facility located at Tween Bridge, located circa 10km to the northeast of Doncaster.

1.1.2. By virtue of its potential generating capacity, which stands at over 50 megawatts, the proposed development constitutes a Nationally Significant Infrastructure Project ('NSIP')¹.

1.1.3. This chapter is supported by the following figures & appendices:

- **Figure 1.1** – Draft Order Limits (Site Location Plan)
- **Technical Appendix 1.1** – Planning Inspectorate's EIA Scoping Opinion
- **Technical Appendix 1.2** – Applicant's EIA Scoping Report

1.1.4. To note, figures are usually presented within or at the end of each chapter. The technical appendices are presented in the accompanying Volume 2 of the PEIR. For continuity, the figures and technical appendices are referenced using the same numbering as the chapter.

1.2. Purpose of Document & Limitations

1.2.1. This working draft PEIR is being published to accompany an informal pre-application consultation with the community and consultees.

1.2.2. The information contained in this PEIR is 'preliminary' and may not represent the final project design or include the final environmental assessment considerations and conclusions. The applicant is seeking consultation responses to the information presented in order to continue to refine the development design and to continue to obtain information that will inform the final PEIR which will be used to accompany the formal statutory pre-application consultation.

1.3. The Applicant

1.3.1. RWE are the leading power generator and one of the largest renewables developers in the UK. They already provide 15% of the UK's energy needs through our wind farms, hydro, biomass and gas energy generation facilities.

¹ As defined under Section 15 of the Planning Act 2008

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- 1.3.2. In March 2023 RWE acquired JBM Solar, a large independent developer of solar and battery storage systems. This acquisition will significantly accelerate RWE's solar development in the UK and places the company amongst the largest solar developers in the UK.
- 1.3.3. By 2030, RWE has ambitions to invest £15bn in new green technologies and infrastructure, to help the UK become more energy independent and achieve its climate goals. RWE directly employs around 3,000 people in the UK, plus many more indirectly.

1.4. Site Location

- 1.4.1. The proposed Scheme is located within the Yorkshire and Humber regions. The site extends to over 1500 hectares, centred at approximately 10 kilometres to the northeast of Doncaster and 14 kilometres to the west of Scunthorpe. The Scheme straddles the administrative boundaries of Doncaster Council and North Lincolnshire Council. At a local level, the Scheme is located on land east of Thorne; south of Tween Bridge Moors; west of Crowle; north and northwest of Sandtoft & Sandtoft Industrial Estate; north of Hatfield Moors; and, northeast of Hatfield. The Scheme is located on land either side of the M180, High Level Banks (the A18) and the Stainforth and Keadby Canal.
- 1.4.2. The Draft Order Limits (Site Location Plan) is provided at **Figure 1.1**.

1.5. Overview of the Scheme

- 1.5.1. 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. An operational lifespan of 40 years would be sought linked to the first export date from the Scheme. The Scheme will progress in accordance with a phasing plan. The Scheme may be carried out thorough a single continuous phase or in multiple phases.
- 1.5.2. At this stage of the project, it is anticipated that the Scheme would comprise the following works:
- Arrays of Ground Mounted Solar Panels
 - Battery Energy Storage System
 - Formation of Ecological Corridors and Green Infrastructure
 - Substations Building and Compounds
 - Upgrade to Main Access Track
 - Temporary Construction and Decommissioning Compounds
 - Open trench cabling works
 - Directional drilling for cable works for various crossing including: rhyes; canal; railway; and, the M180

- Fencing and Security Measures
- Electrical Car ('EV') charging point
- Culverts & upgrades to existing culverts

1.5.3. During the construction phase, one or more temporary construction compound(s) will be required as well as temporary roadways to facilitate access to all parts of the site.

1.5.4. A project description is provided in **Chapter 2 – Scheme Description**.

1.6. The Consenting Process and Nationally Significant Infrastructure Projects

1.6.1. The Scheme represents a significant planning and investment project and is a NSIP. The Planning Act 2008 introduced a new development consent regime for determining NSIPs. This is known as the Development Consent Order ('DCO') regime. The Planning Act 2008 dictates that the Secretary of State is responsible for determining the DCO applications, with the power to appoint the Planning Inspectorate to manage and examine the application. In this role, the Planning Inspectorate will examine the application through an appointed Examining Authority for the Scheme and make a recommendation to the Secretary of State who will then decide whether to grant a DCO which authorises and permits the development.

1.6.2. The Planning Act 2008 defines the key stages in the application process for NSIPs. These are summarised below and further information on the Planning Inspectorate and the planning process can be found here <https://infrastructure.planninginspectorate.gov.uk>.

- Pre-application – developer notifies and consults the public, statutory consultees and those with an interest in the affected land on its proposed application. Pre-application is typically split into informal phase of consultation followed by the formal phase of pre-application consultation. This Scheme is currently at the informal stage of pre-application consultation.
- Submission – developer will review the feedback received during consultation and finalise the proposals taking the feedback into account. A DCO application will then be submitted to the Planning Inspectorate, who will appoint the examination team for the application.
- Acceptance – after the application is submitted, the Planning Inspectorate will decide whether it is suitable for examination.
- Pre-examination – if accepted for examination, there will be an opportunity for people to register their interest in the application with the Planning Inspectorate. Anyone registered will be kept informed of the progress of the application by the Planning Inspectorate, including how they can provide comments. The Planning Inspectorate will invite all those registered to a preliminary meeting that will explain the timetable and format of the examination.

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- Examination – the examination lasts around six months. People who have registered their interest will be able to take part in the examination and send their comments to the Planning Inspectorate.
- Decision – following the examination, the Planning Inspectorate will make its recommendation on the application to the Secretary of State, and the Secretary of State has the final decision as to whether consent is to be granted.

1.7. Structure and Contents of this PEIR

- 1.7.1. This working draft PEIR takes the form of a draft Environmental Statement².
- 1.7.2. A significant amount of survey work has been completed to date to inform the preparation for the PEIR, including ecological surveys, baseline landscape and visual surveys, and a ground investigation. At this stage not all of the detailed survey or assessment work required to inform the EIA have been completed. The EIA process is ongoing, with further work being carried out to enhance the understanding of existing environmental conditions and to provide further detail of the likely significant environmental effects.
- 1.7.3. This working draft PEIR therefore presents the environmental information available at this time, and our current understanding of the likely environmental effects of the development. The working draft PEIR has been prepared in line with the Scoping Opinion 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 on 13 March 2023.
- 1.7.4. As the EIA process is ongoing, this draft PEIR does not yet address all matters raised within the Scoping Opinion. A copy of the Scoping Opinion is provided at **Appendix 1.1**. The Scoping Opinion should be read alongside the Applicant’s Scoping Report, provided at **Appendix 1.2**.
- 1.7.5. This working draft PEIR is structured as follows:
- PEIR: Main Text (Volume 1) – comprises the main volume of the PEIR, including ‘general chapters’ that describe the EIA context, provide a description of the scheme, and set out the scope of the PEIR, followed by the technical chapters containing topic-by-topic environmental information with the associated figures and summary.
 - PEIR: Technical Appendices (Volume 2) – comprises the technical appendices supporting the main report, including specialist reports and documentation providing relevant background and technical information.

² An Environmental Statement (“ES”) is a document that sets out the findings of an Environmental Impact Assessment (“EIA”). An EIA is a process for identifying the likely significance of environmental effects (beneficial or adverse) arising from a proposed development, by comparing the existing environmental conditions prior to development (the baseline) with the environmental conditions during/following the construction, operational and decommissioning phases of a development should it proceed.

- PEIR: Non-Technical Summary (NTS) – this provides a concise summary of the PEIR identifying the likely significant environmental effects and the measures proposed to mitigate or to avoid adverse effects of the Scheme.

1.7.6. The working draft PEIR includes an impact assessment across a range of technical topics and the structure of PEIR is detailed in Table 1.1. The detail and scope of information within each chapter will progress as the project moves forward.

Table 1.1 Structure of Draft PEIR

CHAPTER NUMBER	TITLE	RESPONSIBLE AUTHOR
-	Table of Contents, Glossary and Abbreviations	Pegasus Group
1	Introduction (this chapter)	Pegasus Group
2	Scheme Description	Pegasus Group
3	Approach to Environmental Impact Assessment	Pegasus Group
4	Site Description	Pegasus Group
5	Policy and Legislative Context	Pegasus Group
6	Landscape and Visual Impact Assessment	Pegasus Group
7	Nature Conservation and Biodiversity	Avian
8	Cultural Heritage and Archaeology	Pegasus Group
9	Ground Conditions	Integral
10	Water Resource	Pegasus Group
11	Socio Economic	Pegasus Group
12	Transport and Access	Pegasus Group
13	Noise and Vibration	Ion Acoustics
14	Air Quality	Air Quality Consultants

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15	Agricultural Circumstances	Kernon Countryside Consultants
16	Other Environmental Topics	Pegasus Group

1.8. The EIA Consultant Team

- 1.8.1. The team responsible for the production of the PEIR has been coordinated and managed by Pegasus Group. Pegasus Group is accredited under the Institute of Environmental Management and Assessment (IEMA) ‘Quality Mark’ scheme which is a mark of excellence in EIA co-ordination and management. Pegasus Group have extensive experience of undertaking EIA work across a range of projects and development types.
- 1.8.2. Pegasus Group has extensive experience of coordinating and undertaking EIA work across a range of projects and development types including energy and renewable energy schemes. The management and coordination of the EIA and ES was undertaken by Gareth Roberts, BCs (Hons), MSc Environmental Planning, MRTPI – Director at Pegasus Group. Gareth has managed and coordinated numerous Environmental Statements for major renewable energy infrastructure projects, including DCO and Development of National Significance (DNS) (introduced by the Planning (Wales) Act 2015).
- 1.8.3. The lead authority for the landscape and visual impact chapter is Kate Curtis BA Hons DipLA CMLI. Kate is a Senior Director at Pegasus Group and is a Chartered Landscape Architect with over 20 years’ experience. Kate is very familiar with the Lincolnshire landscape. She has a wide environmental and landscape planning experience including solar farm and other renewable energy developments across England and Wales. Kate has been supported in the production of the ES Chapter by a team of Landscape Architects and environmental professionals based in the Pegasus Leeds Office.
- 1.8.4. The lead author for the socio-economic chapter is Richard Cook who is a Senior Director at Pegasus Group and leads on the company’s economics-related work. He has over 20 years’ experience of working in economic development, with expertise in undertaking economic impact assessments, socio-economic analysis and economic forecasting. He has produced numerous economic benefits statements to support planning applications for new schemes across the country, which includes producing the socio-economic chapter as part of EIAs for numerous schemes. Richard is a member of the Institute of Economic Development. Richard is assisted by Associate Laura Day. She has 14 years’ experience working in socio-economics assessment and EIA coordination. Her socio-economics experience spans DCO and DNS applications in renewable energy and energy infrastructure projects, as well as local consenting routes in a range of sectors including residential, commercial, employment and renewable energy.
- 1.8.5. The lead authority on transport matters is Katie Stock (BA Hons, MSc, CTPP, MCIHT, MTPS), who is a Chartered Transport Planning Professional (CTPP) and Member of the Chartered Institution

of Highways and Transportation (MCIHT). Katie has over 12 years' experience and has supported a wider range of schemes including NSIPs in the energy sector.

- 1.8.6. The lead authority on heritage matters is Jonathan Millward who holds a BA (Hons) in Archaeology, an MA in Practical Archaeology, and is a full accredited member of the Chartered Institute for Archaeologists (MCIfA). Jonathan has worked in archaeology for over 18 years and has over 13 years' experience working on EIA projects.
- 1.8.7. The leading authority on hydrology is Simon Jacques. Mr Jacques is a Chartered Civil Engineer with over 33 years' experience planning, designing and delivering civil engineering infrastructure for a variety of new developments and infrastructure related projects in the UK and overseas. Since joining Pegasus in 2020, he has been a Senior Director responsible for the delivery of Infrastructure Engineering design and related support services for various types of projects including residential, energy, commercial & regeneration, retail, education, healthcare and transport infrastructure projects. This includes the production of flood risk assessment and drainage strategy for a number of solar farms and battery storage schemes including EIA schemes across the UK.
- 1.8.8. The lead authority on ecological matters is Howard Fearn, Director at Avian Ecology Ltd, MSc Ecology and Environmental Management and a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Howard has been a practising ecologist for 20 years and is accomplished in all aspects of professional ecology services. Howard provides day-to-day direction on complex Ecological Impact Assessments and stakeholder negotiations. He specialises in ornithology, as well as onshore wind farm surveys and impact assessments where these developments have the potential to lead to adverse impacts on birds. Howard's wider experience includes multiple large-scale (NSIP and DNS) solar applications, Ministry of Defence projects, flood management schemes, Energy from Waste plants, pipelines, overhead power lines, residential and other commercial developments across the UK.
- 1.8.9. Integrale is a geotechnical and contaminated land consultancy, founded in 1992, which undertakes intrusive ground investigations, risk assessments and environmental advice for development and remedial projects. Dr Kay Boreland obtained a BA in Archaeology and Geology from University of Bristol in 1980 and her doctorate in Quaternary Geology in 1985. She is a Fellow of the Geological Society of Great Britain. Kay has over 30 years professional experience and is Technical Director at Integrale, specialising in advice and report quality review, Environmental Statements and Detailed Risk Assessments. Over the past 15 years she has advised on multiple investigations for solar developments across the UK, assessing a wide variety of ground conditions, where ground gas, groundwater and soil quality issues are of importance. She also provides legal expert witness and planning inquiry advice.
- 1.8.10. The noise and vibration chapter has been prepared by Janec Lillis-James working for Ion Acoustics Ltd. Janec is a Member of the Institute of Acoustics (MIOA) and holds a Diploma in Acoustics and Noise Control along with a Master's Degree in Environmental and Architectural Acoustics from London South Bank University. He has been working as an acoustician since 2014 on a wide variety of projects. He has extensive experience in undertaking EIAs and assessing environmental noise impacts.

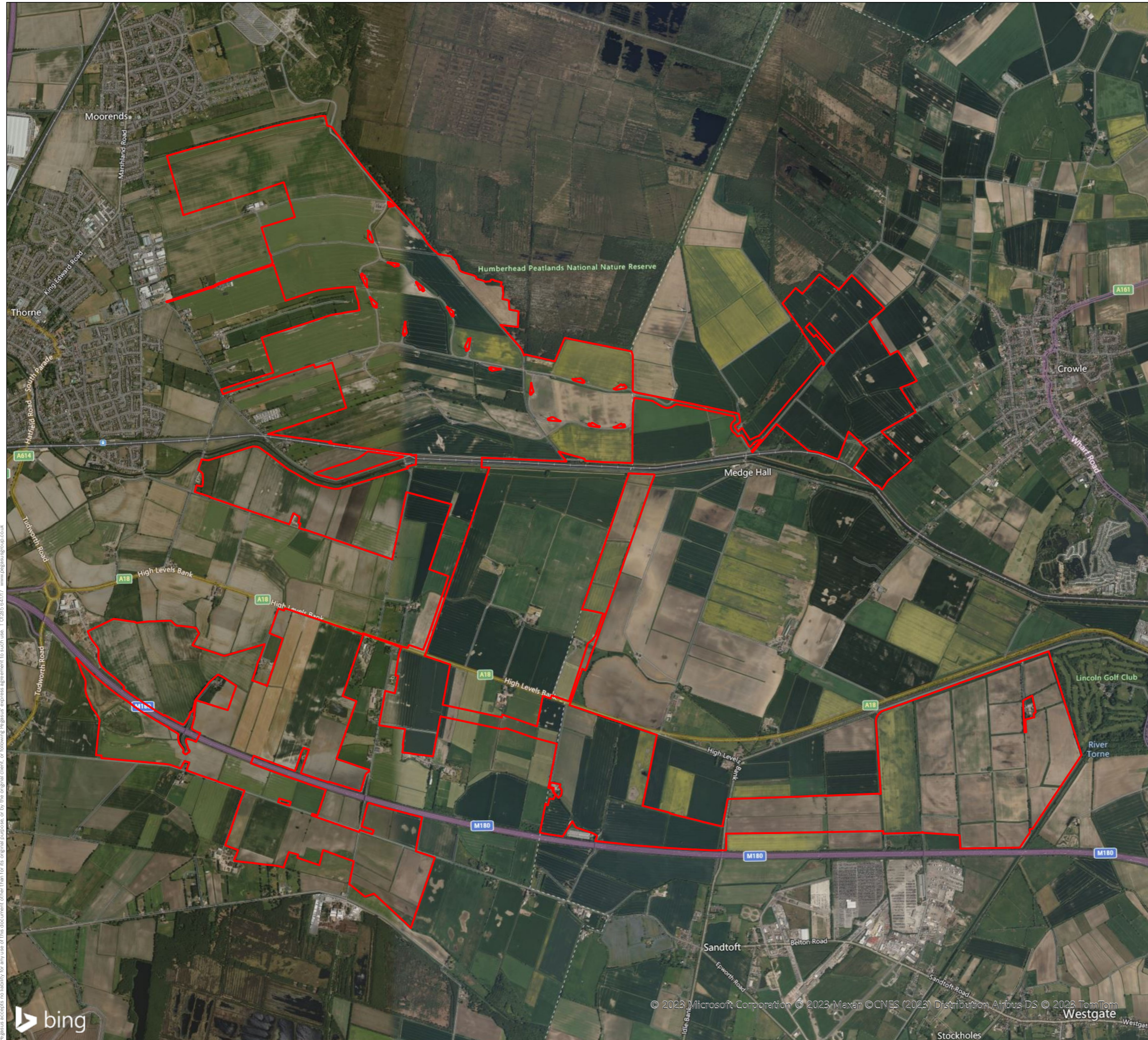
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- 1.8.11. The lead authority on agricultural matters is Tony Kernon (BSc (Hons), RICS, FBIAC) who is a Chartered Surveyor and a Fellow of the British Institute of Agricultural Consultants. Tony has specialised in assessing the effects of development proposals on agricultural land (land quality and soils) and agricultural and rural businesses, for over 35 years. Tony's experience includes many Environmental Assessments and NSIP applications, including road, rail, residential, industrial, infrastructure and energy proposals, mostly in England and Wales. He regularly acts as expert witness for local planning authorities, Government agencies and developers. He is currently involved in multiple NSIP and DNS renewable energy development proposals.
- 1.8.12. The authority on air quality matters are Laurence Caird, MEarthSci CSci MEnvSc MIAQM; Dr Frances Marshall, MSci PhD MEnvSc MIAQM; and, Dr Kate Wilkins, BSc (Hons) MSc PhD CSci MEnvSc MIAQM
- 1.8.13. Mr Caird is a Technical Director with AQC, with 17 years' experience in the field of environmental consultancy with extensive experience in air quality and climate change assessments for Environmental Impact Assessment (EIA) schemes. He has helped shape a methodology for the assessment of greenhouse gas emissions within EIA to satisfy the requirements of the 2017 EIA Regulations and has produced carbon footprints and greenhouse gas assessments for a number of projects including major aviation projects as well as EIA residential, commercial and mixed-use developments and industrial facilities. Beyond EIA, Mr Caird has produced lifecycle carbon assessments for a range of projects, has undertaken assessments of project's resilience and adaptation to climate change, has developed net zero carbon plans and strategies, and undertaken assessments of carbon sequestration and carbon offsets and carbon assessment for land use, land use change and forestry. He also has extensive experience in the field of air quality, and has a detailed understanding of a range of emissions sources including transport, energy and industry. He is a Member of the Institute of Air Quality Management (and a former IAQM Committee Member) and is a Chartered Scientist. Dr Marshall is a Principal Consultant with AQC with ten years' relevant experience. Dr Marshall has experience preparing air quality assessments for a range of projects, including residential and commercial developments, road traffic schemes, energy centres, energy from waste schemes and numerous power generation schemes. She has experience in producing air quality assessments for EIA schemes. She is a Member of both the Institute of Air Quality Management and the Institution of Environmental Sciences. Dr Wilkins is a Senior Consultant with AQC with over five years' experience in the field of air quality. Since joining AQC in January 2018, she has undertaken numerous air quality impact assessments for road traffic, combustion plant and construction dust throughout the UK for both standalone assessments and for EIAs, and has also prepared local authority reports and literature reviews. She is a Chartered Scientist and a Member of both the Institute of Air Quality Management and the Institution of Environmental Sciences.

1.9. Next Steps

- 1.9.1. At the end of the informal consultation, all responses received will be considered and taken into account in the development of the Scheme as we prepare for formal pre-application consultation scheduled for summer 2024.

FIGURE 1.1
DRAFT ORDER LIMITS



KEY

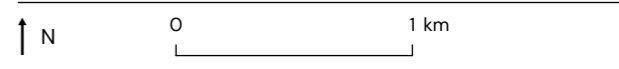
DRAFT ORDER LIMITS (REV P - 13/06/23)

- REVISIONS:
- A - 21/09/22 - ADDED EASEMENTS
 - B - 29/09/22 - ADDED EASEMENTS & PARCELS
 - C - 11/10/22 - REMOVED PARCEL
 - D - 21/10/22 - ADDED PARCELS
 - E - 25/10/22 - ADDED AND REMOVED PARCELS
 - F - 29/11/22 - REMOVED PARCEL
 - G - 19/12/22 - ADDED ACCESS TRACK & AMMENDED BOUNDARY
 - H - 05/04/23 - ADDED AND REMOVED PARCELS
 - I - 12/04/23 - REMOVED PARCELS
 - J - 13/04/23 - REMOVED PARCEL & ADDED ACCESS
 - K - 19/04/23 - ADDED ACCESS TRACK
 - L - 04/05/23 - REMOVED PARCEL
 - M - 23/05/23 - ADDED AND REMOVED PARCELS
 - N - 25/05/23 - REDUCED CABLE EASEMENT
 - O - 08/06/23 - MULTIPLE EDITS
 - P - 13/06/23 - REMOVED PARCELS

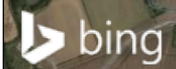
**DRAFT ORDER LIMITS
TWEEN BRIDGE SOLAR
FIGURE 4.1
RWE**

DATE	DRAWN	APPROVED	SCALE
13/06/2023	RL	HS	1:32,000@A3

SHEET	REVISION	DRAWING NUMBER
-	P	P21-3484_06



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