Gate Burton Energy Park
Preliminary Environmental Information Report

Non-Technical Summary (NTS)

June 2022

2.1

low carbon
powering tomorrow

Prepared for:

Gate Burton Energy Park Limited

Prepared by:

AECOM Limited

Table of Contents

1. Introduction

1.1 Background

1.1.1 This document has been prepared on behalf of Gate Burton Energy Park Limited (the 'Applicant') and provides a Non-Technical Summary (NTS) of the Preliminary Environmental Information (PEI) Report for the proposed Gate Burton Energy Park.

1.1.2 The Applicant is planning to submit an application for a Development Consent Order (DCO) to the Secretary of State for Business, Energy and Industrial Strategy for the construction, operation (including maintenance), and decommissioning of a photovoltaic (PV) array electricity generating facility exceeding 50 megawatts (MW) capacity with associated battery storage facility and connection to the UK electricity transmission system (hereafter referred to as the 'Scheme').

1.1.3 This document has been compiled by AECOM and presents a non-technical summary of the Preliminary Environmental Information Report (PEI Report). AECOM is a registrant to the Environmental Impact Assessment (EIA) Quality Mark scheme run by the Institute of Environmental Management and Assessment (IEMA).

1.2 The Applicant

1.2.1 The Applicant, Gate Burton Energy Park Limited is a development proposed by Low Carbon Limited, a UK investment and asset management company specialising in renewable energy.

1.2.2 Low Carbon Limited is committed to making a positive and significant impact on climate change by investing in large-scale renewable energy projects across a range of energy technologies including solar PV, onshore wind, offshore wind, waste-to-energy, battery storage and other proven renewable energy technologies.

1.3 The DCO Site

1.3.1 The land for which DCO consent is being sought is referred to as the 'DCO Site' and comprises approximately 1,436 hectares (ha), centred on National Grid Reference SK 84377 83972. It is located 4 kilometres (km) south of Gainsborough.

1.3.2 The DCO Site includes the 'Solar and Energy Storage Park' which has a 700 ha area within the DCO Site, comprising solar PV and battery storage infrastructure, and the 'Grid Connection Route', covering 736 ha, within which the connection will be sited, connecting the Solar and Energy Storage Park to the existing substation at Cottam Power Station.

1.3.3 The DCO Site is shown on Figure 1 of this NTS.

1.3.4 A description of the physical characteristics of the Scheme and the land-use requirements during the construction, operational, and decommissioning phases is presented in Section 4: Scheme Description of this NTS.

1.4 The Purpose of the PEI Report and NTS

1.4.1 The purpose of the PEI Report is to accompany formal consultation under sections 42, 47 and 48 of the Planning Act 2008 and to enable "*consultees (both specialist and non-specialist) to understand the likely environmental effects of the Proposed Development and helps to inform their consultation responses on the Proposed Development during the pre-application stage*" (Planning Inspectorate, Planning Advice Note 7). It has been prepared to meet the requirements of Regulation 12(2) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations').

1.4.2 The Environmental Impact Assessment (EIA) information contained within the PEI Report is 'preliminary' and does not represent a final project design or include final environmental assessment conclusions. The Applicant is seeking consultation responses to the information presented in order to continue to refine the Scheme design. The Applicant will continue to obtain information that will inform the final assessment of impacts, which will then be contained within the Environmental Statement (ES) that will accompany the DCO Application and report the findings of the EIA. Due to the preliminary nature of the assessment, this inherently means that the assessments are conservative. When the conclusions are finalised in the ES, because further certainty and information will be available, the significance of the effects identified in the PEI Report may be revised so that adverse effects decrease in significance.

1.4.3 The various assessments are therefore at differing stages due to ongoing design work and continued gathering of baseline information.

1.4.4 The purpose of this NTS is to provide a summary of the PEI Report in non-technical language.

2. EIA Process and Methodology

2.1.1 **PEI Report Volume 1: Chapter 5** describes the approach the EIA has taken to assessing impacts associated with the Scheme, including the significance criteria against which impacts have been assessed.

2.2 Overview

2.2.1 EIA is the process undertaken to identify and evaluate the likely significant effects of a proposed development on the environment and to identify measures to mitigate or manage any significant negative effects. The EIA should be informed by consultation with statutory consultees, other interested bodies, and members of the public. The purpose of identifying significant effects is to ensure decision makers are able to make an informed judgement on the environmental impacts of a proposal.

2.2.2 The PEI Report provides the latest environmental information obtained and assessed as part of the EIA.

2.2.3 Following statutory consultation, the PEI Report will be updated and renamed the ES. The ES will accompany the DCO Application and will follow a similar systematic approach to EIA and project design as the PEI Report. The process of identifying environmental effects is both iterative and cyclical, running in tandem with the iterative design process.

2.3 EIA Scoping

2.3.1 An EIA Scoping Report and a request for an EIA Scoping Opinion under Regulation 10 of the EIA Regulations was submitted to the Planning Inspectorate on 12th November 2021 (**PEI Report Volume 3: Appendix 1-A**).

2.3.2 The purpose of the EIA Scoping process is to determine which topics should be included in the EIA and the level of detail to which they should be assessed.

2.3.3 The Scoping Opinion was received on 20th December 2021, which presents the formal response from the Planning Inspectorate (on behalf of the Secretary of State) and statutory consultees (**PEI Report Volume 3: Appendix 1-B**).

2.3.4 Key issues raised in the Scoping Opinion are summarised in **PEI Report Volume 3: Appendix 1-C** of the PEI Report and have been considered during the EIA process.

2.4 Consultation

2.4.1 The main consultation activities undertaken so far include:

- Preparation of the Statement of Community Consultation involving consultation with relevant local authorities;
- EIA Scoping;
- Non-statutory (informal) Consultation Events; and
- Other meetings with a wide range of consultees and stakeholders.

2.4.2 In addition, a project website has been set up to provide up to date information on the project: https://www.gateburtonenergypark.co.uk/, and information has been provided proactively to local residents and local community groups in addition to the statutory requirement to consult.

3. Site Selection and Design Evolution

3.1.1 **PEI Report Volume 1: Chapter 3** presents an overview of the justification for selecting the DCO Site, how the design has evolved since EIA Scoping, and a discussion of the reasonable alternatives.

3.1.2 The Site was identified through a site search exercise undertaken by the Applicant. The reasons for selecting the site will be presented in the ES, along with a description of and justification for the evolution of the DCO Site Boundary.

3.1.3 A range of technical, environmental and economic factors are considered when investigating and assessing any potential site for Nationally Significant Infrastructure Projects (NSIP)-scale ground-mounted solar PV development. Key factors for consideration include (in no particular order):

- Solar energy levels;
- Proximity to an available grid connection;
- Topography;
- Field size / shading;
- Access to the site for construction;
- Engagement with local landowners; and
- Environmental and social parameters described in this document, including proximity to local population, archaeological interest,

agricultural land classification, landscape designations, nature conservation designations, and flood risk, for example.

3.1.4 Following consideration of the above factors, the area in which the Scheme has been located was identified as having good potential for a large-scale ground mounted solar PV array.

3.1.5 The preparation of the PEI Report has led to a variety of key changes to the layout and technology, including for example:

- Reduction in land and refinement of the layout plan following desktop analysis and site surveys;
- The larger built elements of the solar farm, such as the substation and Battery Energy Storage System (BESS), have been carefully located in areas of reduced flooding and are screened by existing woodland with views further screened by topography and existing vegetation;
- Provision of buffers and offsets from existing landscape features such as ponds, hedgerows, woodland and Public Rights of Way;
- A heritage setting buffer to provide offset from listed buildings at Gate Burton, at the Solar and Energy Storage Park's western boundary;

- New grassland and wildflower mixes under the panels to enhance the range of fauna, enhancing biodiversity and providing resource for pollinators;
- Screening and planting design to reduce visual impact by providing environmental enhancement areas, off-sets and buffer zones.
- Siting of infrastructure to avoid below ground archaeological features wherever possible. Screening and planting will be designed to minimise impact on the setting of heritage assets;
- No disturbance to Burton Ancient and Semi-Natural Woodland; and
- Collaborative cable route option design work with Island Green Power to identify opportunities for a single shared connection corridor either side of the River Trent to minimise areas of disturbance and maximise opportunities for avoiding sensitive heritage and ecological receptors.

4. Scheme Description

4.1 The DCO Site

4.1.1 The DCO Site comprises an area of 1,436 ha which straddles the boundary between the counties of Nottinghamshire and Lincolnshire, within the districts of Bassetlaw and West Lindsey. The DCO Site comprises the Solar and Energy Storage Park and Grid Connection Route (an underground cable from the Solar and Energy Storage Park to the point of connection at Cottam Power Station).

4.1.2 Figure 2 illustrates the site boundary, which is the expected maximum area of land required for the construction, operation, and maintenance, and decommissioning of the Scheme. It includes the Solar and Energy Storage Park and Grid Connection Route. It is important to note this may change as the design and EIA progress and stakeholder comments are taken into account, however, significant change is not anticipated.

4.1.3 The current landscape within the DCO Site consists of agricultural fields interspersed with individual trees, woodlands, hedgerows, linear tree belts, farm access tracks, and local transport roads. The land is predominantly Grade 3b (moderate quality agricultural land) with some 3a (good quality agricultural land). The hedgerows within the Site are predominately low and intermittent. The arable fields are large and generally of regular shape. Woodland is more prevalent to the north of the Site.

4.1.4 The landscape features immediately surrounding the DCO Site comprise several small rural villages, including Gate Burton approximately 50m to the west and Knaith approximately 200m to the west, Marton approximately 500m to the south west, and Willingham by Stow 700m to the east and Kexby 1.8km to the east. There are limited industrial or commercial land uses within the immediate vicinity of the DCO Site. The A1500 (Stow Park Road/Till Bridge Lane) and A156 (Gainsborough Road) cross to the south and west, contrasting with the north-south alignment of the River Trent and the railway line connecting Lincoln and Doncaster. The B1241 intersects the northern part of the DCO Site, Marton Road and Willingham Road border the southern extent of the DCO Site.

4.1.5 Within a 10km radius of the DCO Site, there are no statutory sites of international importance, and within 2km radius of the DCO Site there are two national statutory designated nature conservation sites (see Figure 3), comprising Ashton's Meadow Site of Special Scientific Interest (SSSI), and

Lea Marsh SSSI. The closest, Ashton's Meadow SSSI is located 1.5km to the west of the DCO Site.

4.1.6 There are 14 non-statutory sites designated for nature conservation within 2km of the DCO Site, all are designated Local Wildlife Sites for their biodiversity value at a local level and are known to have supporting value to a wide variety of protected and ecologically important species and / or habitats/ The locations of these non-statutory sites are shown in Figure 4.

4.1.7 There are no scheduled monuments, listed buildings, registered parks and gardens or conservation areas within the DCO Site. There are 9 Scheduled Monuments within 3km of the Solar and Energy Storage Park and 93 listed buildings within 3km of the DCO Site. There is one Conservation Area within 3km of the Solar and Energy Storage Park, the Gainsborough Riverside Conservation Area.

4.1.8 The majority of the Solar and Energy Storage Park is located within land at low risk of flooding (less than 1 in 1,000 annual probability). There are some areas of higher risk associated with local watercourses and drainage systems.

4.1.9 There is a network of public rights of way (PRoW) both within the DCO Site, predominately within the Grid Connection Route, and across the surrounding area, as shown in Figure 5.

4.2 Description of the Scheme

4.2.1 The Scheme comprises solar photovoltaic (PV) panels, BESS infrastructure and an on-site substation. The PV panels will convert the sun's energy into electricity for storage onsite and export to the national grid via an underground cable.

4.2.2 Unlike a conventional power station, the environmental impacts of a solar farm are not a direct result of the amount of electricity it can generate. For this reason, it is not proposed that the Gate Burton Energy Park is restricted by imposing a limit on how much electricity it can generate.

4.2.3 Instead, the Scheme will seek a development consent that would restrict the aspects of the solar farm which have potential environmental impacts – such as the height of the solar panels, dimensions of infrastructure such as the Battery Energy Storage System (BESS) and on-site substation, and where within the DCO Site solar panels would be located. These are known as the 'design parameters'. This approach also ensures the Gate Burton Energy Park will be able to generate electricity as efficiently as possible, using technology which is constantly improving and may allow greater amounts of electricity to be generated in future within the existing design parameters. Further information about the

design parameters is presented in the sections below, and in **PEI Report Volume 1, Chapter 2: The Scheme**.

Scheme Components

4.2.4 The Scheme will consist of the principal infrastructure described below. To ensure that the likely significant environmental effects of the Scheme are no worse than those assessed in the EIA and the effect of the Scheme has been robustly assessed, the parameters set out above are the basis upon which the Scheme has been assessed. Indicative images of the Scheme equipment are presented in Plate 1.

4.2.5 The PV Panels will be located within the Solar and Energy Storage Park, as illustrated by Figure 6, however the exact locations of PV panels have not yet been determined and will only be decided upon at the detailed design stage, which will occur after the determination of the DCO application. For the purposes of the PEI Report and environmental assessments therefore, where flexibility needs to be retained some conservative assumptions have been used on which the assessments are based. The final design will be consistent with – and no worse environmentally – than the assumptions used and presented in the final ES to accompany the DCO application.

4.2.6 The DCO Site is formed by the Solar and Energy Storage Park and Grid Connection Route. The location of the Scheme components has been carefully considered and restructured to specific areas, in order to minimise the impacts of these components.

4.2.7 The Scheme components comprise:

- Solar PV tables (mounting structures) and panels;
- Inverters;
- Transformers;
- An On-Site Substation;
- Onsite cabling;
- BESS;
- A circa 7.5km electrical connection route to connect to the National Grid Substation at Cottam Power Station;
- Fencing and security measures;
- Access tracks; and
- Landscaping and biodiversity enhancement

4.2.8 During the construction phase, up to four temporary construction compounds will be required as well as temporary roadways to facilitate access to all land within the Solar and Energy Storage Park.

4.2.9 Opportunities for landscaping, and habitat management will be explored in areas around the solar infrastructure to contribute to achieving Biodiversity Net Gain (BNG).

Typical solar PV Panels

Typical string inverter (image reproduced courtesy of Huawei)

Plate 1 Images to show the type of equipment which may be used within the Scheme

4.3 Construction

Construction Programme

4.3.1 Subject to being granted consent and following a final investment decision, construction could start in early 2025. Construction will require an estimated 24 to 36 months, with operation therefore anticipated to commence around early 2028.

Construction Activities

4.3.2 Construction activities will include:

- Site preparation;
- Import of construction materials, plant and equipment to site;
- The establishment of a construction compound(s);
- Upgrading of existing site tracks/access roads and construction of new tracks;
- Marking out the location of infrastructure;
- Import of components to site;
- Erection of PV Mounting Structures;
- Mounting of PV Panels;
- Installation of electric cabling;
- Installation of Power Conversion Stations;
- Installation of BESS;
- Construction of on-site substation;
- Cable installation (including trenching);
- The establishment of mobilisation areas and running tracks;
- Stripping of topsoil in sections for the cable connection, sub-station and BESS area only;
- Trenching in sections;
- Appropriate storage and capping of soil;
- Appropriate construction drainage with pumping where necessary;

- Sectionalised approach of duct installation;
- Excavation and installation of jointing pits;
- Cable pulling;
- Testing and commissioning; and
- Site reinstatement and habitat creation.

Site Access

4.3.3 It is anticipated that construction access will include four access/egress points: one of two access options on the A156 Gainsborough Road (A156 Access Option North and A156 Option South) with the primary point of access to the Site expected to be the A156 Option North. Other access/egress points include: Kexby Lane North Access, Kexby Lane South Access and Marton Road. In addition, a new access would be constructed on the northern side of Cottam Road (in the vicinity of the existing power station access) and an access off the A156 south of Marton to provide construction vehicle access to the grid connection works.

4.3.4 Operational access would be from Gainsborough Road (A156), via Clay Lane (A156 Option South) along with an number of gated access points around the site perimeter. The majority of routine visits by vans and four-wheel drive vehicles would utilise the Clay Lane rail underpass for access to the eastern part of the Site. If larger vehicles are required to access the eastern part of the Site, these would utilise the construction access points along Kexby Lane and Marton Road, which would be retained for the operational phase.

4.3.5 Access tracks will be constructed across the Solar and Energy Storage Park. These would typically be 3.5m to 6m wide compacted stone tracks with 1:2 gradient slopes on either side.

Construction Staff

4.3.6 At the peak of construction, which is expected to be during 2026, it is estimated that a maximum of up to 400 workers will be required. This number will be less at other times of the construction phase and if construction is carried out over a slightly longer period than the anticipated 36 months.

Construction Controls

4.3.7 The construction phase will be subject to management documents which will limit and control activities. The outline documentation will include an:

- Framework Construction Environmental Management Plan (CEMP); and
- Framework Construction Traffic Management Plan (CTMP).

4.4 Operation

4.4.1 During the operational phase, activity on the Solar and Energy Storage Park will be minimal and would be restricted principally to vegetation management, equipment maintenance and servicing, periodic replacement of components, periodic fence inspection, and monitoring to ensure the continued effective operation of the Scheme.

4.4.2 It is anticipated that there will be up to fourteen permanent FTE staff during the operational phase working on a site and flexible office basis. Operational staff are expected to travel to site by four-wheel drive vehicle or medium/large van.

4.4.3 The design life of the Scheme is 60 years; however, if equipment is still operating successfully and safely, the Applicant may choose to operate beyond the Scheme's originally anticipated design life. This is a common occurrence for generating stations. Many stations operate beyond the design life if they are well maintained.

4.5 Decommissioning

4.5.1 Decommissioning is expected to take between 24 and 48 months and would be undertaken in phases. A Decommissioning Environmental Management Plan will be prepared prior to decommissioning and will be secured through a DCO requirement.

4.5.2 All PV modules, mounting poles, cabling, inverters, and transformers would be removed and recycled or disposed of in accordance with good practice and market conditions at the time.

4.5.3 The Site will be returned to the landowner after decommissioning and will be available for its original use.

4.5.4 The effects of decommissioning are usually similar to, or of a lesser magnitude than, construction effects and will be considered in the relevant sections of the ES. The specific method of decommissioning the project at the end of its operational life is uncertain at present as the engineering approaches to decommissioning will evolve over the operational life of the Scheme.

5. Assessing Environmental Effects

5.1 Topics Assessed

5.1.1 **PEI Report Volume 1: Chapters 1** to **5** provide an introduction to the policy and legislative context, a description of the DCO Site and surrounds, an overview of the Scheme and alternatives that were considered during the design process, and the approach and methodology to the EIA.

5.1.2 The following topic specific chapters have been produced and assessed in **PEI Report Volume 1**:

- **Chapter 6:** Climate Change;
- **Chapter 7:** Cultural Heritage;
- **Chapter 8:** Ecology and Nature Conservation;
- **Chapter 9:** Water Environment;
- **Chapter 10:** Landscape and Visual Amenity;
- **Chapter 11:** Noise and Vibration;
- **Chapter 12:** Socio-Economics and Land-Use;
- **Chapter 13**: Transport and Access;
- **Chapter 14:** Human Health and Wellbeing; and
- **Chapter 15:** Other Environmental Topics.

5.1.3 **Chapter 15** of **PEI Report Volume 1** provides an overview of the topics that can be addressed more concisely than the other topic specific chapters and therefore do not merit an individual chapter. These topics are air quality; glint and glare; ground conditions; major accidents and disasters; telecommunications; television reception and utilities; and waste.

5.1.4 **Chapter 16** of **PEI Report Volume 1** documents cumulative effects and effect interactions that lead to combined effects on sensitive receptors.

5.1.5 **Chapter 17** of **PEI Report Volume 1** presents a brief summary of the PEI Report outlining the residual significant effects remaining following the implementation of mitigation.

5.2 PEI Report Terminology

5.2.1 To enable comparison between technical topics and to aid understanding of the PEI Report findings, standard terms are used wherever possible to describe the relative significance of effects throughout the PEI Report (i.e. ‘major’, ‘moderate’, minor’, and ‘negligible’). The effects are also described as being adverse or beneficial. Where the quality standards for each technical discipline result in deviations in the standard assessment methodology, these are described in the relevant chapters as applicable within **PEI Report Volume 1**.

5.2.2 Each of the technical chapters within **PEI Report Volume 1** provides further description and definition of the significance criteria relevant to each topic. Where possible, this has been based upon quantitative and accepted criteria (for example, noise assessment guidelines), together with the use of value judgement and expert interpretation to establish to what extent an effect is significant.

5.2.3 Typically, effects that are considered to be negligible or minor are judged to be 'not significant', whereas those that are moderate or major are 'significant'. Where the EIA predicts a significant adverse effect on one or more receptors, we have considered whether there are further mitigation measures which could avoid or reduce the effect, or to reduce the likelihood of it happening. The use of any such mitigation will be secured through the DCO, should it be granted. As the design of the Scheme has evolved to date, the Applicant has worked with environmental specialists to ensure the design avoids or reduces environmental effects on receptors where possible through the use of embedded mitigation measures (meaning measures that form part of the design or methods for construction or operation), such as the use of a Construction Environmental Management Plan (CEMP). These measures are taken into account in the EIA and assessment of effects of the Scheme

6. PEI Report Findings

6.1.1 An assessment of the environmental effects of the Scheme during its construction, operation (including maintenance), and eventual decommissioning has been completed for each of the topics identified in Section 5.1 above.

6.1.2 The preliminary conclusions on the likely significant environmental effects of the Scheme are described within **PEI Report Volume 1**. This section provides a brief summary of the overall findings of the report.

6.2 Climate Change

6.2.1 **PEI Report Volume 1: Chapter 6 Climate Change** presents the findings of an assessment of the potential significant effects of the Scheme on climate change (e.g., greenhouse gas emissions from the construction, operation, and decommissioning of the Scheme). The resilience of the Scheme to projected future climate change impacts is also assessed through a Climate Change Resilience Review.

Baseline and Context

6.2.2 Consideration has been given to the following aspects of climate change assessment:

- **Lifecycle greenhouse gas (GHG) impact assessment** – the impact of GHG emissions arising over the lifetime of the Scheme on the climate;
- **Climate change resilience (CCR) review** – the resilience of the Scheme to projected future climate change impacts, including damage to the Scheme caused by accidents resulting from climate change; and
- **In-combination climate change impact (ICCI) assessment** – which identifies how the resilience of receptors in the surrounding environment are affected by the combined impact of future climate conditions and the Scheme.

6.2.3 For the lifecycle GHG impact assessment, the future baseline is a 'business as usual' scenario whereby the Scheme is not implemented. The future baseline comprises existing carbon stock and sources of GHG emissions within the DCO Site boundary from the existing activities on-site.

6.2.4 While the current land use within the DCO Site boundary will have minor levels of associated GHG emissions, it is anticipated that these emissions will not be material in the context of the overall Scheme. Therefore, for the purposes of the lifecycle GHG impact assessment, a GHG emissions baseline of zero is applied.

6.2.5 The current baseline for the CCR review and ICCI assessment is the current climate in the location of the Scheme. This is based on historic climate data recorded by the closest Met Office station to the Scheme (Scampton) for the 30-year climate period of 1981-2010.

6.2.6 The future baseline is expected to differ from the present-day baseline. These have been calculated using the United Kingdom Climate Change Projections 2018 (UKCP18).

6.2.7 The receptor for the lifecycle GHG impact assessment is the global climate.

6.2.8 The receptor for the review of climate change resilience is the Scheme itself, including all infrastructure, assets, and workers on-site during construction, operation, and decommissioning.

6.2.9 In the ICCI assessment, sensitive receptors are determined by each discipline and the assessment is undertaken in regard to the identified sensitive receptors in each technical chapter.

Assessment of Effects

6.2.10 The assessment has considered the resilience of the Scheme to climate change and adequate measures such as flood resilience have been integrated into the Scheme design.

6.2.11 The GHG impact of construction and decommissioning are anticipated to result in **minor adverse, not significant** effects on the climate, while the impacts of operation of the Scheme is considered to have a **negligible, not significant** effect. Overall, the whole-life GHG impact can be expressed in terms of the average GHG intensity of the electricity generated by the Scheme over its lifetime.

6.2.12 GHG emissions savings are expected to be achieved throughout the lifetime of the Scheme. Therefore, the GHG emissions during construction, operation, and decommissioning of the Scheme can be considered to be 'offset' by the net positive impact of the Scheme on GHG emissions and the UK's ability to meet its carbon targets.

6.2.13 The GHG savings achieved throughout the lifetime of the Scheme demonstrate the role solar energy generation has to play in the transition to, and longer-term maintenance of, a low carbon economy. Without low-carbon energy generation projects such as the Scheme, the average grid GHG

intensity will not decrease as is projected, which could adversely affect the UK's ability to meet its carbon reduction targets.

6.2.14 As the GHG intensity of the Scheme remains below the projected grid average throughout its lifetime, however, it is considered that the overall GHG impact of the Scheme is beneficial as it will play a part in supporting the trajectory towards net zero, it is considered that the Scheme overall is considered to have a **negligible** effect on the climate.

Climate Change Resilience Review

6.2.15 Future climate change projections have been reviewed and the sensitivity of assets have been examined, before commenting on the adequacy of the climate change resilience measures built into the Scheme. As a result of the proposed resilience measures **no significant** climate change risks during the construction, operation or decommissioning phase have been identified.

In-Combination Climate Change Assessment

6.2.16 Future climate change projections have been reviewed and the sensitivity of identified sensitive receptors to these hazards examined as part of the In-Combination Climate Change Assessment. **No significant** effects as a result of the Scheme were identified.

Mitigation Measures

6.2.17 A number of embedded construction mitigation measures are included within the Scheme, and these will be included within the Framework Construction Environmental Management Plan (CEMP) which will accompany the DCO Application. The Framework CEMP will include climate change resilience measures embedded in the Scheme. These include storing topsoil and construction materials outside of floodplain extents; appointing at least one Flood Warden; health and safety plans accounting for potential climate change impacts on workers; and a Framework Decommissioning Environmental Management Plan (DEMP) prepared prior to decommissioning.

6.2.18 Further climate change resilience measures embedded within the Scheme, particularly in relation to flood risk include:

- The design of drainage systems to ensure there will be no significant increases in flood risk downstream, including climate change scenarios;
- Sustainable Drainage Systems (SuDS) will be utilised to ensure the surface water drainage strategy adequately attenuates and treats runoff from the Scheme whilst minimising flood risk to the DCO Site and surrounding areas; and
- The rate of runoff from each development location within the whole Solar and Energy Storage Park will ensure there is no increase in runoff rate from the Site to receiving watercourses.

6.3 Cultural Heritage

Baseline and Context

6.3.1 **PEI Report Volume 1: Chapter 7 Cultural Heritage** considers the potential impacts on designated and non-designated heritage assets. Cultural heritage comprises all aspects of the environment resulting from the interaction and relationships between people and places through time. Heritage assets include buildings, monuments, sites, places, areas or landscapes identified as having a degree of significance due to their heritage interest.

6.3.2 A number of scheduled moments, listed buildings, and other heritage assets are present within the vicinity of the DCO Site.

Assessment of Effects

6.3.3 The assessment of effects has been undertaken while taking embedded mitigation for the Scheme into account. These measures include mitigation planting to reduce the impacts on the setting of built heritage and historic landscape assets. Buffer areas have been designed around built heritage assets (such as listed buildings) and archaeological assets.

6.3.4 The assessment undertaken to date has been informed through a desk-based assessment. A programme of geophysical survey, aerial photographic, and LiDAR analysis are currently in progress and consultation with the local authority archaeological advisors is ongoing. The full results of these reports (desk-based assessment, geophysical survey and LiDAR) were not available at time of writing the PEI Report but will accompany the DCO Application.

6.3.5 Additional construction activities associated with the Scheme that could have an impact on heritage assets include the presence and movement of construction equipment; the siting of construction compounds and activities; and increased traffic volumes.

6.3.6 There are 55 heritage assets recorded within the Scheme that have the potential to be subject to physical impacts or impacts to the significance of assets caused by changes to their setting as a result of the construction of the Scheme. These comprise 10 designated assets and 45 non-designated assets.

6.3.7 During construction and operation, there is also the potential for impacts to the setting of local heritage assets from the presence of the Scheme infrastructure and construction machinery. Impacts on the setting potentially includes impacts from the visual aspect of larger structures, security lighting, noise and associated traffic.

6.3.8 During construction the effects on the setting of the majority of heritage assets have been assessed to be **negligible** or **minor adverse**, and therefore **not significant**.

6.3.9 **Moderate** or **major adverse, significant** effects have been identified for the following built heritage assets arising during construction and from the

presence of the Scheme, and these effects would be experiences for the lifetime of the Scheme (including during decommissioning):

- Heynings Priory (1008685); and
- Gate Burton non-designated parkland (MLI98360).

6.3.10 Based on the current understanding of the value of previously recorded below ground cultural heritage, **significant** effects have also been identified for the following archaeological assets arising during construction of the Scheme:

- Cropmarks of possible prehistoric date (MLI54017, MLI90939, and MLI54018);
- Medieval settlement of Gate Burton;
- Area of cropmark (MNT4983);
- Earthwork mound (MLI52497); and
- Viking Winter Camp (MLI125067).

6.3.11 All significant effects on the setting of heritage assets are reversible on the removal of the Scheme, however the potential complete or partial loss of an asset will cause a permanent change. However, appropriate archaeological mitigation, such as excavation, will be used to understand and record the asset.

6.3.12 Impacts during the operational phase of the Scheme include those associated with the operation of the development, such as security lighting, operational noise, and associated traffic. Although no additional significant effects are considered likely through operation over and above those already identified relating to the presence of the Scheme within an asset's setting, further consideration of these elements will be undertaken in the ES.

6.3.13 It is not expected that the operation of the Scheme will result in any further intrusive activities and as such no impact to archaeological resources is anticipated during this phase.

6.3.14 Following decommissioning, it is considered that the Scheme, including the solar PV panels and associated infrastructure will be removed in accordance with the relevant statutory process at that time. It is expected that the selected method of decommissioning would have due regard to health and safety, environmental impact and benefits, and economic aspects which will be set out in a Framework Decommissioning Environmental Management Plan,

which will be secured through a DCO Requirement. Any future decommissioning and / or reinstatement works would be subject to prevailing legislation, guidance and permitting regimes. Landscape restoration and remediation to suitable surfaces would be undertaken as required. This will result in the restoration of the rural landscape. A well-designed decommissioning scheme would not have any impact beyond the already-disturbed footprint of the Scheme; therefore, it is not anticipated that decommissioning activities would have a direct physical impact upon archaeological remains.

6.3.15 There would be temporary impacts to the setting of designated assets in the study area during decommissioning, resulting from the use of machinery to dismantle the Scheme. Decommissioning is likely to affect the setting of those heritage assets described for the construction phase above. Impacts arising from decommissioning activities would be temporary and the duration would be shorter than the impacts during construction. The impacts therefore would not be greater than those reported during construction.

Mitigation Measures

6.3.16 The following embedded, additional, and enhancement measures have been incorporated into the Scheme design, with detailed proposals and locations to be submitted with the DCO application:

- Careful selection and refinement of a Grid Connection Route to minimise impact to significant assets;
- Siting of transformers, panels and converter stations to minimise change to the setting of assets;
- Screening and planting design; and
- Avoidance of known archaeological remains.

6.3.17 The design and mitigation developed in relation to the proposed Scheme minimises construction and decommissioning impacts by:

- Refinement of the design of the Scheme to avoid assets, where possible;
- Minimising overall land take requirements to reduce the extent to which the Scheme could affect known and potential cultural heritage assets;
- The sympathetic use of landscaping to reduce visual effects on cultural heritage assets;
- Historic landscape recording in advance of scheme construction, to provide a permanent documentary record of assets in their current form and condition;
- Archaeological investigations in advance of, or during, scheme construction;

- Installation of physical protection or screening measures temporary during construction and/or decommissioning works; and
- Dissemination of the results of all surveys in an appropriate format and supporting archive.

6.3.18 It is anticipated that it will be possible to mitigate the Scheme's impacts upon the buried archaeological resource through a staged programme of archaeological investigation and recording, the purpose of which is to ensure that surviving remains are recorded prior to their destruction by construction activities. Following a programme of geophysical survey and evaluation excavation (trial trenching), which will be reported as part of the ES, to identify the extent and survival of recorded remains, where required, further archaeological mitigation, such as excavation, will be undertaken to ensure remains are fully understood and recorded.

6.3.19 The setting of heritage assets will continue to be considered throughout detailed design development and opportunities for further mitigation of significant effects, such as through additional screening or setbacks, will be considered in the ES, if appropriate.

6.4 Ecology and Nature Conservation

Baseline and Context

6.4.1 **PEI Report Volume 1: Chapter 8 Ecology and Nature Conservation** presents the findings of an assessment of the potential significant effects of the Scheme on ecology and biodiversity. The assessment considers effects on designated sites, habitats, and protected species.

6.4.2 Ecological receptors considered in the PEI Report include species and habitat that are important at an international, national, and local level (i.e. how rare and important the species and habitat are). The majority of the DCO Site consists of arable land, with areas of grassland, woodland and hedgerows throughout.

6.4.3 There are no statutorily designated for nature conservation within the DCO Site. There are two sites statutorily designated for national biodiversity importance within 2km of the DCO site, the closest being Ashton's Meadow Site of Special Scientific Interest (SSSI) 1.5km to the west.

6.4.4 There are 14 non-statutory sites designated for nature conservation within 2km of the DCO Site. These sites have been designated as Local Wildlife Sites (LWS) for their biodiversity value at a county level and are known to have

supporting value to a wide variety of protected and ecologically important species and/ or habitats. The locations of these non-statutory sites, relevant to the Scheme, are shown in Figure 4.

6.4.5 The following protected species surveys are ongoing following a Phase 1 Habitat Survey: terrestrial invertebrates, amphibians, reptiles. Wintering birds, breeding birds, bats, otter, water vole, badger and botanical.

Assessment of Effects

6.4.6 Effects on ecological resources from infrastructure projects can arise from direct and indirect impacts upon designated sites, habitats or species, and be of a temporary or permanent nature. Indirect effects can occur through pollution of air and water and via changes in lighting, noise or hydrology.

6.4.7 Whilst there is the potential for effects upon ecological receptors during construction, mitigation measures designed to prevent adverse impacts upon ecological receptors will be embedded in the Scheme, including measures within the Construction Environmental Management Plan (CEMP) which will accompany the DCO Application. These include improving ecological connectivity and the creation of habitat to mitigate and compensate for habitat loss during construction and operation. A Biodiversity Net Gain (BNG) report will be prepared with the ES and submitted as part of the DCO application but is not available at this stage as the design for the Scheme continues to evolve.

6.4.8 Embedded mitigation and additional measures have been incorporated into the Scheme design, with detailed proposals and locations to be submitted with the DCO application. These measures are provided on the basis of baseline conditions known at the time of reporting. It is anticipated that further measures may be required as the baseline conditions are fully established. If required, the scheme design will be further refined to embed mitigation, as appropriate.

6.4.9 The temporary loss of habitat within Cow Pasture Lane Drains LWS (which will be restored post-construction) will result in a temporary **moderate adverse** effect, that is potentially **significant** in EIA terms.

6.4.10 Temporary fragmentation of habitat within Cow Pasture Lane Drains LWS (which will be restored post-construction) is expected to result in a temporary **moderate adverse** effect, that is potentially **significant** in EIA terms.

6.4.11 The temporary loss of running water habitat (which will be restored post-construction) is expected to result in a temporary **moderate adverse** effect, that is potential **significant** in EIA terms. Standard environmental protection measures will be implemented during construction of the Scheme to prevent indirect impacts occurring.

6.4.12 Temporary fragmentation of running water habitat (which will be restored post-construction) will result in a temporary **moderate adverse** effect, that is potentially **significant** in EIA terms.

6.4.13 Direct loss of marshy grassland habitat is expected as a result of construction activities, this will result in a permanent **moderate adverse** effect, that is potentially **significant** in EIA terms and could lead to a residual effect in the absence of embedded mitigation.

6.4.14 The direct loss of hedgerows within the DCO site as a result of grid connection cables, fences and access routes will result in a **moderate adverse** effect that is potentially **significant** in EIA terms. Whilst the extent of any loss of habitat is currently unknown, the majority of hedgerows across the DCO Site will be avoided and any replanting required has been embedded within the Scheme design. Once hedgerows establish along with additional hedgerow planting proposed across the DCO Site, it is predicted that the Scheme will be able to deliver a net gain in this habitat and the overall impact will be beneficial.

6.4.15 The operation of the Scheme will not lead to any impacts on the above ecological receptors. At this stage, the effects of decommissioning of the Scheme are likely to be similar to those for construction and will need to follow legislation and policy requirements at the time of decommissioning.

Mitigation Measures

6.4.16 A Construction Environmental Management Plan (CEMP) will be in place during construction and an equivalent plan during decommissioning to reduce the effects on habitats, designations, and species.

6.4.17 A Framework Landscape and Biodiversity Management Plan (LBMP) will also be provided as part of the DCO Application. This will present measures for the protection of ecological receptors; against which a detailed LBMP will be brought forward.

6.4.18 On the basis of the preliminary assessment, there is the potential for significant effects and therefore additional mitigation measures have been identified as necessary and will be developed further. EIA is an iterative process, and should further mitigation be identified, e.g. if ongoing ecological surveys determine other impacts, then the Scheme design will look to capture these.

6.4.19 Examples of embedded mitigation for ecological receptors include:

- Avoidance of protected species, such as 30m from badger setts and 10m buffer from watercourses;

- Undeveloped buffers will be included in the Scheme design to protect all hedgerows, individual trees, ponds, and ancient woodland during construction; and

- Horizontal Directional Drilling (HDD) for sections of the Grid Connection Route to avoid disturbance to priority or sensitive habitat.

6.5 Water Environment

Baseline and Context

6.5.1 **PEI Report Volume 1: Chapter 9 Water Environment** identifies and proposes measures to address the potential impacts and effects of the Scheme on surface waterbodies (e.g. rivers, streams, ditches, canals, lakes and ponds) including water quality, hydromorphology, flood risk, drainage and water resources during construction, operation and decommissioning.

6.5.2 An important consideration is also the impact on the water environment where it is critical for supporting protected aquatic species and the biodiversity and conservation value of water dependent ecological sites that may be designated at a local, national or international level.

6.5.3 The DCO Site is located between the Witham Management Catchment within the Anglian River Basin Management Plane (RBMP) and the Lower Trent and Erewash Management Catchment within the Humber RBMP. There are six Water Framework Directive (WFD) designated watercourses within the study area, including the River Trent from Carlton-on-Trent to Laughton Drain; River Toll (Witham); Marton Drain Catchment; Seymour Drain Catchment; and Skellingthorpe Main Water Body.

6.5.4 In addition to the WFD watercourses, there are several undesignated tributaries of these waterbodies present within the DCO Site, along with drains, ditches and ponds. The watercourses within the DCO Site are either man-made or extensively modified.

6.5.5 There are numerous standing waterbodies and ponds located across the DCO Site. The largest of which is Littleborough Lagoon and is a Local Wildlife Site (LWS). This is a shallow lagoon within a flood bank and drain of botanical and ornithological importance.

6.5.6 The topography of the hydrology study area (which is approximately 1 km around the DCO Site) is generally flat. The topographical highs are found within the north and the topographical lows are associated with the River Trent waterbody and its floodplain, resulting in a gentle slope from north-east to south-west on its western bank along the Grid Connection Route. The land use within the study area is generally a mosaic of arable farmland and, with patches of woodland, drains and ponds scattered across the area. The River Trent bisects the study area, with the Solar and Energy Storage Park located east of this river.

6.5.7 The DCO Site is primarily underlain by three bedrock geologies, of which all are mudstone formations. These include Scunthorpe Mudstone Formation – mudstone and limestone, interbedded; Penarth Group – mudstone; and Mercia Mudstone Group – mudstone.

6.5.8 The superficial deposits are generally patchy across the study area. These include alluvium (clay, silt, sand, and gravel); Holme Pierrepont Sand and Gravel Member; till (diamicton); and Mid-Pleistocene glaciofluvial deposits (sand and gravel). However, much of the Solar and Energy Storage Park has no recorded superficial deposits.

6.5.9 The majority of the Solar and Energy Storage Park Site lies within Flood Zone 1 (less than 1 in 1,000 annual probability). Some areas of higher risk are present in areas associated with watercourses (between 1 in 100 and 1 in 1000 annual probability).

6.5.10 The majority of the Grid Connection Route lies within Flood Zone 3 (1 in 100 or greater probability of flooding), i.e. high risk. There are flood defences that border the River Trent and its floodplain through its entire length through the Scheme.

Assessment of Effects

6.5.11 A number of activities during construction, operation, and decommissioning phases are likely to generate impacts, which, if unmitigated, have the potential to affect the water environment. Environmental considerations were taken into account during the design of the Scheme in order to avoid and/or reduce potential impacts on water environment receptors.

6.5.12 A number of standard and embedded measures have been identified, which would be implemented during construction to manage the impacts and reduce the effects that the construction of the Scheme would have on the water environment. The construction of the Scheme will take place in accordance with a Construction Environmental Management Plan (CEMP). The CEMP will detail the measures that would be undertaken during construction to

mitigate the temporary effects on the water environment. The measures within the CEMP will focus on managing the risk of pollution to surface waters and the groundwater environment. It will also consider the management of activities within floodplain areas (i.e. kept to a minimum and with temporary land take required for construction to be located out of the floodplain as far as reasonably practicable).

6.5.13 The majority of construction works across the DCO Site are buffered from watercourses and on relatively flat topography. As such, the risk to watercourses from construction activities is considered generally low. The greater risks of adverse impacts are where direct works are required within a watercourse.

6.5.14 Following the implementation of the embedded mitigation set out in the PEI Report, including best practice measures secured via the CEMP, the effects for surface water, groundwater, or flood risk during construction are considered **negligible, slight adverse, neutral or no change**, and therefore **not significant**.

6.5.15 During the operational phase, there is the potential for adverse impacts without mitigation, but these are considered to be **not significant**.

6.5.16 Potential impacts from the decommissioning phase of the Scheme are similar in nature to those during construction, as some ground works would be required to remove infrastructure installed. A detailed DEMP will be prepared prior to decommissioning to identify required measures to prevent pollution and flooding.

Mitigation Measures

6.5.17 The Scheme has been designed, as far as possible, to avoid and minimise impacts and effects on the water environment through the process of design development, and by embedding measures into the design of the Scheme.

6.5.18 A number of standard and embedded measures have been identified, which would be implemented during construction to manage the impacts and reduce the effects that the construction of the Scheme would have on the water environment. These include the use of the CEMP which will incorporate measures to prevent an increase in flood risk or pollution during the construction works, in addition to the provision of temporary settlement and drainage measures. This will be supported by a Water Management Plan (WMP) that will provide greater detail regarding the mitigation to be

implemented to protect the water environment from adverse effects during construction.

6.5.19 Construction works undertaken adjacent to, beneath and within watercourses will comply with relevant guidance, including Environment Agency and Defra guidance documents.

6.5.20 An Outline Surface Water Drainage Strategy will be submitted with the DCO Application which will provide for the attenuation of surface water runoff from the operational Solar and Energy Storage Park, whilst minimising flood risk to the Site and surrounding areas.

6.5.21 The solar PV panels will be off set from watercourses, the point of measurement will be agreed with the Environment Agency through further consultation. Where flood depths exceed 0.8 m above ground level solar PV panel height, within areas of Flood Zone 1, may be raised or the area avoided.

6.5.22 A specific Flood Risk Assessment (FRA) has been prepared for the DCO Site and includes a review of the current and future flood risk to the Site from all sources. This will inform the Scheme design and set out any proposed mitigation requirements that are to be addressed within the Surface Water Drainage Strategy,

6.5.23 There are considered to be no significant residual effects for surface water, groundwater or flood risk during the construction, operation and decommissioning phases of the Scheme. The assessment will be reviewed and revised where necessary at the ES stage when further design detail is available and further consultation has been undertaken with statutory bodies.

6.6 Landscape and Visual Amenity

Baseline and Context

6.6.1 **PEI Report Volume 1: Chapter 10 Landscape and Visual** presents the findings of an assessment of the potential significant effects on the existing landscape/ townscape, designations, and views, which have been identified as part of the baseline. Landscape effects relate to changes to the landscape as a resource, including physical changes to the fabric or individual elements of the landscape, its aesthetic or perceptual qualities and landscape character. Visual effects relate to changes to existing views of identified visual receptors (‘people’), from the loss or addition of features within their view due to the Scheme.

6.6.2 The Landscape and Visual Impact Assessment identifies the sensitivity and overall significance of landscape and visual effects within the identified study area. The landscape and visual baseline assessments have been based on desk study and visual field work in early 2022.

6.6.3 Landscape receptors of the Scheme include National Character Area (NCA) 48 (Trent and Belvoir Vales), which covers the entirety of the study area. A number of regional, county and local landscape receptors were also identified as part of the baseline. Visual receptors in the area include recreational users,

residents, visitors to the area, employment and institutional users, and motorists using the highway network.

Assessment of Effects

6.6.4 Embedded mitigation has been included within the Scheme design to reduce the landscape and visual effects of the Scheme. Without these measures, the effects of the Scheme on the landscape and visual receptors assessed within **PEI Report Volume 1: Chapter 10 Landscape and Visual** would be greater than the effects presented in this section of the NTS. Areas of planting and positioning of the Scheme have been designed around the following principles:

- Careful siting of the Scheme within the Landscape;
- Conserving existing vegetation patterns; and
- Sensitive design in relation to form, colour, and materials.

Construction Phase (2025 to 2027-28)

6.6.5 At a county level, construction would result in **no significant** effects to the Landscape Character Areas (LCAs). The level of effect would range from **minor adverse** to **neutral** and is considered to be temporary and short-term.

6.6.6 At a district level, there would be localised changes to landform and the perception of construction activity in parts of the Trent Valley LCA and the Northern Cliffs Foothills LCT adjacent to the Scheme, reducing the level of tranquillity locally. Construction would result in a **moderate adverse** effect, which is considered **significant**, albeit temporary and lasting only for the duration of the construction works.

6.6.7 Construction would result in **negligible adverse** or **neutral** effects to the remaining district level LCAs. These effects are considered to be **not significant.**

6.6.8 The DCO Site is located in Local Landscape Character Area (LLCA) 02: Ancient Woodland Plateau, LLCA 05: Somerby & Knaith Woodlands and LLCA 06: Clay Farmlands. Construction will result in **significant** effects, albeit temporary, on three LLCAs.

6.6.9 Construction activities are expected to result in **moderate or major adverse** effects for residential receptors in close proximity to the DCO Site. There effects are considered to be **significant**. This would result from the

introduction of construction activity at close range across a wide extent of a view.

6.6.10 Residential receptors located in the wider study area would experience **minor, negligible and neutral** effects during construction, reducing quickly with increasing distance from the Scheme, these are considered to be **not significant.**

6.6.11 Elevated views of the construction site are only available from considerable distance and locations include high ground to the east at Tillbridge Lane Viewpoint, east of Ingham and Fillingham and north of Glentworth. Visual effects are considered to be **negligible neutral** and therefore **not significant**.

6.6.12 Views from the western area of the study will be either barely discernible or confined to upper sections of cranes or fully screened by intervening landform and vegetation. Visual effects are estimated to range from **negligible to neutral** and therefore **not significant**.

6.6.13 People walking on public right of way (PRoW) LL|Knai|44/2 and sections of LL|Upto|53/1 will experience **major adverse** effects due to construction located adjacent along the footpath. This is considered **significant**.

6.6.14 Visibility from LL|Mton|69/1 north of the A1500 (Stow Park Road), LL|Stow|70/1 south of Willingham by Stow joining Marton Road, and LL|Knai|44/1 will be limited due to filtered or screened views due to intervening landform and vegetation. Visual effects are considered to be **moderate to minor adverse**, (**significant**).

6.6.15 People walking on the wider PRoW network beyond the Scheme in the wider study area will experience **no significant** effects resulting from construction due to intervening landform, vegetation and existing built structures.

6.6.16 Views of construction from the local road network will be visible along some sections of the road network. Roadside vegetation can filter open views of the site or screen views of the Scheme depending on the season. Occasional views of construction will be available through gaps in vegetation, but they will be fleeting and oblique to the direction of travel. Where more open views from the road network are available the visual effects are considered to be **moderate-major adverse (significant)**, this reduces to **minor-negligible adverse-neutral (not significant)** along the remaining road network.

6.6.17 Visual effects for train passengers along the nearby train line will be **moderate-minor adverse**, although visual effects will be fleeting and oblique to the direction of travel.

Operational Impacts – Year 1

6.6.18 Operational phase impacts have been assessed in both the first year during winter (when there are no leaves on vegetation) and in Year 15 during summertime (best case, after planting has established), in line with the requirements set out in professional guidance.

6.6.19 The operation of the Scheme would result in **no significant** effects to the LCAs defined at County level. The level of effect will range from **minor adverse** to **neutral** and is considered to be temporary and short-term in nature.

6.6.20 At a district level, the Scheme will result in **no significant** effect to LCAs, with the level of effect ranging from **minor adverse** to **neutral**.

6.6.21 Operation will result in **negligible** or **neutral** effects to the remaining district level LCAs. This is considered to be **not significant**.

6.6.22 At a local level, the operation of the Scheme would result in a **major adverse** effect to LLCA 02 and LLCA 06, and a **moderate-major** adverse effect at LLCA 03. This is considered to be **significant**.

6.6.23 Residential receptors in close proximity to the Scheme would typically experience **major or moderate adverse (significant)** effects, during year 1 of operation. The Scheme layout includes an offset from residential properties and proposes mitigation planting, but this would not be established at Year 1. The visual effects relate to the visibility of the PV arrays, which will be prominent in available close distance views for residents along Willingham Road and Marton Road, Clay Farm, Park Farm and a number of residents along Kexby Lane and Station Road.

6.6.24 For residential receptors in the wider study area, operational effects would be **minor, negligible** and **neutral (not significant),** reducing with increasing distance from the Scheme.

6.6.25 Elevated views of the operational site are only available from considerable distance and locations include high ground to the east at Tillbridge Lane Viewpoint, east of Ingham and Fillingham and north of Glentworth. Visual effects are considered to be **negligible neutral** considering the distance, intervening vegetation and gently undulating landform. This is considered to be **not significant**.

6.6.26 Views from the western section of the study would be barely discernible and confined to upper section of PV panels or fully screened by intervening landform and vegetation and would result in **negligible** to **neutral (not significant)** effects.

6.6.27 People walking PRoW LL|Knai|44/2, sections of LL|Upto|53/1 will experience **major adverse (significant)** visual effects due to the PV arrays located close to the footpath.

6.6.28 Views from LL|Mton|69/1 north of the A1500 (Stow Park Road), LL|Stow|70/1 south of Willingham by Stow joining Marton Road, and LL|Knai|44/1 will be

limited due to filtered or screened views due to intervening landform and vegetation. Visual effects are considered to be **moderate** to **minor adverse**.

6.6.29 People walking on the wider PRoW network beyond the Scheme in the wider study area will not experience significant visual effects during Year 1 due to intervening landform, vegetation and existing built structures.

6.6.30 Views of the Scheme from the local road network will be highest along sections of Clay Lane, Willingham Road, Marton Road, and section of Kexby Lane and Station Road. Roadside vegetation would filter open views of the Scheme. Occasional views of the Scheme will be available through gaps in vegetation, but they will be fleeting and oblique to the direction of travel. Where more open views from the road network are available the visual effects are considered to be **moderate-major adverse (significant)**, this reduces to **minor-negligible adverse-neutral (not significant)** along the remaining road network.

6.6.31 The majority of the train line is accompanied by trackside vegetation or embankments filtering or screening views of the Scheme. Visual effects for train passengers are considered to be **moderate-major (significant)** in available views. These effects would be fleeting and oblique to the direction of travel.

Operational Impacts – Year 15

6.6.32 Following the establishment of the planted vegetation in Year 15 and considering the benefit of summertime leaf, the visibility of the Scheme in close range views and the wider study area would be reduced.

6.6.33 The establishment of new planting would change the composition of some residential views and would screen the DCO Site. The majority of visual effects from residences will have reduced to **not significant** due to the establishment of the proposed planting. Medium visual effects with a **moderate adverse** effect will be experienced at Park Farm, sections of Willingham Road and Marton Road as well as Clay Lane and Clay Farm, these are considered to be **significant**.

6.6.34 Visual effects for residents located in the wider study area will range between **minor, negligible and neutral** (**not significant)** with increasing distance from the Scheme.

6.6.35 Elevated views at Tillbridge Lane Viewpoint and east of Ingham and Fillingham and north of Glentworth will remain largely unchanged as proposed landscape planting will not significantly alter the visibility of the site at that elevation and distance. Visual effects are considered to be **negligible neutral (not significant)**.

6.6.36 Views from the western section of the study area will not be discernible due to intervening landform and vegetation.

6.6.37 People walking PRoW LL|Knai|44/2, sections of LL|Upto|53/1 will experience medium visual effects. The significance of these effects will be **moderate adverse** due to the PV arrays located close to the footpath; this is considered to be **significant**.

6.6.38 Visibility from LL|Mton|69/1 north of the A1500 (Stow Park Road), LL|Stow|70/1 south of Willingham by Stow joining Marton Road, and LL|Knai|44/1 will be limited due to filtered or screened views due to intervening landform and vegetation. Visual effects are considered to be **minor adverse (not significant)**.

6.6.39 People walking on the wider PRoW network beyond the Scheme in the wider study area will experience **no significant** visual effects during Year 15.

6.6.40 Visual effects along the majority of the local road network will reduce to **not significant** due to the establishment of proposed tree planting and maintenance of existing and new hedgerows at 3m height. However, some sections will allow for filtered or open views for example at field gates, resulting in a **minor-moderate adverse** effect.

6.6.41 The visibility from elevated locations at a distance will remain largely unchanged as localised planting within or around the scheme will not affect long distance views materially. The Scheme will therefore still be barely discernible in elevated panoramic views and visual effects are considered to be **negligible neutral (not significant)**.

6.6.42 Visual effects for train passengers will remain similar and range from **moderate-minor** in available views. Visual effects will be fleeting and oblique to the direction of travel.

Decommissioning Effects (2088 to 2089-90)

6.6.43 Decommissioning effects on the landscape and visual amenity are likely to be similar to those temporary impacts experienced during construction of the Scheme but reduced on account of the containment provided by landscape mitigation measures including proposed vegetation, which will have reached maturity, and general landscape management measures.

6.6.44 However, the decommissioning phase has the potential to result in localised **significant adverse** landscape and visual effects, like the construction phase, due to the presence of machinery and general activity to remove Scheme structures. Likely decommissioning effects will be further detailed in line the development of final landscape mitigation measures as the Environmental Impact Assessment (EIA) progresses.

Mitigation Measures

6.6.45 The LVIA has, and still is, informing the iterative design process, incorporating design principles in response to policy requirements, published landscape character assessments and fieldwork analysis.

6.6.46 The Scheme design has undergone a series of design iterations to embed mitigation measures into the design during the PEI Report process. The design development will be completed during the Environmental Impact Assessment (EIA) process.

6.6.47 The Scheme will be designed to integrate with the local green infrastructure network, improving ecological and recreational connectivity across the Site. These will be fully detailed in the ES.

6.6.48 The design will incorporate minimum offsets from existing landscape features. This includes:

- Residential properties;
- Ancient woodland;
- Woodland;
- Hedgerows;
- PRoW; and
- Watercourses.

6.6.49 The residual significant landscape and visual effects are due to the change in land use and the massing of the panels and associated structures. Whilst long term, the residual significant effects will be temporary. It will not be possible to mitigate all adverse effects due to the requirements and the scale of the Scheme, and in order to retain the overall vegetation pattern within the study area.

6.7 Noise and Vibration

Baseline and Context

6.7.1 **PEI Report Volume 1: Chapter 11 Noise and Vibration** presents the findings of an assessment of the potential significant effects of the Scheme on noise and vibration of the DCO Site and surrounding area. Baseline noise monitoring was carried out to establish the existing noise climate in the area. Sensitive receptors which have the potential to be affected by the Scheme were identified.

6.7.2 During the surveys the dominant noise source at the majority of the locations was observed to be road traffic from the surrounding road network. Additionally, at certain locations, train movements had a substantial

contribution to the noise environment. Local noise sources that influence noise conditions are fauna, farming activities and local resident activities.

Assessment of Effects

6.7.3 The effect of noise and vibration generated during the construction and operational phases of the Scheme are considered at nearby sensitive receptors. The sensitive receptors considered are the nearest receptors to the Site (i.e. the receptors that will experience the highest levels of noise and vibration). Potential noise and vibration effects during the construction and decommissioning phases are likely to include works activities associated with site preparation, plant installation, substation construction, cable laying, and construction-related vehicle movements within the DCO Site boundary and along access routes. Construction noise levels will be controlled through the use of embedded mitigation and the use of a CEMP, which will be published alongside the ES.

6.7.4 Examples of best practicable means that will be implemented during construction works to control noise and vibration, include:

- Selection of inherently quiet and low vibration equipment, compliant with UK noise emission requirements;
- Drop heights of materials will be minimised;
- Plant and vehicles will be sequentially started up rather than all together;
- Off-site pre-fabrication where reasonably practicable;
- Use of screening locally around significant noise producing plant and activities;
- Regular and effective maintenance by trained personnel will be undertaken to keep plant and equipment working to manufacturer's specifications;
- All construction plant and equipment to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use;
- Loading and unloading of vehicles, dismantling of site equipment or moving equipment or materials around the Order limits to be conducted in such a manner as to minimise noise generation, as far as reasonably practicable;
- All vehicles used on-site shall incorporate reversing warning devices as opposed to the typical tonal reversing alarms to minimise noise disturbance where reasonably practicable; and

- Provision of information to the relevant local authority and local residents to advise of potential noisy works that are due to take place.

6.7.5 For the purposes of providing an assessment of likely significant noise effects the Study Area has been determined by receptors within 500m of the DCO Site. It is considered that receptors further than 500m will experience considerably lower levels of noise and vibration emissions as these will attenuate over distance, resulting in negligible noise and vibration effects from the Scheme; this is confirmed by the modelling output and conclusions in **PEI Report Volume 1, Chapter 11: Noise and Vibration**.

Construction (2025 to 2027-28) and Decommissioning (2088 to 2089-90) Phases

6.7.6 The overall impact of construction noise works has been assessed as **not significant**.

6.7.7 It is anticipated that the vibration at nearby sensitive receptors will be **not significant** for construction and decommissioning activities.

6.7.8 The impact of construction works traffic noise would result in a **negligible** noise effect on all road links with the exception of Marton Road, where construction traffic is calculated to result in a **minor adverse** effect; this is considered to be **not significant**.

Operational Phase (2028 to 2088)

6.7.9 For the assessment of operational noise during the daytime (07:00 to 19:00 hours in the summer and 08:00 to 18:00 in the winter), the typical background level has been defined from a Sunday daytime period with lower noise levels compared to a weekday or Saturday, as to provide a worst-case assessment scenario. It has been assumed that all plant is in operation continuously during the daytime.

6.7.10 It is anticipated that noise effects at nearby sensitive receptors will be **not significant** during operation.

Mitigation Measures

6.7.11 The following mitigation measures would be in place during the construction phase:

- Use of best practicable means set out in the CEMP and DEMP;
- Development of a construction noise monitoring scheme;

- Monitoring and reporting of noise complaints to the Applicant for immediate investigation and action; and
- Use of a good communication strategy for liaison with occupiers of sensitive receptors that may be adversely affected by construction noise and vibration.

6.7.12 The proposed Scheme minimises operational impacts by:

- Locating the BESS compound in an area away from large concentrations of receptors such that noise emissions from the BESS are less impactful;
- Transformers will be housed in cabins, which will attenuate noise emissions;
- Plant selection (quiet as possible);
- Screening of noise sources; and
- Design of layout including locating inverters and transformers at positions that will not give rise to likely significant effects.

6.8 Socio-Economics and Land Use

Baseline and Context

6.8.1 **PEI Report Volume 1, Chapter 12 Socio-Economics and Land Use** presents the findings of an assessment of the likely significant effects on socio-economics and land use as a result of the Scheme.

6.8.2 The Scheme has the potential to have a range of effects, some of which would be temporary whilst others would be permanent. Due consideration is given to the Scheme in terms of effects on the following:

- Employment generation;
- Gross Value Added (GVA);
- Public Rights of Way (PRoW);
- Agricultural land; and
- Local amenities and land use (residential properties, business premises, community facilities and development land).

6.8.3 The baseline conditions are summarised in the sections below.

Existing DCO Site and land use

6.8.4 The DCO Site mainly consists of agricultural fields interspersed with trees, woodlands, hedgerows, linear tree belts and farm access tracks. Immediately

surrounding the Solar and Energy Storage Park are several small rural villages, including Knaith, Gate Burton, Marton, Willingham by Stow and Kexby. There are limited industrial or commercial land uses within the immediate vicinity. Other infrastructure within the surrounding area includes 400kV overhead powerlines carried by pylons. These extend from Cottam Substation within the Grid Connection Route.

Agricultural Land

6.8.5 An ALC survey has been undertaken on the Solar and Energy Storage Park site. The quality of agricultural land is graded on a sliding scale, with Grade 1 representing the best quality agricultural land, and Grade 5 being the least favourable.

6.8.6 The Solar and Energy Storage Park comprises approximately 667ha of land, within which no Grade 1 or Grade 2 land is present. Approximately 74ha, 11% of the Solar and Energy Storage Park is comprised of subgrade 3a land, and 493.9ha (74%) comprises subgrade 3b agricultural land. Approximately 67.3ha (10%) of the Solar and Energy Storage Park is estimated to be subgrade 3b land. The remaining area is classified as non-agricultural land.

Population and Employment

6.8.7 According to the ONS Mid-Year Population Estimates, the residential population of the Study Area (the 60-minute drive radius) has increased from 4,628,317 in 2011 to 4,888,882 in 2020, representing a 5.6% increase over 9 years. This population growth rate is slightly lower than the overall rates recorded for the East Midlands and England during the same time period (7.2% and 6.5% respectively).

6.8.8 According to the Annual Population Survey, in 2020 the economic activity rate in the Study Area was 77.7%, generally in line with the averages of 79.5% in the East Midlands and 79.4% in England as a whole. The unemployment rate for working age residents in the Study Area was 5.2%. This is similar to the rate for the East Midlands (5%) and England (4.9%).

Local Economy

6.8.9 Gross Value Added (GVA) per head is slightly lower in the Study Area (£17,130) compared to the average for the East Midlands (£21,845) and for England (£28,096).

6.8.10 The mining, quarrying and utilities broad industrial group (which includes employment from the generation of energy) is one of the least prominent sectors across the Study Area (1.4%) and also in the East Midlands (1.4%)

and England (1.1%) as a whole. The construction industry is more common in the Study Area (5.5%) as well as regionally (4.7%) and nationally (4.9%).

Public Rights of Way (PRoW)

6.8.11 Public Rights of Way (PRoW) are primarily located west of the River Trent, outside the Solar and Energy Storage Park.

6.8.12 There is one PRoW located within the Solar and Energy Storage Park boundary: LL|Knai|44/2 (footpath), which is the prolongation of LL|Knai|44/1 (footpath). These two PRoWs connect Kexby Lane (east) to Station Road / Knaith Hill (west). The two PRoW cover a combined distance of circa 1.2km (about 600m each).

6.8.13 The Grid Connection Route will pass through several footpaths, these include:

- LL|Mton|66/4;
- NT|Cottam|FP1;
- NT|Cottam|FP3;
- NT|Cottam|RB4;
- NT|South Leverton|BOAT16; and
- NT|Rampton|FP5.

Local receptors

6.8.14 The area around the DCO Site is mostly rural and relatively sparsely populated. There are two residential properties within the DCO Site on Clay Lane to the south of the Solar and Energy Storage Park.

6.8.15 There are some agricultural business premises lying directly within the DCO Site such as N K Taylor Farm. There is a business management consultancy approximately 500m west of the DCO Site. A furniture shop also lies 500m north of the Site.

6.8.16 There are two schools located in proximity to the DCO Site. These are Frances Olive Anderson C of E Primary School approximately 1km to the north and The Marton Academy Primary School approximately 1km to the south.

6.8.17 There is a range of community and recreational facilities within proximity of the Scheme. There are no police or fire stations within 2km of the DCO Site.

Assessment of Effects

Construction (2025 to 2027-28)

6.8.18 The estimated construction period is expected to last 24 to 36 months. Therefore, likely effects will be of a medium-term temporary nature. Although these jobs are temporary, they represent a positive economic effect for a substantial period. It is estimated the Scheme will require an average 400

gross direct full-time employment (FTE) jobs on-site per day during the construction period.

6.8.19 The direct, indirect and induced employment, expenditure and upskilling created from the construction of the Scheme must be judged in the context of the labour pool of construction workers in the Study Area (60-minute travel area) (106,000). Taking this into account, the impact of construction employment generation in the Study Area has been assessed as temporary low beneficial, which results in a medium-term temporary **minor beneficial** effect. This is considered to be **not significant**.

6.8.20 Analysis of the hotel, bed and breakfast and inns accommodation sector has been undertaken to assess the likely capacity against the demand from the potential peak construction workforce, and indicates, considering existing seasonal demand and typical occupancy, that capacity is sufficient, and that the workforce can be accommodated within existing provision within a 30-minute drive time radius of the Site. Given this, there would be **no effect** on the hotel, bed and breakfast, and inns accommodation sector arising from the Scheme.

6.8.21 The impact of direct GVA generation from the construction phase on the economy within the Study Area has been assessed as medium-term temporary medium beneficial, which results in a temporary **moderate beneficial effect**. This is considered **significant**.

6.8.22 The impact on the national economy as represented by the total GVA generated has been assessed as medium-term temporary low beneficial, which results in a temporary **minor beneficial** effect. This is considered **not significant**.

6.8.23 Changes to journey times, local travel patterns, and certainty of routes for users would arise from the temporary diversions of PRoW. In a small number of cases, where PRoWs cross the grid connection construction spread, diversions will be required to be put in place. Diversions would all be temporary. Due to the limited scale of impacts upon PRoWs, these effects are assessed to be very low adverse, which results in a **minor adverse** effect. This is considered to be **not significant**.

6.8.24 From the construction phase, temporary use of agricultural land will occur. The total area of agricultural land temporarily required from construction and throughout operation of the Scheme would be approximately 667ha. The area of land which would be required during construction only and can be returned to farming use comprises approximately 73.6ha of grade 3a land. As there is no land classified as

Grades 1 or 2, the sensitivity is assessed to be low. As the loss of the entire area of BMV agricultural land is reversible (after operation), the temporary effect of the Scheme on the use of agricultural land is assessed to be **not significant**.

6.8.25 Taking into account the results of the air quality, noise, traffic and visual assessments, there are no residents, businesses or community facilities that would likely experience a significant effect on their amenity during construction from effects acting in combination. Therefore, there are no impacts arising from the Scheme on these local amenities during construction which results in **no effect**, and which is considered **not significant**.

6.8.26 There are no planning applications / permissions affected by land required for the operation of the Scheme and thus no effects have been assessed. The Cottam Power Station site is identified as being a Priority Regeneration Area within the emerging Local Plan, however, the site isn't currently allocated for any alternative uses.

Operation (2028 to 2088)

6.8.27 The impact of operational employment generation in the local economy would be slightly increased by the Scheme. However, the increase would be marginal and therefore the impact has been assessed as permanent, very low beneficial which results in a permanent **negligible** effect, which is considered **not significant**.

6.8.28 PRoWs are not expected to be affected during operation, however in the event that PRoW closures are required for maintenance activities temporary diversions will be put in place. Due to no closures expected, the impact on users of PRoWs has been assessed as very low which results in **no effect**. This is considered **not significant**.

6.8.29 Taking into account the results of the noise, traffic, air quality and visual assessments, there are no residents, community facilities or businesses that would likely experience a significant effect on their amenity during operation. Therefore, there are no impacts arising from the Scheme on local amenities which results in **no effect**, and which is considered **not significant**.

Decommissioning (2088 to 2089-90)

6.8.30 The direct, indirect and induced employment, expenditure and upskilling created from the decommissioning of the Scheme must be judged in the context of the labour pool of construction workers in the study area. The study area currently has around 106,000 workers in its construction sector. The impact of decommissioning employment generation in the local economy has been assessed as temporary medium beneficial, which results in a medium-term temporary **minor beneficial** effect. This is considered **not significant**.

6.8.31 The impact of employment loss in the local economy during the decommissioning phase during the long-term has been assessed as permanent very low adverse. This results in a permanent **negligible** effect, which is considered **not significant**.

6.8.32 Due to the limited scale of impacts upon PRoWs, effects are assessed to be very low adverse, which results in a **minor adverse** effect. This is considered **not significant.**

6.8.33 Regarding the decommissioning phase, an assessment will be made of the land and soil, and a programme of remedial action will be agreed to return land to arable agricultural use. The land will be in the same or better condition than it is currently as a result of the expected natural enhancement through approximately 60 years of being set-aside and the remedial actions undertaken, however this is likely to be temporary and subject to good agricultural land management practices being adopted after decommissioning. Overall, given the short time frame of any disruption to farming activities during decommissioning and the return of the DCO Site to solely farming practices following completion of decommissioning, the magnitude of change during the decommissioning phase is considered to be low and the significance of effect therefore **not significant**.

6.8.34 Taking into account the results of the noise, air quality visual and transport assessments, there are no residents, community facilities or businesses that would likely experience a significant effect on their amenity during operation. Therefore, there are no effects arising from the Scheme on local amenities which results in **no effect**, and which considered **not significant**.

Mitigation Measures

6.8.35 Mitigation measures are embedded within the Scheme, as set out in **PEI Report Volume 1 Chapters 10, 11, 13 and 15**, to reduce other construction and operational effects which in turn will mitigate the effects on the local community and existing facilities from a socio-economic and land use perspective.

6.8.36 The Scheme has been designed to take into account the quality of agricultural land such as positioning the permanent infrastructure (the substation and the BESS) to avoid best and most versatile land as far as possible, and also minimising impacts on PRoW.

6.8.37 There are no residual significant effects on Socio-economics and Land Use expected following the implementation of mitigation.

6.9 Transport and Access

Baseline and Context

6.9.1 **PEI Report Volume 1: Chapter 13 Transport and Access** reports the findings of an assessment of the likely significant effects on traffic and transport as a result of the Scheme during construction and decommissioning. Operational impacts have been scoped out due to the low number of trips associated with maintenance and operation.

Strategic Highway Network

6.9.2 The A1(M) is a dual carriageway road which forms part of the trunk road network and is managed by National Highways. The A1(M) can be accessed via A614 Blyth Interchange, A638, A631 and A156 Gainsborough Road to the north or via A57, Markham Moor Interchange and A156 Gainsborough Road to the south.

6.9.3 The A614 is a single carriageway road which links the A1(M) to the A638 which runs north to Doncaster. The A614 is classified by the Department of Transport (DfT) as part of the Major Road Network (MRN) and provides access to the A631, which joins with A631 to the northwest and provides access to A156 from the north.

6.9.4 The A57 is a single carriageway road which links the A1(M) to the A46 to the west of Lincoln. The A57 is classified by the DfT as part of the MRN and provides access to the A156 from the south. The A57 also provides access to Laneham Road, which joins with Rampton Road and provides access to Cottam Road from the west.

Local Highway Network

6.9.5 The A156 High Street/ Gainsborough Road is a single carriageway road that runs north-south, bordering the Solar and Energy Storage Park to the north and west.

6.9.6 The B1241 is a rural single carriageway road that runs both north-south and east-west, to the north and east of the Solar and Energy Storage Park

6.9.7 Willingham Road, which becomes Marton Road, are both narrow rural roads. The two roads provide a physical border to the south and east of the Solar and Energy Storage Park. The route has signing stating it is unsuitable for HGV use.

6.9.8 Clay Lane is a no-through road single lane track accessed via the A156 to the southwest of the Solar and Energy Storage Park and passing underneath the railway via a relatively narrow and low underpass.

6.9.9 The A1500 Stow Park Road/ Marton Road/ Till Bridge Lane runs east-west, to the south of the Solar and Energy Storage Park.

6.9.10 The Grid Connection Route is planned to run in a southwest direction from the Solar and Energy Storage Park, crossing the A156 (to the south of Marton), the A1500 (to the east of Marton) and the River Trent.

6.9.11 Cottam Road is a single carriageway road located circa. 6km to the southwest of the Solar and Energy Storage Park

Walking Facilities

6.9.12 Due to the rural location of the Solar and Energy Storage Park, there is limited footway provision in the surrounding area. Footways are limited to the settlements that surround the Solar and Energy Storage Park and include the A156, B1242 (north), B1242 (east) and the A1500.

6.9.13 There is one PRoW crossing the Solar and Energy Storage Park (PRoW Knai 44/2), and three further PRoW which run in close proximity the proposed boundary of the Solar and Energy Storage Park (PRoW Knai 44/1, PRoW Mton 69/1, and PRoW Upton 53/1.

6.9.14 Based on the proposed Grid Connection Route, the following PRoW have the potential to be impacted:

- PRoW Mton 68/1;
- PRoW Mton 66/4;
- PRoW Cottam FP1;
- PRoW Cottam FP3;
- PRoW Cottam RB4;
- PRoW Cottam RB6;
- PRoW Treswell FP4;
- PRoW Treswell FP5
- PRoW Rampton FP6; and
- PRoW South Leverton BOAT16.

Cycling Facilities

6.9.15 There are no on or off carriageway dedicated/ marked cycling facilities within the immediate vicinity of the Solar and Energy Storage Park. The B1421 to the north and east of the site, as well as the smaller roads closer and within the Solar and Energy Storage Park itself are likely to be attractive to leisure cycling. The Solar and Energy Storage Park could be potentially accessed by cyclists from Lea, Willingham, Stow, Upton and Brampton located within an approximate 2.5km cycle radius.

6.9.16 There are no formal cycle facilities in the vicinity of the Solar and Energy Storage Park. The nearest National Cycle Network route (between Harby and Lincoln) is located approximately 12km to the south.

6.9.17 There are no on or off carriageway dedicated/ marked cycling facilities within the immediate vicinity of the Grid Connection Route. However, there is a number of minor roads within the western extents of the Grid Connection

Route within Nottinghamshire, including Cottam Road which is relatively lowly trafficked and would appear to be attractive to leisure cyclists. Additionally, this area could be potentially accessed by cyclists from Coates, South Leverton, Rampton and Treswell, all within a 2.5km cycle distance.

Equestrian Facilities

6.9.18 There are no formal equestrian facilities (i.e. Bridleways) in the vicinity of the Solar and Energy Storage Park, however, some of the surrounding roads are generally lightly trafficked and could be used by equestrians on this basis.

6.9.19 There are formal equestrian facilities in the vicinity of the Grid Connection Route along its western part within Nottinghamshire county. These include Bridleways, Restricted Byways and Byways Open to All Traffic (BOAT).

Public Transport Facilities

6.9.20 Bus stops are located on the A156 and B1421 (north and east) which broadly surround the Solar and Energy Storage Park. The Grid Connection Route is served by bus stops in the western extent of the study area. The bus stops are situated approximately 1.3km to the west of Cottam Substation on Cottam Lane/ Green Lane on the eastern side of Treswell.

6.9.21 Gainsborough is located to the north of the Solar and Energy Storage Park and has two railway stations, Gainsborough Central and Gainsborough Lea Road.

6.9.22 Gainsborough Central Station is located approximately 6km to the north of the Solar and Energy Storage Park and runs services between Sheffield and Cleethorpes.

6.9.23 Gainsborough Lea Road Station is located approximately 4.5km to the north of the Solar and Energy Storage Park and runs services from Sheffield to Lincoln / Cleethorpes and Peterborough to Doncaster.

6.9.24 Retford Station is located approximately 10.5km to the west of Cottam Substation and runs services to Lincoln / Cleethorpes and Sheffield / Lincoln.

Assessment of Effects

6.9.25 The embedded design mitigation measures referred to below have been incorporated into the Scheme design for the construction and decommissioning phases. These measures would be secured through the DCO, primarily by a detailed Construction Traffic Management Plan (CTMP) including:

- Providing suitable points of access for construction vehicles with adequate visibility, with any supporting improvements (e.g. vegetation clearance) to take place within the highway boundary and the DCO Site boundary if required;

- Delivering internal construction routes through the Solar and Energy Storage Park, to allow vehicles to access all areas via the site access points;

- Maintaining access to/ along PRoW, or otherwise providing temporary PRoW diversion routes where necessary to avoid any PRoW closures or potential conflicts with the Scheme where possible. The diversion routes will be agreed with the local authorities prior to construction;

- Managing areas where the proposed construction route crosses any existing local access roads, including by maximising visibility between construction vehicles and other users (pedestrians and road users), implementing traffic management e.g. advanced signage to advise other users of the works, as well as manned controls at each crossing point (marshals/ banksmen), with a default priority that construction traffic will give-way to other users.

- Restricting HGV movements to certain routes;

- Reducing HGV movements during certain times of the day (e.g. between 07:00 and 09:00, as well as between 17:00 and 19:00), to avoid increasing traffic levels on the surrounding highway network during the traditional weekday peak hours;

- Implementing a Delivery Management System to control the bookings of HGV deliveries from the start of the construction period. This will be used to regulate the arrival times of HGVs via timed delivery slots, as well as to monitor compliance of HGV routing;

- Implementing a monitoring system to record the route of all HGVs travelling to and from the Scheme, to record any non-compliance with the agreed routing plan/ delivery hours and to communicate any issues to the relevant suppliers to ensure the correct routes are followed;

6.9.26 The embedded design mitigation measures referred to below would be implemented during the operational phase. These measures will be secured through the DCO:

- Providing suitable points of access for operational vehicles, including on the A156, Kexby Lane (North and South) and Marton Road;

- Converting the internal construction routes to maintenance routes, to allow operational vehicles to access all areas of the Solar and Energy Storage Park via the proposed access points during the operational phase;

- Prohibiting vehicles from using an level crossings and, subject to the findings of the Glint and Glare Assessment (to be carried out at ES stage), providing additional screening where required to ensure operational rail safety;

- Maintaining access to all existing PRoW within the Scheme, with no diversions or closures; and

- Controlling areas where the internal maintenance route crosses any existing PRoW or local access roads (such as providing gates), permitting only operational traffic to utilise these internal routes within the Solar and Energy Storage Park. Operational traffic should give-way to other users (pedestrians and road users) when utilising the crossing points. Visibility will be maximised between operational vehicles and other users, with warning signage provided if required.

6.9.27 The assessment shows that the construction phase is not expected to result in any significant impacts with respect to severance, pedestrian delay, pedestrian and cyclist amenity, fear and intimidation, with all showing **minor adverse** (Kexby Lane) or **negligible** (all other receptors) and is considered to be **not significant**.

6.9.28 The impact of accidents and safety on road link and junction receptors has been assessed as **negligible** and is considered to be **not significant**

6.9.29 The Scheme is expected to attract a low level of vehicle trips during the operational phase i.e. up to 15 vehicle arrivals and 15 vehicle departures daily, and a detailed assessment of this scenario has therefore been excluded from this PEI Report, as agreed in the Scoping Opinion.

6.9.30 Following the above assessment for the Solar and Energy Storage Park, **no significant effects** have been identified as a result of the Scheme on transport and access during any phase as all effects have either been categorised as **minor adverse** or **negligible**.

Mitigation Measures

6.9.31 No additional measures are expected for the construction and decommissioning phases, although potential carriageway widening, and vegetation may be required as part of the abnormal load route review.

6.9.32 No additional mitigation and enhancement measures are proposed for the operation phase, above the embedded mitigation measures set out in Section 6.9.26, given that there are not expected to be any significant effects as a result of the Scheme.

6.10 Human Health and Wellbeing

Baseline and Context

6.10.1 **PEI Report Volume 1, Chapter 14 Human Health and Wellbeing** reports the findings of an assessment of the likely significant effects on human health and

wellbeing as a result of the Scheme during construction, operation and decommissioning.

6.10.2 The study area was defined to include human health and wellbeing features likely to be at risk from possible direct and indirect impacts that might arise from the Scheme and comprises the following wards:

- Rampton and Sturton Wards in Bassetlaw District; and
- Lea, Stow and Torksey wards in the West Lindsey District.

6.10.3 According to 2020 mid-year population estimates, the total population of the study area is 12,058. The population in Lea is 2,106; in Stow is 2,379; in Torksey is 2,930; in Rampton is 2,273; and in Sturton is 2,370.

6.10.4 In 2020 the average proportion of residents of working age in the study area was 55.7%. This is lower than the average for the East Midlands (61.8%) and England (62.3%).

6.10.5 the average proportion of residents aged 65 and over in the study area is 30.2%. This is considerably higher than the rates recorded in the East Midlands (19.6%) and nationally (18.5%).

6.10.6 West Lindsey is the 146th most deprived local authority of 317 districts in England (where 1 is most deprived), Regarding the health deprivation domain, West Lindsey is the 143rd most deprived local authority. Bassetlaw is the 108th most deprived local authority in England. For health deprivation, Bassetlaw is ranked as the 68th most deprived local authority in England.

6.10.7 The proportion of residents within the study that experience limitations to their daily activities a little or a lot is 21.4%. This is slightly higher than 18.6% in the East Midlands and 17.6% in England as a whole.

6.10.8 ONS data states that the average life expectancy at birth for the study area is 81.9. This is in line with both the average for the East Midlands (81.1) and England (80.9).

6.10.9 The nearest hospital (with an accident and emergency department) to the DCO Site is Lincoln County Hospital which is approximately 18km to the south east of the site.

6.10.10 There are two GP surgeries within close proximity of the site. These are Marton Branch Surgery and Willingham-by-Stow Surgery both approximately 1km away from the site.

6.10.11 There are three schools located near to the site of the Scheme. These are Frances Olive Anderson Church of England Primary School approximately 1km to the north, The Marton Academy Primary School 1km to the south, and Sturton by Stow Primary School 2km to the south east.

6.10.12 There are no police or fire stations in direct proximity of the site. The nearest are Gainsborough Police Station and Gainsborough Fire Station both located approximately 5km north of the site.

Assessment of Effects

6.10.13 Mitigation measures being incorporated in the design and construction of the Scheme are set out below. Prior to the implementation of the mitigation, the Scheme has the potential to affect human health and wellbeing (positively or negatively), during construction, operation and during decommissioning, in the following ways:

- Access to Healthcare Services and Other Social Infrastructure;
- Air Quality, Noise and Neighbourhood Amenity;
- Accessibility and Active Travel;
- Access to Work and Training; and
- Social Cohesion and Lifetime Neighbourhoods.

6.10.14 Primary mitigation measures are embedded within the Scheme, as set out in the respective chapters, to reduce other construction and operational effects (such as noise and vibration, air quality, transport and access and socio-economics and land use) which in turn will mitigate the effects on the local community and existing facilities from a human health and wellbeing perspective.

6.10.15 The additional construction and decommissioning traffic flow will not exceed future baseline traffic flows and therefore the potential impact on access to healthcare services and other social infrastructure is considered to be **neutral.**

6.10.16 The assessment does not identify any significant impacts on the amenity of residents, during the construction and decommissioning phases. Air particulate concentrations are forecast to remain low on account of the low background levels and good industry practice control measures, and noise levels from the construction and decommissioning phases are not anticipated to lead to any impacts on health or mental health. Therefore, the impact on human health and wellbeing as a result of changes to air quality, noise, and neighbourhood amenity is expected to be **neutral**.

6.10.17 The proposed construction access roads within the DCO Site are not expected to cross any PRoW or cause temporary PRoW diversions. This is projected to be similar for the decommissioning phase. Therefore, the impact of the Scheme on accessibility and active travel is assessed as **neutral**.

6.10.18 The construction phase of the Scheme will support 400 net jobs per annum, with 228 per annum being taken up by residents within 60 minutes of the DCO Site. The decommissioning phase is expected to support the same number of jobs. The Scheme is assessed as having a **positive** effect on access to work and training during construction and decommissioning.

6.10.19 The construction and decommissioning phases of the Scheme are assessed to have a **neutral** impact on social cohesion and lifetime neighbourhoods.

6.10.20 The additional traffic flow generated during the operational phase will not exceed future baseline traffic flows and therefore the potential impact on access to healthcare services and other social infrastructure is considered to be **neutral**.

6.10.21 There will be no closures of PRoW during the operational phase and therefore the impact of the Scheme on accessibility and active travel is assessed as **neutral**.

6.10.22 During the operational phase, the Scheme will provide 14 jobs. This is assessed to be **neutral**.

6.10.23 During operation, the Scheme will have a **neutral** effect on social cohesion and lifetime neighbourhoods.

Mitigation Measures

6.10.24 Additional mitigation measures will be proposed to mitigate noise impacts at the three significantly affected receptors. This is detailed in **PEI Report Volume 1, Chapter 11: Noise and Vibration**. This will continue to be reviewed at the ES stage.

6.10.25 No other additional mitigation and enhancement measures are proposed for the construction, operation, and decommissioning phases of the Scheme, above the embedded measures set out in the respective chapters (such as noise and vibration, air quality, transport and access and socio-economics and land use), given that there are not expected to be any significant effects as a result of the Scheme.

6.11 Other Environmental Topics

Air Quality

6.11.1 This section considers the potential impacts and effects of the Scheme on air quality during construction, operation and decommissioning. The assessment relates to dust generation, and additional road traffic and plant emissions during the construction and decommissioning phases. The potential for operational impacts is also addressed.

6.11.2 The adoption of good site practice will be implemented through measures to control dust as outlined within the IAQM's 'Guidance on the assessment of Dust from Demolition and Construction' document that are commensurate with the level of risk identified in the assessment and the construction phase activities.

6.11.3 Mitigation measures will be incorporated into the Framework CEMP for the Scheme based on any mitigation that is 'highly recommended' in the IAQM dust guidance.

6.11.4 Dust generation during construction and decommissioning will be short-term and temporary and is not anticipated to induce significant effects on local air quality. Air quality impacts are therefore expected to be **negligible** and **not significant**.

6.11.5 Potential impacts on local air quality arising from the operation of the Scheme are considered to be **negligible** and **not significant**.

Glint and Glare

6.11.6 The definition of glint and glare for the purposes of this assessment is the effect of reflected sunlight causing harm or discomfort to a sensitive receptor. A glint is further defined as the momentary receipt of a bright light and a glare as the receipt of a bright light over an extended or continuous period of time.

6.11.7 Throughout and following statutory consultation, the design may be altered slightly and the parameters for the PV Arrays refined to respond to stakeholder comments. Therefore, a full assessment of Glint and Glare will be presented in the ES upon finalisation of the Scheme for the DCO Application.

6.11.8 At this stage it is not expected that there would be any significant effects from glint and glare. This is because, if glint and glare effects are identified as the design progresses, they can be relatively easily mitigated through a number of measures including for example adjusting the position of panels, removing panels, or vegetation planting to remove the line of site and risk of glint and glare. It is therefore anticipated that glint and glare effects will be **not significant**.

Ground Conditions

6.11.9 A Preliminary Risk Assessment identifies and evaluates potential land quality risks and development constraints associated with the Scheme.

6.11.10 Given the proposed Scheme, the sources identified and the nature of the likely exposure to existing human health receptors and that of the future users of the Solar and Energy Storage Park, the risk to human health is considered to be acceptable. Risks to controlled waters has been identified to be low to moderate/low, considering the presence of numerous drains in the drainage network. The risk to human health and controlled waters is considered acceptable.

Major Accidents and Disasters

6.11.11 This section summarises the potential effects of the Scheme on the risks of major accidents or disasters occurring and affecting the Scheme. Accidents" are an occurrence resulting from uncontrolled developments in the course of construction, operation and decommissioning (e.g. a major emission, fire or explosion). "Disasters" are naturally occurring extreme weather events or ground related hazard events (e.g. subsidence, landslide, earthquake).

6.11.12 An exercise was undertaken to identify all possible major accidents or disasters that could be relevant to the Scheme.

6.11.13 By their very nature, major accidents and disasters have the potential to lead to **moderate** or **major adverse significant** effects, and therefore the focus is on prevention and response planning to reduce the risk or effect of this happening. This is on-going through design development and consultation with relevant statutory consultees. However, at this stage, it is not expected that there is a significant risk of major accidents and disasters during construction, operation or decommissioning as a result of the Scheme

Telecommunications, Television Reception and Utilities

6.11.14 This section summaries the effects of the Scheme on telecommunication, infrastructure, television reception and existing utilities.

6.11.15 The risk of damage to utilities during construction would be minimised through embedded mitigation, which would involve those measures listed above and mapping infrastructure that crosses the Scheme and avoiding it through the design. The draft DCO will include protective provisions for the protection of electronic communication networks and utilities, and engagement with relevant statutory undertakers in this respect is ongoing. No further mitigation would be required.

6.11.16 The Scheme is unlikely to interfere with telecommunications infrastructure and therefore no effects are anticipated in the construction, operation and decommissioning phases.

6.11.17 The Scheme consists of fixed low-lying infrastructure and is therefore unlikely to interfere with digital television signals and therefore no effects are anticipated in the construction, operation and decommissioning phases.

6.11.18 The potential exists for utilities to be affected during the construction of the Scheme through damage caused as a result of excavation and engineering operations. Without any precautionary measures to avoid damage to utilities, this could lead to a short-term adverse effect. Precautionary measures will be included as part of the embedded mitigation for the Scheme, these measures, would reduce the likelihood of effects on utilities during construction. Therefore, no adverse effects are expected during construction.

6.11.19 The decommissioning phase would require below ground works to remove the grid connection cables; however, works would be undertaken within the footprint excavated during construction. Additionally, the embedded mitigation measures used during construction would also apply during decommissioning. Therefore, no adverse effects are predicted during decommissioning.

6.11.20 No effects on utilities are predicted as a result of the operational phase of the Scheme because no below-ground works will be required during operation.

Waste

6.11.21 This section discussions the expected waste streams from the Scheme and how they will be managed. In practical terms, wastes include surplus spoil,

scrap, recovered spills, unwanted surplus materials, packaging, office waste, wastewater, broken, worn-out, contaminated or otherwise spoiled plant, equipment, and materials.

6.11.22 During construction, the PV modules, racks, inverters, and other supporting equipment will be manufactured off-site to the specified sizes, and wastage during installation is expected to be minimal. Large-scale earthworks are not expected. All management of waste will be in accordance with the relevant regulations and waste will be transported by licensed waste hauliers to waste management sites which hold the necessary regulatory authorisation and/or permits for those wastes consigned to them. It is concluded that **no significant** effects are expected during construction.

6.11.23 Waste arisings from the day-to-day operation of the Scheme would include welfare facility waste and general waste (paper, cardboard, wood, etc). These wastes are expected to be minimal and would be managed by appropriately permitted carriers and facilities in line with appropriate environmental permits and requirements. Therefore, **no significant** effect is expected during the operation of the Scheme.

6.11.24 During the 60-year operational life of the Scheme, it is expected that there will be requirement for periodic replacement of some or all of the Solar and Energy Park elements. The ES will include an assessment of the likely impact of component replacement (e.g. panels, batteries, inverters, transformers) and outline what measures will be put in place to ensure that these components are able to be diverted from the waste chain. At the end of the Scheme's operational life, it will be decommissioned. A Framework Decommissioning Environmental Management Plan (DEMP) will be prepared as part of the EIA, that will set out the general principles to be followed in the Detailed Decommissioning Plan that will be prepared prior to decommissioning occurring. The effects of decommissioning are usually like, or of a lesser magnitude, than the construction effects, and therefore this considered **not significant**.

7. Summary and Conclusions

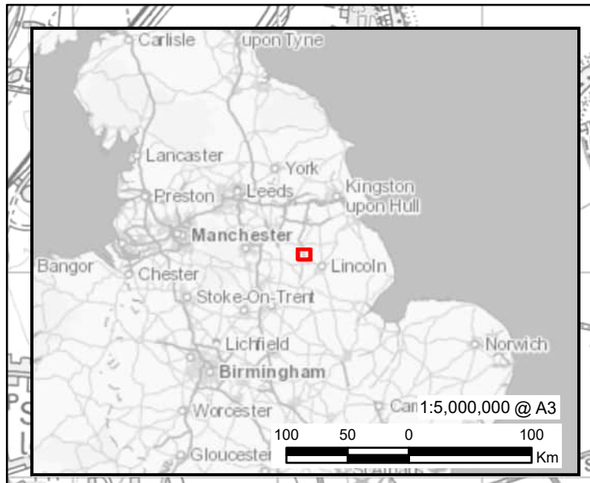
7.1.1 The PEI Report explains the interim findings of the EIA process that has been undertaken for the Scheme.

7.1.2 A number of environmental impact avoidance, design and mitigation measures have been identified to mitigate and control environmental effects during construction, operation (including maintenance) and decommissioning of the Scheme. It is proposed that these will be secured through appropriate requirements and other controls within the DCO for the Scheme, should this be granted.

7.1.3 Feedback from the formal consultation process will be taken into account when preparing the DCO application and in undertaking the EIA process. The PEI Report will be revised and further developed to prepare an ES that will accompany the DCO application. The ES will present the final findings and

conclusions associated with the EIA process, based on the proposed layout and design.

8. Figures



AECOM

PROJECT

Gate Burton Energy Park

CLIENT

Gate Burton ENERGY PARK

CONSULTANT

AECOM Limited
Sunley House
4 Bedford Park
Surrey, CR0 2AP, UK
www.aecom.com

LEGEND

DCO Site

NOTES

ISSUE PURPOSE

Non-Technical Summary

PROJECT NUMBER

60664324

FIGURE TITLE

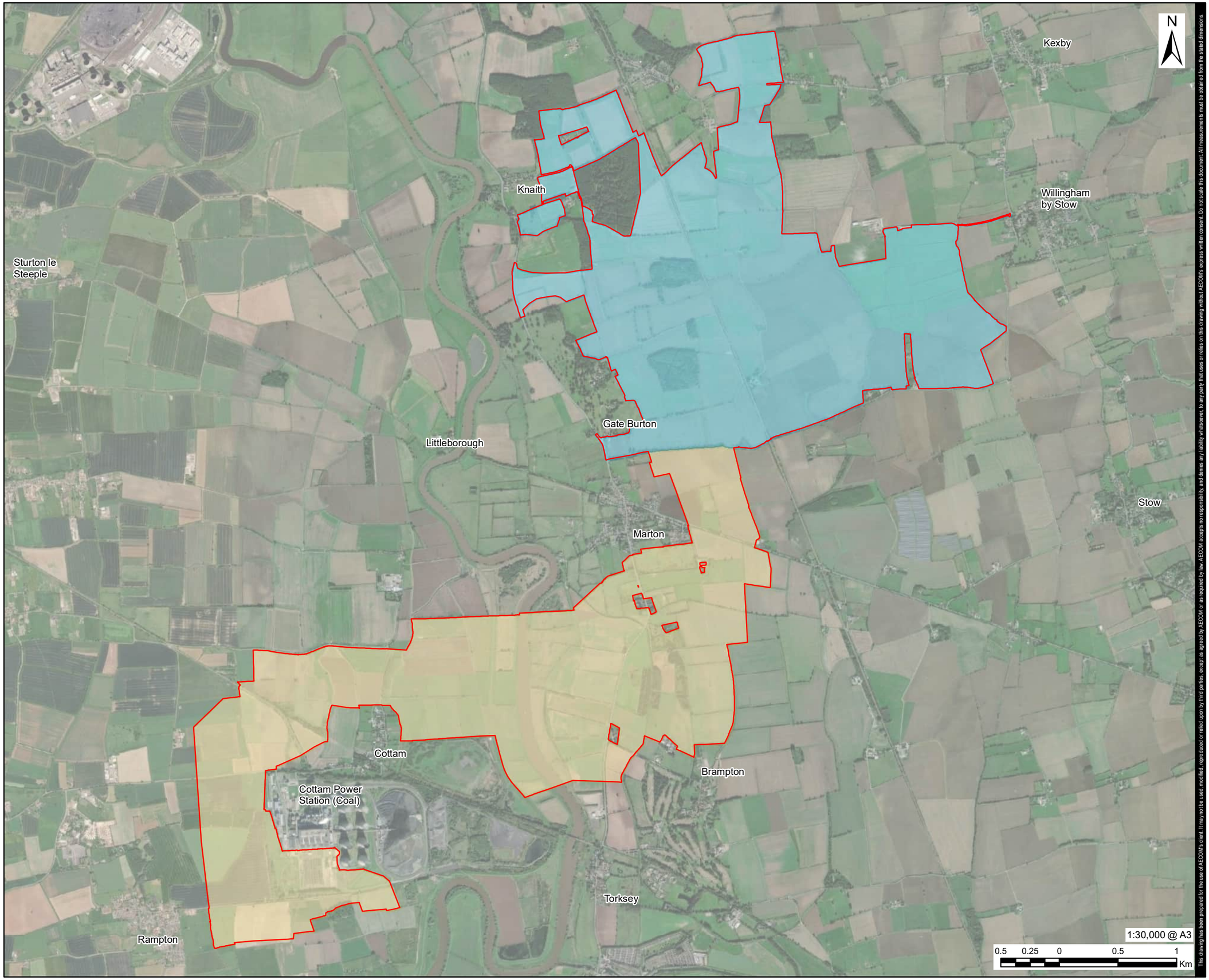
Scheme Location

FIGURE NUMBER

Figure 1

Filename: \\na.aecomnet.com\fs\EMEA\Croydon-UKCRD1\Legacy\UKCRD1FP001\UKCRD1FP001-Y1E\projects\general\GIS\Projects\Gate Burton Energy Park\02_Maps\PEIR\Non-Technical Summary\NTS_PEIR_Figure01_SiteLocation.mxd Revision: 01 Drawn: VC Checked: HK Approved: WB Date: 2022-05-27

Filename: \\na.aecomnet.com\ifs\EMEA\Croydon-UKCRD1\Legacy\UKCRD1FP001\UKCRD1FP001-V1\E\projects\general\GIS\Projects\Gate Burton Energy Park\02_Maps\PEIR\Non-Technical Summary\NTS_PEIR_Figure02_SiteBoundary.mxd Revision: 01 Drawn: VC Checked: HK Approved: WB Date: 2022-05-27



AECOM

PROJECT

Gate Burton Energy Park

CLIENT

Gate Burton ENERGY PARK

CONSULTANT

AECOM Limited
Sunley House
4 Bedford Park
Surrey, CR0 2AP, UK
www.aecom.com

LEGEND

- DCO Site
- Solar and Energy Storage Park
- Grid Connection Route

NOTES

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community© Crown copyright and database rights 2021. Ordnance Survey 0100031673.

ISSUE PURPOSE

Non-Technical Summary

PROJECT NUMBER

60664324

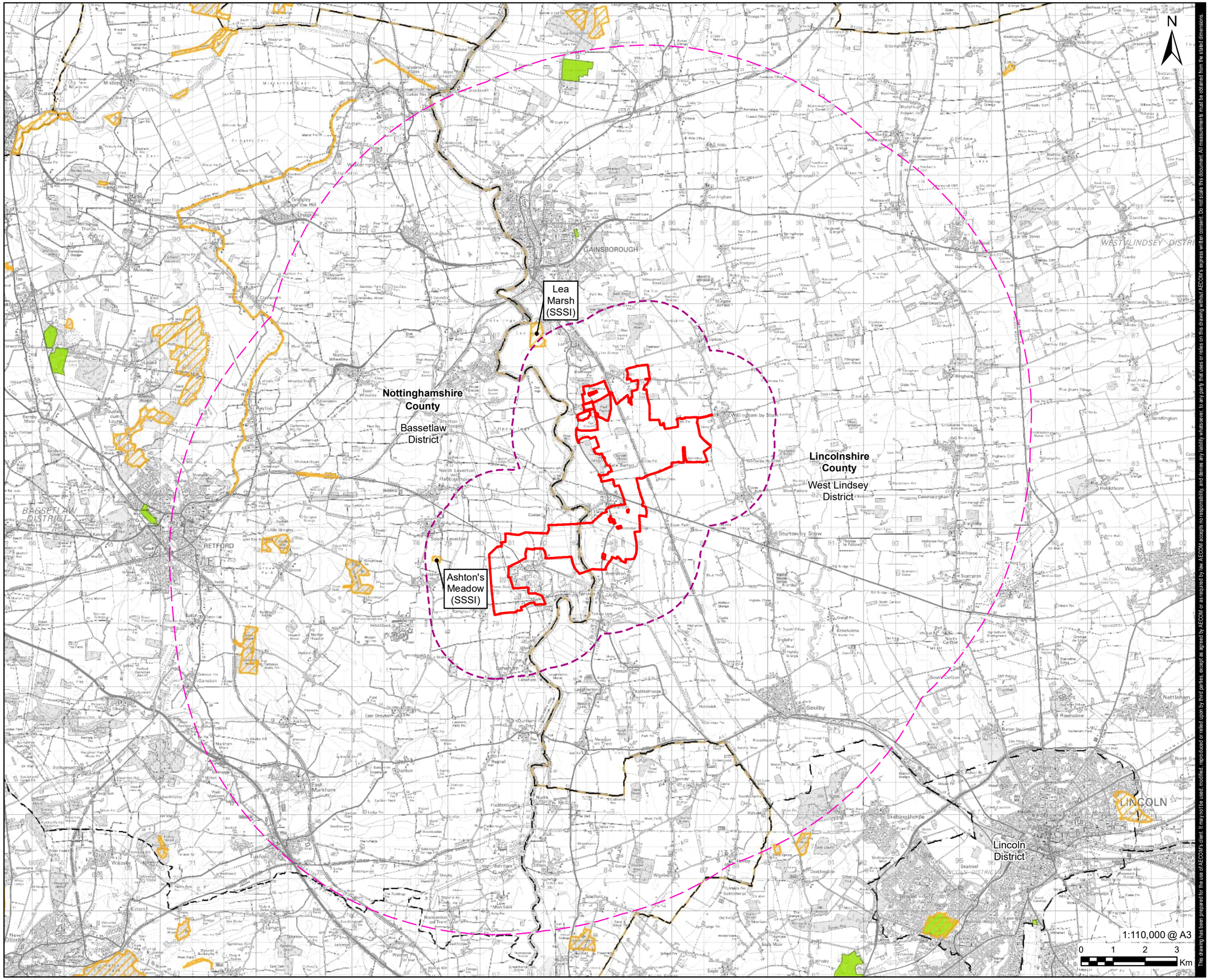
FIGURE TITLE

Scheme Boundary

FIGURE NUMBER

Figure 2

Filename: \\na.aecomnet.com\fs\EMEA\Croydon-UKCRD\1Legacy\UKCRD\1FP001\UKCRD\1FP001-V1\E\projects\general\GIS\Projects\Gate Burton Energy Park\02_Maps\PEIR\Non-Technical Summary\NTS_PEIR_Figure03_StatutorySites.mxd Revision: 01 Drawn: BF Checked: NG Approved: WB Date: 2022-05-27



AECOM

PROJECT

Gate Burton Energy Park

CLIENT

Gate Burton ENERGY PARK

CONSULTANT

AECOM Limited
Sunley House
4 Bedford Park
Surrey, CR0 2AP, UK
www.aecom.com

LEGEND

- DCO Site
- County Boundary
- District Boundary
- 2km Buffer
- 10km Buffer

Other Statutory Sites, within 2km of proposed site

- Site of Special Scientific Interest (SSSI)
- Local Nature reserve (LNR)

NOTES

ISSUE PURPOSE

Non-Technical Summary

PROJECT NUMBER

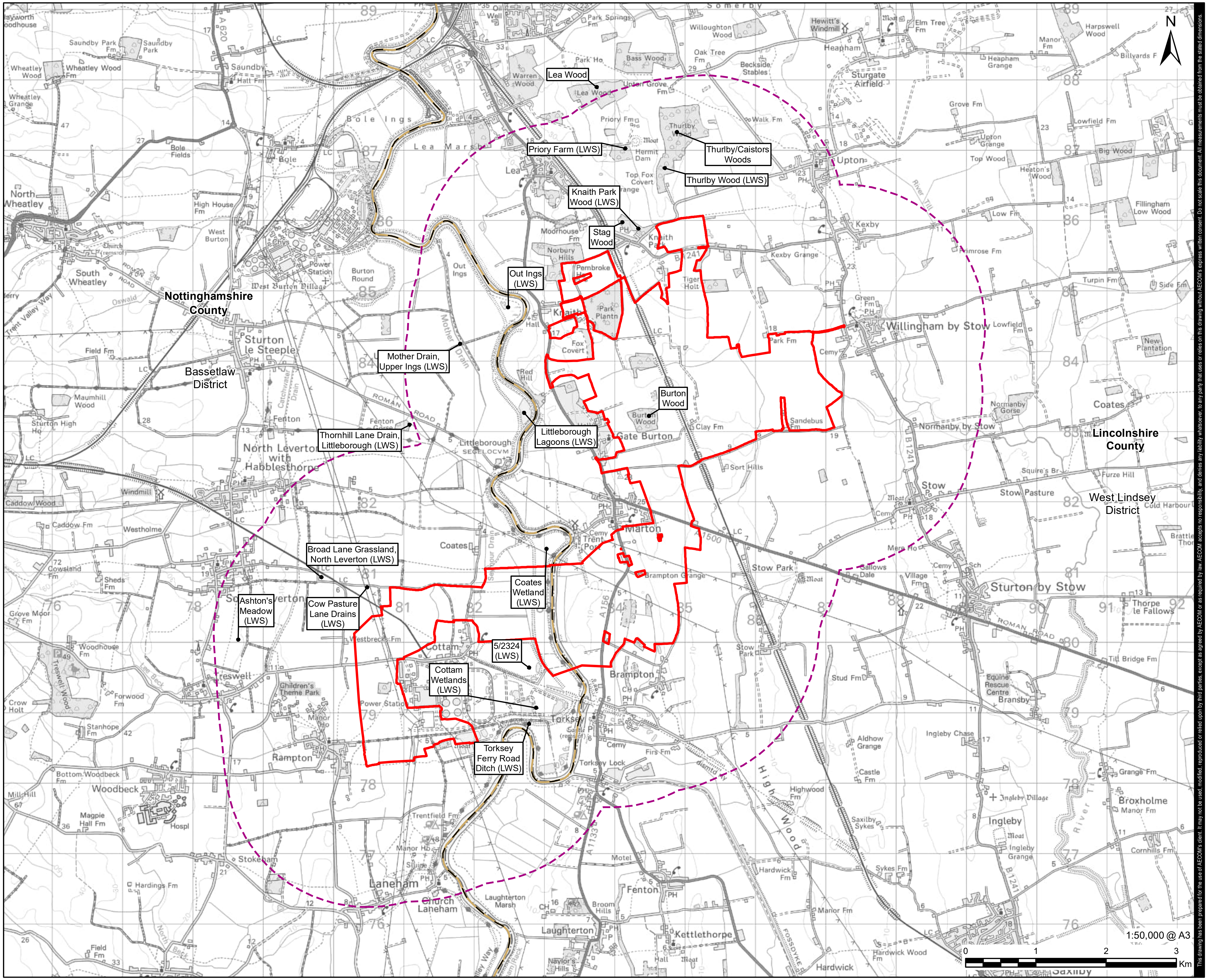
60664324

FIGURE TITLE

Sites Statutorily Designated for Nature Conservation Value

FIGURE NUMBER

Figure 3



Filename: \\na.aecomnet.com\lfs\EMEA\Croydon-UKCRD1\Legacy\UKCRD1FP001\UKCRD1FP001-V1E\projects\general\GIS\Projects\Gate Burton Energy Park\02_Maps\PEIR\Non-Technical Summary\NTS_PEIR_Figure04_NonStatutorySites.mxd Revision: 0 Drawn: BF Checked: DH Approved: RW Date: 2022-05-27

AECOM

PROJECT

Gate Burton Energy Park

CLIENT

Gate Burton ENERGY PARK

CONSULTANT

AECOM Limited
Sunley House
4 Bedford Park
Surrey, CR0 2AP, UK
www.aecom.com

LEGEND

- DCO Site
- County Boundary
- District Boundary
- 2km Buffer

NOTES

© Crown copyright and database rights 2021. Ordnance Survey 0100031673.

ISSUE PURPOSE

Non-Technical Summary

PROJECT NUMBER

60664324

FIGURE TITLE

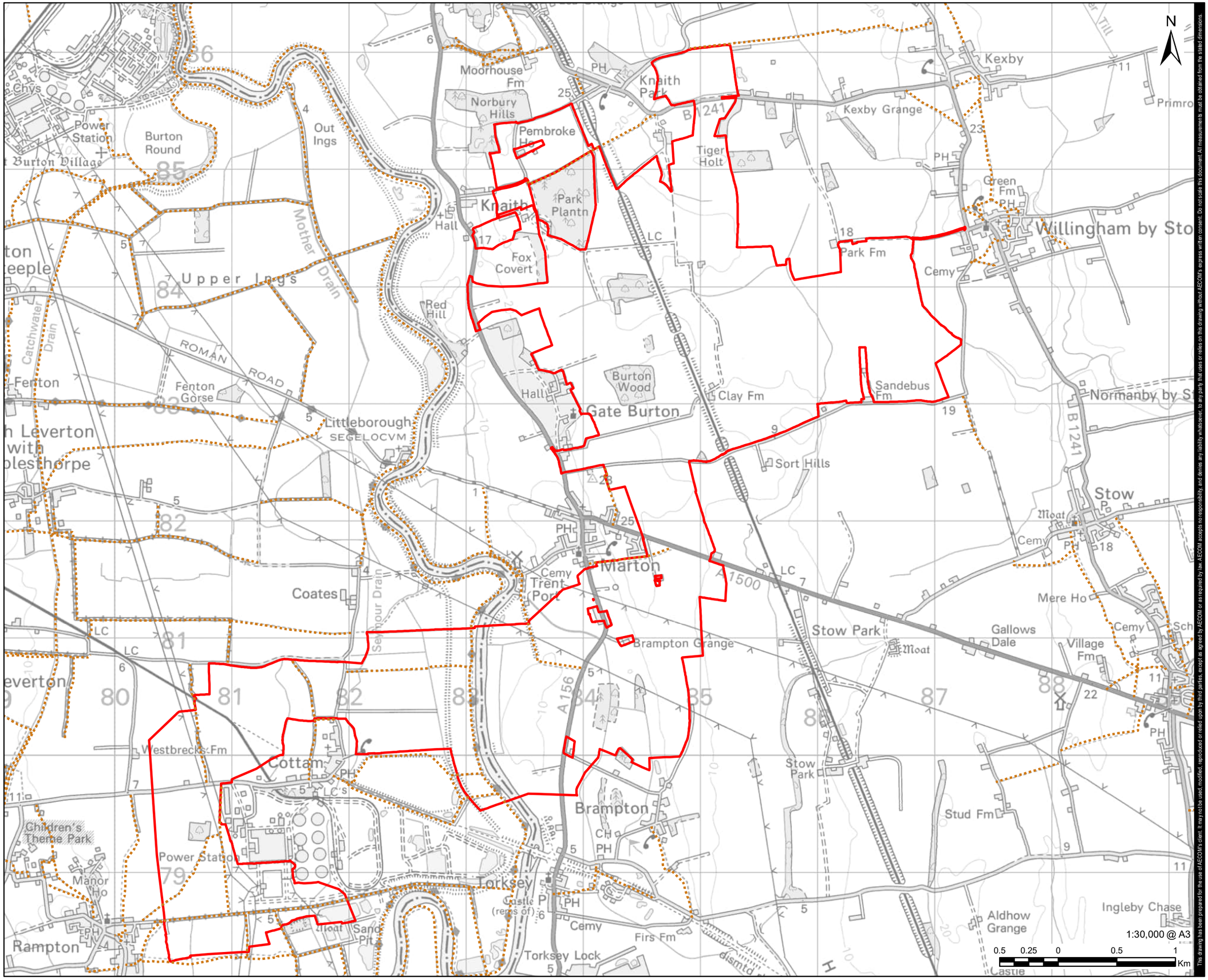
Non Statutory Sites Designated for Nature Conservation Value

FIGURE NUMBER

Figure 4

Revision: 01 Drawn: VC Checked: HK Approved: WB Date: 2022-05-27

Filename: \\na.aecomnet.com\fs\EMEA\Croydon-UKCRD1\Legacy\UKCRD1FP001\UKCRD1FP001-V1\E\projects\general\GIS\Projects\Gate Burton Energy Park\02_Maps\PEIR\Non-Technical Summary\NTS_PEIR_Figure05_PRoW.mxd



AECOM

PROJECT

Gate Burton Energy Park

CLIENT

Gate Burton ENERGY PARK

CONSULTANT

AECOM Limited
Sunley House
4 Bedford Park
Surrey, CR0 2AP, UK
www.aecom.com

LEGEND

- DCO Site
- Public Right of Way

NOTES

ISSUE PURPOSE

Non-Technical Summary

PROJECT NUMBER

60664324

FIGURE TITLE

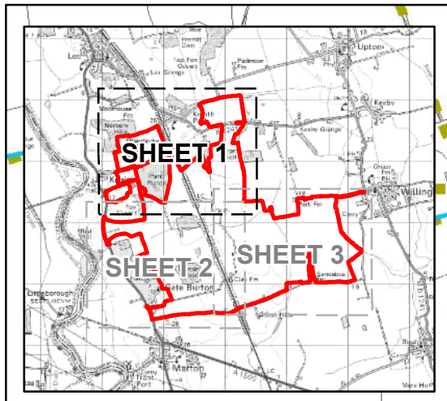
Public Rights of Way

FIGURE NUMBER

Figure 5

Revision: 01 Drawn: VC Checked: RW Approved: WB Date: 2022-06-09

Filename: \\na.aecomnet.com\lfs\EMEA\Croydon-UKCRD1\Legacy\UKCRD1FP001\UKCRD1FP001-V1\IEprojects\generalGIS\Projects\Gate Burton Energy Park\02_Maps\PEIR\Non-Technical Summary\NTS_PEIR_Figure06_SiteLayout_A3.mxd



STAG WOOD

B1241

Kexby Lane North Access.

Kexby Land South Access.

Solar Panel Exclusion Zone

Public Rights of Way Buffer of 5m to offset from footpath users.

Retained Existing Pond with 10m Buffer.

Indicative Skylark plots to provide open areas for these species.

A156

SHEET 2

SHEET 3

Lapwing Field and Barn Owl Buffer

N

1:8,000 @ A3

100 50 0 100 200 m

AECOM

PROJECT

Gate Burton Energy Park

CLIENT

Gate Burton ENERGY PARK

CONSULTANT

AECOM Limited
Sunley House
4 Bedford Park
Surrey, CR0 2AP, UK
www.aecom.com

LEGEND

- Solar and Energy Storage Park
- Solar Panel Exclusion Zone
- Solar Panel
- Indicative Skylark Plots
- Construction Compound
- Transformer Station

Proposed Mitigation/Enhancement

- Proposed or Strengthened Hedgerow
- Tree and Shrub Belt Planting
- Proposed Species Rich Grassland
- Hedge with Trees - 10m Buffer

EcoConstraintsBuffer

- Other Hedge - 5m Buffer
- Waterbody - 10m Buffer

Existing Infrastructure/Features

- A Road
- B Road
- Public Right of Way
- Railway
- Ordinary Watercourse
- Existing Hedgerow with Trees
- Existing Hedgerow
- Existing Woodland
- Waterbody/Watercourse

Environmental Designations

- Grade II Listed Building
- Ancient Woodland
- Scheduled Monument

NOTES

This is an indicative preliminary layout plan for the purposes of statutory consultation and is subject to change. Refer to PEI Report 'Chapter 2: The Scheme' for further information.

ISSUE PURPOSE

Non-Technical Summary

PROJECT NUMBER

60664324

FIGURE TITLE

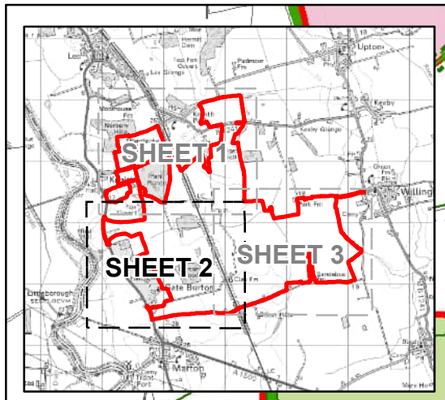
Indicative Site Layout Plan For Consultation
Sheet 1 of 3

FIGURE NUMBER

Figure 6

Revision: 01 Drawn: VC Checked: RW Approved: WB Date: 2022-06-09

Filename: \\na.aecomnet.com\fs\EMEA\Croydon-UKCRD\1Legacy\UKCRD\1FP001\UKCRD1FP001-V1\Eprojects\general\GIS\Projects\Gate Burton Energy Park\02_Maps\PEIR\Non-Technical Summary\NTS_PEIR_Figure06_SiteLayout_A3.mxd



SHEET 1

SHEET 2

SHEET 3

Existing Woodland Buffer of 15m to protect tree roots.

Lapwing Field and Barn Owl Buffer

A156 Access Option, North.

Substation and BESS located here in an area of reduced flood risk and reduced visibility.

Existing Woodland Buffer of 15m.

Heritage setting buffer to provide an offset of infrastructure from the non-designated parkland and number of listed buildings at Gate Burton (including the Grade II* listed Gate Burton Hall and Burton Château).

A156

BURTON WOOD

Building Buffer of 25m from panels.

Ancient Woodland buffer of 20m to protect the ancient woodland and avoid root damage.

A156 Access Option, South.

Lapwing Field.

1:8,000 @ A3

100 50 0 100 200 m

AECOM

PROJECT

Gate Burton Energy Park

CLIENT

Gate Burton ENERGY PARK

CONSULTANT

AECOM Limited
Sunley House
4 Bedford Park
Surrey, CR0 2AP, UK
www.aecom.com

LEGEND

- Solar and Energy Storage Park
- Solar Panel Exclusion Zone
- Solar Panel
- Indicative Skylark Plots
- Construction Compound
- Transformer Station

Proposed Mitigation/Enhancement

- Proposed or Strengthened Hedgerow
- Tree and Shrub Belt Planting
- Proposed Species Rich Grassland
- Ancient Woodland 20m Buffer
- Heritage Setting Buffer
- Hedge with Trees - 10m Buffer

EcoConstraintsBuffer

- Other Hedge - 5m Buffer

Existing Infrastructure/Features

- A Road
- Public Right of Way
- Railway
- Main River
- Ordinary Watercourse
- Existing Hedgerow with Trees
- Existing Hedgerow
- Existing Woodland
- Substation and BESS
- Waterbody/Watercourse

Environmental Designations

- Grade II* Listed Building
- Grade II Listed Building
- Ancient Woodland

NOTES

This is an indicative preliminary layout plan for the purposes of statutory consultation and is subject to change. Refer to PEI Report 'Chapter 2: The Scheme' for further information.

ISSUE PURPOSE

Non-Technical Summary

PROJECT NUMBER

60664324

FIGURE TITLE

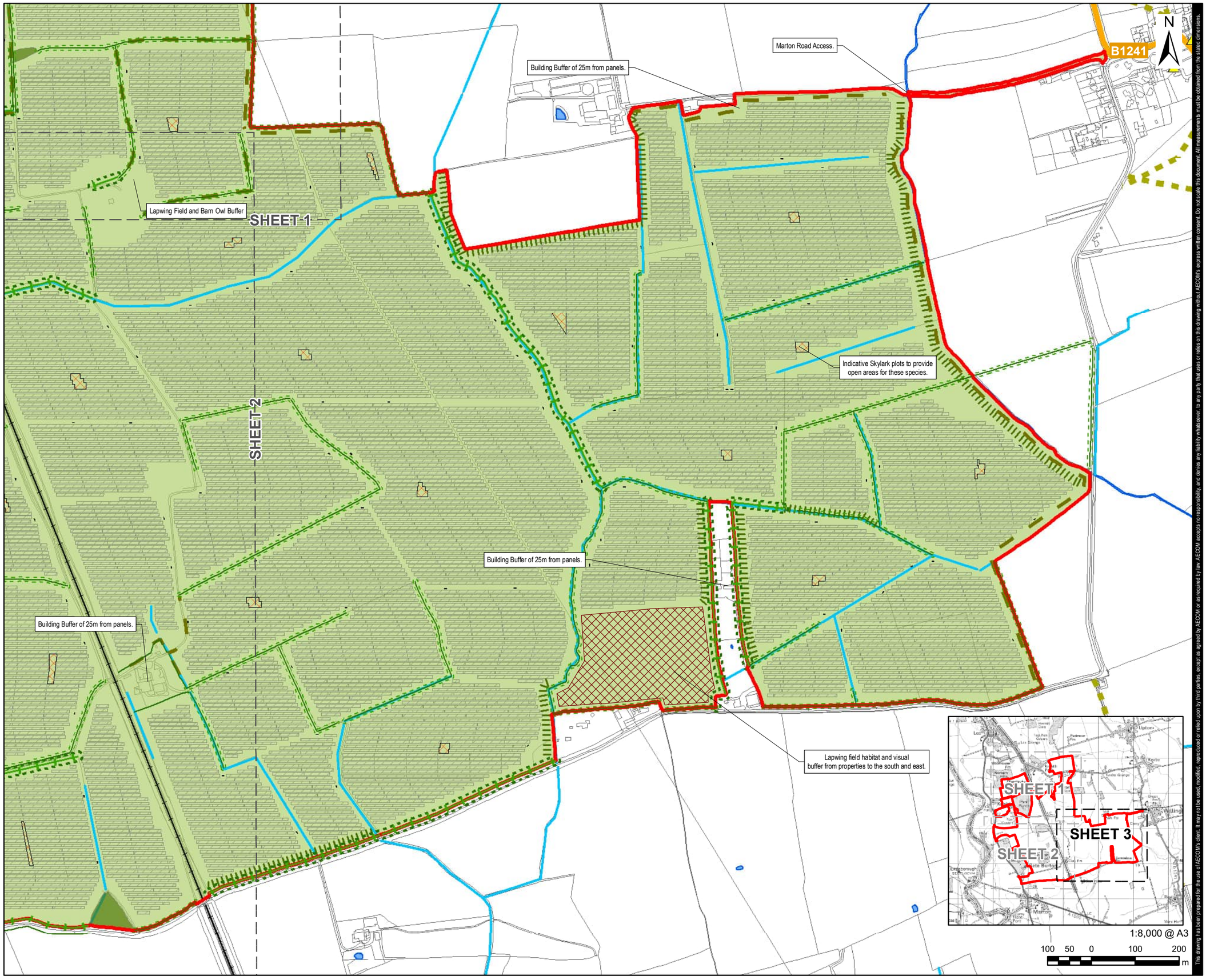
Indicative Site Layout Plan For Consultation
Sheet 2 of 3

FIGURE NUMBER

Figure 6

Revision: 01 Drawn: VC Checked: RW Approved: WB Date: 2022-06-09

Filename: \\na.aecomnet.com\ifs\EMEA\Croydon-UKCRD1\Legacy\UKCRD1FP001\UKCRD1FP001-V1\EIprojects\general\GIS\Projects\Gate Burton Energy Park\02_Maps\PEIR\Non-Technical Summary\NTS_PEIR_Figure06_SiteLayout_A3.mxd



AECOM

PROJECT

Gate Burton Energy Park

CLIENT

Gate Burton ENERGY PARK

CONSULTANT

AECOM Limited
Sunley House
4 Bedford Park
Surrey, CR0 2AP, UK
www.aecom.com

LEGEND

- Solar and Energy Storage Park
- Solar Panel
- Indicative Skylark Plots
- Lapwing Field
- Transformer Station

Proposed Mitigation/Enhancement

- Proposed or Strengthened Hedgerow
- Tree and Shrub Belt Planting
- Proposed Species Rich Grassland
- Hedge with Trees - 10m Buffer

EcoConstraintsBuffer

- Other Hedge - 5m Buffer

Existing Infrastructure/Features

- B Road
- Public Right of Way
- Railway
- Ordinary Watercourse
- Existing Hedgerow with Trees
- Existing Hedgerow
- Existing Woodland
- Waterbody/Watercourse

Environmental Designations

- Grade II Listed Building

NOTES

This is an indicative preliminary layout plan for the purposes of statutory consultation and is subject to change. Refer to PEI Report 'Chapter 2: The Scheme' for further information.

ISSUE PURPOSE

Non-Technical Summary

PROJECT NUMBER

60664324

FIGURE TITLE

Indicative Site Layout Plan For Consultation
Sheet 3 of 3

FIGURE NUMBER

Figure 6

Gate Burton
ENERGY PARK

Contact us

0800 860 6259
(open Monday - Friday 09:00 - 17:30)

info@gateburtonenergypark.co.uk

FREEPOST GATE BURTON ENERGY PARK

gateburtonenergypark.co.uk

low carbon
powering tomorrow

Certified
B
Corporation
This company meets the highest standards of social and environmental impact