

West Burton Solar Project

Design and Access Statement Part 1 of 2

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Issue Sheet

Report Prepared for: West Burton Solar Project Ltd.
DCO Submission

Design and Access Statement

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Executive Summary

This Design and Access Statement supports the application for a Development Consent Order (DCO) for the construction, operation, maintenance and decommissioning of a ground mounted solar energy generating station, energy storage facility, substations and grid connection (hereafter referred to as ‘the Scheme’). The Applicant is West Burton Solar Project Limited, part of Island Green Power. The Scheme is located to the northwest of Lincoln, straddling the Lincolnshire-Nottinghamshire border.

The Scheme will make a significant contribution to the production, supply and storage of a renewable and more sustainable form of energy. This Design and Access Statement has been provided to support the DCO application by describing the design evolution process adopted for the Scheme, culminating in the proposals which are the subject of the application.

The project design team is comprised of qualified and experienced professionals, including solar energy specialists, highway and drainage engineers, planners, landscape professionals, heritage specialists, ecologists, and other environmental professionals. The contributions of all disciplines have been crucial to informing the design approach to the Scheme. The design team has also worked collaboratively with local stakeholders, residents, and other consultees to ensure that the design has been informed by local knowledge and expertise.

The overarching vision for the development seeks to ensure that the Scheme contributes to renewable energy policy targets and objectives, which includes responding positively to the existing site context, baseline analysis and assessment of potential impacts. The Scheme seeks to do so through delivery of a design that positively responds to its locational context, delivers on the potential substantial benefits to energy production, climate change, and biodiversity enhancement, whilst keeping negative impacts on the local and wider environment to a minimum. Design objectives were set by the Applicant and the project team to meet these criteria. These were:

- Delivery of a significant amount of affordable, renewable energy to contribute to national targets for reducing carbon emissions to net zero by 2050;
- Delivery of improved energy resilience by diversifying energy production and storing energy for when it is needed most;
- Contribution towards strategic improvements to local ecology and biodiversity;
- Develop the Scheme sensitively to the surrounding landscape, limiting the impact on views for key landscape receptors, residential properties, and recreational routes;
- Develop the Scheme sensitively in response to the presence of heritage assets and their settings;
- Safeguard surrounding hydrological systems, and ensure the Scheme is resilient to flooding and will not increase flood risk elsewhere, taking account of the impacts of climate change; and

- Ensure the protection, and where possible enhancement, of existing Public Rights of Way and ensure the continued safe use of the public highway network.

1 Introduction

1.1 Context

- 1.1.1 This Design and Access Statement supports the application for a Development Consent Order (DCO) for the construction, operation, maintenance and decommissioning of a ground mounted solar energy generating station, energy storage facility, substations and grid connection (hereafter referred to as ‘the Scheme’) and associated development. The Applicant is West Burton Solar Project Limited, which is part of Island Green Power.
- 1.1.2 The DCO application will be submitted under Section 37 of the Planning Act 2008 (the “Act”) (Ref.1) to the Secretary of State for Department for Energy Security & Net Zero. As the Scheme will have a generating capacity of over 50MW of electricity it is defined as a Nationally Significant Infrastructure Project (NSIP) under 14(1)(a) and 15(2) of the Act.
- 1.1.3 There is no specific guidance relating to the preparation of Design and Access Statements for Nationally Significant Infrastructure Projects (NSIPs), however the document has been prepared in line with national guidance on the subject, specifically:
- Design and Access Statement: How to Read, Write and Use Them, produced by CABE (2007) (Ref.2); and
 - Guidance on Information Requirements and Validation, published by the Department for Communities and Local Government (2010) (Ref.3).
- 1.1.4 The Scheme will make a significant contribution to the production, supply and storage of a renewable and more sustainable form of energy. This Design and Access Statement has been provided to support the DCO application by describing the design evolution process adopted for the Scheme, culminating in the proposals which are the subject of the application. This document should therefore be read in conjunction with the DCO application documents as referenced in-text.
- 1.1.5 The Scheme is located to the northwest of Lincoln, straddling the Lincolnshire-Nottinghamshire border. The main built form of the Scheme, namely, the solar energy generating stations and associated development (including substations and energy storage facility) is to be situated in the District of West Lindsey in Lincolnshire. The only element of the Scheme within Nottinghamshire (within the Bassetlaw District), will be the buried cable connecting the solar farm and energy storage facility to the National Grid at West Burton Power Station (and any associated works within the National Grid substation operational area).
- 1.1.6 This Design and Access Statement provides, in accordance with Section 4.5 of the Overarching National Policy Statement for Energy (2011) (NPS EN-1) (Ref.4), information regarding the context of the Scheme’s location; how the design has evolved, including how it has been influenced by planning policy and stakeholder engagement; and the proposed outline design solution including access. This

document sets out how the fundamental principle of good design has been embedded in the Scheme.

- 1.1.7 The spatial extent of the Scheme is referred to as the Order limits and is shown on the Works Plans **[EN010132/APP/WB2.3]** accompanying the DCO application which are secured by Article 3 of the Draft DCO **[EN010132/APP/WB3.1]**. The Environmental Impact Assessment (EIA) presented in the Environmental Statement (ES) **[EN010132/APP/WB6.1-6.5]** has been undertaken based on the maximum extents of each of the Work packages described in Schedule 1 to the Draft DCO as shown on the Works Plans. This approach is known as the use of a 'Rochdale Envelope' which is described in footnote 78 to paragraph 4.2.8 of NPS EN-1 as being an assessment based on a *"series of maximum extents of a project for which the significant effects are established. The detailed design of the project can then vary within this 'envelope' without rendering the environmental impact assessment inadequate"*.
- 1.1.8 Due to the rapidly evolving technology within the solar photovoltaics and energy storage system sectors, the in-built flexibility allows for the most up-to-date technology to be utilised for the development of the Scheme. The full detail design at the point of construction will be managed post-consent through the Requirements set out in Schedule 2 of the Draft DCO **[EN010132/APP/WB3.1]**.
- 1.1.9 The project design team is comprised of qualified and experienced professionals, including solar energy specialists, highway and drainage engineers, planners, landscape professionals, heritage specialists, ecologists, and other environmental professionals. The contributions of all disciplines have been crucial to informing the design approach to the Scheme. The design team has also worked collaboratively with stakeholders to ensure that the design was informed by local knowledge and expertise.
- 1.1.10 Further details regarding the need for the Scheme are provided in the Statement of Need **[EN010132/APP/WB7.11]** and Planning Statement **[EN010132/APP/WB7.5]**, and details of the site selection process are provided in ES Chapter 5: Alternatives and Design Evolution **[EN010132/APP/WB6.2.5]** and its associated Appendix 5.1 **[EN010132/APP/WB6.3.5.1]**.

1.2 Document Structure

1.2.1 Supporting plans and Figures relating to this Design and Access Statement are provided in **Appendix 1** of this document.

1.2.2 The following sections comprise the remainder of this Design and Access Statement.

[Section 2: Design Policy and Guidance](#)

1.2.3 This section sets out the policy context and guidance relating to large scale energy infrastructure including design objectives and strategies, and definitions of what constitutes 'good design'.

[Section 3: Scheme Location and Context](#)

1.2.4 Section 3 presents an overview of the Order limits and their surroundings. This section goes on to identify the characteristics and key environmental features that have informed the development of the Design Objectives identified in the following section.

[Section 4: Design Objectives](#)

1.2.5 This section establishes the overall vision and objectives that have guided and informed the iterative design process. The Design Objectives set out how the Scheme will deliver the overall vision whilst being sensitive to the character and features identified in Section 3.

[Section 5: Design Evolution](#)

1.2.6 This section sets out the sequential and iterative development of the design, showing the evolution of the Scheme at the different project stages in response to the baseline information gathered from desk and field-based assessments, from feedback from stakeholders and ongoing design workshops.

[Section 6: Design Masterplan](#)

1.2.7 The Design Masterplan visually illustrates how the spatial design of the Scheme meets its objectives.

[Section 7: Access](#)

1.2.8 This section sets out the access strategy for construction and operational traffic to the Sites. This section also shows the existence of public rights of way, the nature of temporary diversions or closures, and the creation of new permissive routes as part of the Scheme.

[Section 8: Commitments](#)

1.2.9 This section explains how the delivery of the design features and commitments presented in this document will be secured by the DCO.

2 Design Policy and Guidance

2.1 Overview

2.1.1 This section considers guidance and policy relevant to the design of major energy infrastructure. This includes policies set out in the adopted and draft National Policy Statements for Energy, the National Planning Policy Framework (NPPF) and relevant local planning policy considered important and relevant to the Secretary of State's decision. Other sections of this Design and Access Statement and supporting plans demonstrate how the Scheme complies with these policies, as supported by the Planning Statement [EN010132/APP/WB7.5] submitted as part of the DCO application.

2.2 National Policy

[National Policy Statements for Energy: July 2011](#)

2.2.1 The Overarching National Policy Statement for Energy (EN-1) (hereafter "NPS EN-1") (Ref.4) sets out the Government's policy for delivery of major energy infrastructure.

2.2.2 The principles for good design by which all energy infrastructure should adhere to are set out in Section 4.5 of NPS EN-1. Paragraph 4.5.1 states that good design should *"produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible"*. Paragraph 4.5.1 goes on to acknowledge that *"the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area"*.

2.2.3 Paragraph 4.5.3 requires energy infrastructure developments to be satisfactorily sustainable and be as *"attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be"* taking into consideration both functionality and aesthetics, and potential limitations of choice in available energy infrastructure designs. Paragraph 4.5.4 expects the Secretary of State to consider the *"ultimate purpose of the infrastructure"* and its *"operational, safety and security requirements which the design has to satisfy"* in considering whether good design can be demonstrated.

2.2.4 NPS EN-1 identifies adapting to climate change as a key consideration of design. Specifically, paragraph 4.8.5 requires applicants to consider the impacts of climate change *"when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure"*.

2.2.5 Together with NPS EN-1 The National Policy Statement for Renewable Energy Infrastructure (EN-3) (Ref.5) provides the primary basis for decision making on applications for nationally significant renewable energy infrastructure.

2.2.6 NPS EN-3 expects renewable energy NSIPs to demonstrate *"good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology"* (paragraph 2.4.2).

- 2.2.7 National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref.6) also identifies that proposals for electricity networks infrastructure should demonstrate good design in their approach to mitigating potential adverse impacts (paragraph 2.5.1).
- [Draft National Policy Statements for Energy: September 2021](#)
- 2.2.8 The Government is currently reviewing and updating the Energy NPSs in an effort to respond to updated national energy requirements, whilst also for the first time including specific policies for solar photovoltaic generation NSIPs. The suite of Draft Energy NPSs were published for consultation on 6 September 2021.
- 2.2.9 Draft NPS EN-1 (Ref.7) sets out at section 4.6 that applicants should consider how 'good design' can be applied at the early stages of a project. It also recommends that applicants embed opportunities for nature inclusive design into their scheme and emphasises that wider impacts such as landscape and environmental impacts will be important factors in the design process.
- 2.2.10 Draft NPS EN-3 (Ref.8) paragraph 2.51.4 and 2.51.5 set out that solar farm developers should consider the criteria for good design set out in section 4.6 of NPS EN-1, particularly in terms of layout, future maintenance and retention of boundary vegetation. It also sets out that solar farms should be designed sensitively to minimise environmental effects, including on landscape (paragraph 2.51.3) and heritage assets (paragraph 2.53.3).
- [National Planning Policy Framework: revised July 2021](#)
- 2.2.11 The National Planning Policy Framework (NPPF) (Ref.9), most recently updated in July 2021, sets out the Government's planning policies for England and how these should be applied. Chapter 12 of the NPPF is concerned with how development can achieve well-designed places.
- 2.2.12 Good design is described in paragraph 126. It explains that *"the creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities."*
- 2.2.13 The NPPF goes on to define well-designed places at paragraph 130, with an emphasis given to ensure developments are reflective of *"local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents such as design guides and codes"* (paragraph 134). The NPPF also expects applicants to proactively engage with local planning authorities and communities during the evolution of development proposals, so that they can be more favourably considered.
- 2.2.14 The NPPF specifically demonstrates its requirement for the planning system to *"shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources"*

(paragraph 152); and for new development to be planned such that it is sufficiently resilient to the impacts of climate change (paragraph 154).

[Levelling-up and Regeneration Bill – reforms to national planning policy: December 2022](#)

- 2.2.15 The Government published on 22nd December 2022 a consultation document (Ref.10) which sets out its proposed approach to updating the NPPF. The consultation is due to close on 2nd March 2023. It is understood that a fuller review of the NPPF will be undertaken in due course, with its scope dependent on the implementation of the government's proposals for wider changes to the planning system, including the Levelling-Up and Regeneration Bill.
- 2.2.16 In relation to design, the vast majority of Section 12 is to remain as per the July 2021 iteration (although paragraph numbers are to change). Additional emphasis is proposed to the preparation and use of local design codes, in line with the National Model Design Code (paragraph 135 of the consultation document). Furthermore, greater clarity regarding the use of planning conditions is made to make enforcement easier (paragraph 137 of the consultation document).

2.3 Local Policy

- 2.3.1 The below section provides an overview of design related policy identified within the relevant local development plans and neighbourhood plans. No supplementary design guidance documents have been identified as relevant to the Scheme due to its non-residential nature.

[West Lindsey](#)

Central Lincolnshire Local Plan (April 2017)

- 2.3.2 Policies within the Central Lincolnshire Local Plan (April 2017) (Ref.11) are applicable in West Lindsey District.
- 2.3.3 Policy LP17: Landscape, Townscape and Views seeks that development should help to *“protect and enhance the intrinsic value of [West Lindsey’s] landscape and townscape, including the setting of settlements”*, through maintaining and responding positively to *“historic buildings and monuments, other landmark buildings, topography, trees and woodland, hedgerows, walls, water features, field patterns and intervisibility between rural historic settlements”* and any other features that *“positively contribute to the character of the area”*. Developments should also *“take account of views in to, out of and within development areas”* and therefore *“should be designed (through considerate development, layout and design) to preserve or enhance key local views and vistas and create new public views where possible.”* Developments should also be conscious of the cumulative impacts on landscape and views.
- 2.3.4 Policy LP19: Renewable Energy Proposals sets out that in Central Lincolnshire, *“proposals will be supported where the benefit of the development outweighs the harm caused and it is demonstrated that any harm will be mitigated as far as is reasonably possible”*. Developments should therefore take account of *“the surrounding*

landscape and townscape, heritage assets, ecology and diversity, residential and visual amenity, safety, and agricultural land classification.

- 2.3.5 Policy LP20: Green Infrastructure Network states that *"development proposals which are consistent with and help deliver the opportunities, priorities and initiatives identified in the latest Central Lincolnshire Green Infrastructure Study and Biodiversity Opportunity Mapping Study, will be supported."* Whereas *"Proposals that cause loss or harm to this network will not be permitted unless the need for and benefits of the development demonstrably outweigh any adverse impacts"*. The policy sets out that *"Where adverse impacts on green infrastructure are unavoidable, development will only be permitted if suitable mitigation measures for the network are provided. Development proposals should ensure that existing and new green infrastructure is considered and integrated into the scheme design from the outset... Development proposals must protect the linear features of the green infrastructure network that provide connectivity between green infrastructure assets, including public rights of way, bridleways, cycleways and waterways, and take opportunities to improve such features."*
- 2.3.6 Policy LP21: Biodiversity and Geodiversity sets out that *"All development should: protect, manage and enhance the network of habitats, species and sites of international, national and local importance (statutory and non-statutory), including sites that meet the criteria for selection as a Local Site; minimise impacts on biodiversity and geodiversity; and seek to deliver a net gain in biodiversity and geodiversity."*
- 2.3.7 Policy LP26: Design and Amenity requires that all development *"must achieve high quality sustainable design that contributes positively to local character"* through taking account of the design principles set out in the policy:
- Effective and efficient use of land;
 - Respect the existing topography, landscape character and identity;
 - Incorporate and retain as far as possible existing natural and historic features;
 - Incorporate appropriate landscape treatment;
 - Provide well designed boundary treatments;
 - Protect any important local views into, out of or through the site; and
 - Use appropriate, high quality materials.
- 2.3.8 Developments should also ensure the amenity of existing and future occupants of neighbouring land and building is reasonably protected.
- 2.3.9 Policy LP55: Development in the Countryside refers primarily to buildings, however it does demonstrate that there is some level of support for development in the countryside, subject to the development being suitably accessible, justifiable in its location and of benefit to the local economy, and that it would not conflict with neighbouring uses. This policy also seeks to protect best and most versatile agricultural land by seeking to minimise development on such land, or where

feasible, once any development which is permitted has ceased its useful life, the land will be restored to its former use at of at least equal quality.

Central Lincolnshire Local Plan Review: Proposed Submission (March 2022)

- 2.3.10 Policies within the Local Plan Review (Ref.12) are subject to ongoing examination, and are anticipated to supersede policies within the adopted Local Plan (2017) once adopted.
- 2.3.11 Directly superseding Policy LP55 from the Local Plan (2017) Policy S5: Development in the Countryside in the Local Plan Review (2022) refers primarily to buildings, however it does demonstrate that there is some level of support for development in the countryside, subject to the matters set out in the policy.
- 2.3.12 Policy S14: Renewable Energy demonstrates Central Lincolnshire’s continued support for suitably located renewable energy development, including solar farms in its efforts to transition to a net zero carbon future. Developments should have regard for scale, siting and design, and the consequent impacts on landscape character; visual amenity; biodiversity; geodiversity; flood risk; townscape; heritage assets and their settings; and highway safety; aviation and defence navigation system/communications; and sensitive neighbouring uses. Solar development specifically should also have regard for agricultural land classification, taking care to avoid best and most versatile agricultural land, peat land, or other carbon sinks.
- 2.3.13 Policy S48: Walking and Cycling Infrastructure highlights how the local plan seeks to support the facilitation of non-vehicular travel, and as such requires developments to *“protect, maintain and improve existing infrastructure, including closing gaps or deficiencies in the network, provide high quality attractive routes that are safe, direct, legible and pleasant and are integrated into the wider network.”*
- 2.3.14 As in the previous iterations of this policy, Policy S53: Design and Amenity requires all development to achieve high quality sustainable design that contributes positively to local character, that responds actively and positively to context, local identity, built form, channels of movement, natural features and the environment, complementary land use, and uses high quality materials and a high standard of design to be able to ensure the development is adaptive throughout its lifetime.

Neighbourhood Plans

- 2.3.15 The entirety of the Site at West Burton 2 and part of the Site at West Burton 3 are within parishes which have made Neighbourhood Plans. No part of the Site of West Burton 1 is within a parish with a made Neighbourhood Plan.

Saxilby with Ingleby

- 2.3.16 The Site at West Burton 2 falls entirely within the parish of Saxilby with Ingleby, and as such falls under Saxilby with Ingleby Neighbourhood Plan (adopted 2017) (Ref.13).
- 2.3.17 Although primarily targeted at residential and business development, Policy 2: Design of New Development requires that developments within the neighbourhood

plan area are respectful of the existing pattern of development, use appropriate materials, are of an appropriate scale and density in relation to setting, help to reduce car dependency, take advantage of local topography and landscape, promote health and wellbeing of residents, and incorporate flood resilience and resistance measures.

- 2.3.18 Policy 16: Existing and New Non-Vehicular Routes requires development to take opportunities to provide new or enhance existing non-vehicular routes including connections to the existing network. In doing so, any new non-vehicular routes should not detract from the landscape character or ecological value of its setting, and should aim to enhance biodiversity.
- 2.3.19 Policy 17: Traffic and Movement Around the Village requires developments to ensure transport impacts are identified and are acceptable, and any required mitigation be implemented.

Sturton by Stow, and Stow

- 2.3.20 A significant portion of the Site at West Burton 3, and the adjacent parts of the cable route, fall within the parishes of Sturton by Stow and Stow, and as such fall under the Sturton by Stow and Stow Neighbourhood Plan (adopted 2022) (Ref.14).
- 2.3.21 Policy 1: Sustainable Development is predominantly aimed at controlling residential or employment development, but nevertheless demonstrates that the neighbourhood plan seeks for development to be located, designed, constructed and operated so as to be consistent with the national target of bringing the United Kingdom's greenhouse gas emissions to net zero by 2050, is designed to mitigate impacts on climate change, and incorporates design measures for adaptation and resilience to climate change.
- 2.3.22 Policy 5: Delivering Good Design requires developments to be appropriate in scale, nature and location, whilst demonstrating good quality design and respecting character and appearance of the surrounding area, as well as promoting renewable energy generation and energy efficiency, minimising risk of flooding, and ensuring the design of all aspects of the development incorporate climate change adaptation and resilience measures.

Bassetlaw District

Bassetlaw District Local Development Framework: Publication Core Strategy and Development Management Policies (adopted November 2010) (Ref.15)

- 2.3.23 Policy DM4: Design and Character expects development to be designed to a high quality that addresses the key areas of concern set out in the policy wording. New developments should respect its local character and its distinctiveness, complementing and enhancing the character of the surrounding built, historic, and natural environment and landscape character. Furthermore, *"new development should ensure that it does not have a detrimental effect on the residential amenity of nearby residents"*, and *"will need to demonstrate that careful consideration has been*

given to minimising CO2 emissions". Although the wording of the document is focussed on buildings, the policy seeks to "[maximise] opportunities to integrate renewable and low carbon energy infrastructure", demonstrating the importance of renewable energy to local policy commitments.

2.3.24 Policy DM9: Green Infrastructure; Biodiversity & Geodiversity; Landscape; Open Space and Sports Facilities states that *"Development proposals will be expected to support the Council's strategic approach to the delivery, protection and enhancement of multi-functional Green Infrastructure, to be achieved through the establishment of a network of green corridors and assets (please refer to the Council's Green Infrastructure work for a full list of Green Corridors and Nodes within, and running beyond, the District) at local, sub-regional and regional levels. Particular support will be given to proposals that will further the development of: The Idle Valley Project; The Trent Vale Partnership; Sherwood Forest Regional Park. Development proposals will be expected to demonstrate, in line with the Council's Green Infrastructure work, that:*

i. they protect and enhance green infrastructure assets affected by the development and take opportunities to improve linkages between green corridors;

ii. where they overlap with or will affect existing green infrastructure nodes or corridors, such assets are protected and enhanced to improve public access and use;

iii. where opportunities exist, development proposals provide improvements to the green infrastructure network that benefit biodiversity through the incorporation of retained habitats and by the creation of new areas of habitat; and

iv. they provide robust delivery mechanisms for, and means of ensuring the long-term management of, green infrastructure.

Development that will result in the loss of existing green infrastructure may be supported where replacement provision is made that is considered to be of equal or greater value than that which will be lost. Where new development may have an adverse impact on green infrastructure, alternative scheme designs that minimise impact must be presented to the Council for consideration before the use of mitigation measures (e.g. off-site or through financial contributions for improvements elsewhere) is considered."

2.3.25 Regarding biodiversity, the policies state that *"Development that will result in the loss of such features may be supported where replacement provision is made that is considered to be of equal or greater value than that which will be lost and which is likely to result in a net gain in biodiversity. Where new development may have an adverse impact on such features, alternative scheme designs that minimise impact must be presented to the Council for consideration before the use of mitigation measures is considered. Where sufficient mitigation measures cannot be delivered, compensation measures must be provided as a last resort."*

2.3.26 Regarding landscape matters, the policy requires that *"New development proposals in and adjoining the countryside will be expected to be designed so as to be sensitive to their landscape setting. They will be expected to enhance the distinctive qualities of the landscape character policy zone in which they would be situated, as identified in the*

Bassetlaw Landscape Character Assessment. Proposals will be expected to respond to the local recommendations made in the Assessment by conserving, restoring, reinforcing or creating landscape forms and features accordingly.”

- 2.3.27 Policy DM10: Renewable and Low Carbon Energy sets out that the Bassetlaw District Council should be *“supportive of proposals that seek to utilise renewable and low carbon energy to minimise CO2 emissions”*, where they comply with the identified locations for energy opportunities, and where they are:
- *“compatible with policies to safeguard the built and natural environment, including heritage assets and their setting;*
 - *will not lead to the loss of or damage to high-grade agricultural land;*
 - *are compatible with tourism and recreational facilities;*
 - *will not result in unacceptable impacts in terms of visual appearance; landscape character; noise; shadow-flicker; watercourse engineering and hydrological impacts; pollution; traffic generation; or loss of features of recognised importance for biodiversity;*
 - *will not result in an unacceptable cumulative impact in relation to the factors above.”*

Bassetlaw Local Plan 2020-2038 Publication Version Composite (published for examination July 2022) (Ref.16)

- 2.3.28 Policies within the Local Plan 2020-2038 are subject to ongoing examination, and are anticipated to supersede policies within the Core Strategy (November 2010) document once adopted.
- 2.3.29 Policy ST35: Design Quality requires that *“all development must be of a high quality design”* that has a *“clear function, character and identity based upon a robust understanding of local context, constraints and distinctiveness, while reflecting the principles of relevant national and local design guidance; where appropriate, positively preserves, enhances and integrates landscape and townscape features, and natural and heritage assets; respects and complements the local context; incorporates and/or links to a well-defined green/blue infrastructure network; incorporates high quality landscape design and maximises opportunities for greening; and is sustainable in design and construction, and utilises modern construction methods and durable materials”*.
- 2.3.30 Policy ST37: Landscape Character sets out that the Council will be supportive of proposals that contribute to the nature and quality of Bassetlaw’s landscapes, where it can be demonstrated they protect and enhance the distinctive qualities of the relevant landscape character zone.
- 2.3.31 Policy 48: Protecting Amenity expects proposed development to *“be designed and constructed to avoid and minimise impacts on the amenity of existing and future users, individually and cumulatively, within the development and close to it”* through ensuring it does not have *“a significant adverse effect on the living conditions of existing and new*

residents” nor “generate a level of activity, noise, light, air quality, odour, vibration or other pollution which cannot be mitigated to an appropriate standard”.

Neighbourhood Plans

Sturton Ward

- 2.3.32 Sturton Ward covers the parishes of North and South Wheatley, North Leverton with Hablesthorpe, South Leverton, and Sturton le Steeple including Bole and West Burton. This therefore covers the majority of the cable route corridor to the west of the River Trent, and the grid connection point at West Burton National Grid Substation.
- 2.3.33 The Sturton Ward Neighbourhood Plan Review (adopted 2021) (Ref.17) sets out the requirement for development outside the defined development boundaries to be carefully controlled in accordance with national and local planning policies in Policy 1: Sustainable development, infill and the development boundary.
- 2.3.34 Policy 2a: Protecting the landscape character, significant green gaps and key views, requires development to protect the positive attributes of the open countryside and landscape character as appropriate to their scale, nature and location, and should demonstrate they have regard to the guidance in the Sturton Ward Design Code (2020) (Ref.18).
- 2.3.35 Policy 5: Design Principles sets out that developments should demonstrate a high design quality that will contribute positively to the character of the Ward as appropriate to their scale, nature and location. Furthermore, developments should respond to the local character, demonstrate sensitive positioning, scale and form, provide a clear rationale of response to history and design quality, use native trees and hedgerows where possible in landscaping schemes, use a sensitive colour palette, be of a scale and mass that is sympathetic to heritage assets and their setting.

Treswell and Cottam

- 2.3.36 The part of the cable route within the parish areas of Treswell and Cottam falls within the Treswell and Cottam Neighbourhood Plan Area, and as such, policies set out in the adopted neighbourhood plan are to be considered.
- 2.3.37 In the made Neighbourhood Plan (adopted 2019) (Ref.19), Policy 1: Development in Treswell and Cottam requires all development to be designed such that it does not significantly and adversely impact on residential amenity, character and appearance of the area, nor on social, built, historic cultural and natural assets in the neighbourhood plan area.
- 2.3.38 Furthermore, Policy 2: Design Principles requires developments to retain important views, respect the existing grain of development, respect local materials, and to retain and take inspiration from existing boundary treatments.
- 2.3.39 The Treswell and Cottam Neighbourhood Plan is currently under review and is at Pre-Submission Draft stage (as of January 2022) (Ref.20). Although not yet adopted,

the policies are of some weight due to their progression and consistency with the previous plan and updated Local Plan position. Policy 6: Design Principles carries over the requirements from Policy 2 of the adopted plan.

2.4 Industry Guidance

[National Infrastructure Commission: Design Principles for National Infrastructure \(2020\)](#)

2.4.1 Design Principles for National Infrastructure (Ref.21) are a set of key design principles developed by the National Infrastructure Commission's (NIC) design group to guide the planning and delivery of major infrastructure projects. These key principles are:

- Climate: Mitigate carbon emissions and adapt to climate change
- People: Reflect what society wants and share benefits widely
- Places: Provide a sense of identity and improve our environment
- Value: Achieve multiple benefits and solve problems well

2.4.2 These principles aim to promote a holistic approach to infrastructure design that improves environmental performance whilst focussing design measures around improving the scope of beneficial impacts infrastructure can bring.

[Solar Energy UK: 11 Commitments on Solar Farms](#)

2.4.3 Solar Energy UK is a non-profit trade association which represents a significant portion of the UK's solar energy businesses. Members of the association are expected to comply with best practice industry guidance through the adoption of 11 key commitments on their solar sites (Ref.22). Those related directly to design are:-

- for design measures to enhance the biodiversity and natural capital value of all solar sites,
- being sensitive and complementing nationally and locally protected landscapes and nature conservation areas;
- deliver multi-functional land use by proposing co-location with agriculture and/or nature recovery projects for solar and energy storage developments;
- accommodate needs for rights of way and sites of archaeological importance;
- and to minimise visual impact where possible, making visual enhancements, and including appropriate screening.

[BRE: Planning guidance for the development of large scale ground mounted solar PV system](#)

2.4.4 The Building Research Establishment (BRE) provides research, advice, training, testing, certification and standards for both public and private sector organisations in the UK and abroad within the construction sector.

- 2.4.5 BRE have published guidance on the development of large-scale solar farms (Ref.23), which addresses documents that need to be provided within a planning application, as well as relevant considerations to the determination of planning applications for large scale solar.

3 Scheme Location and Context

3.1 Order Limits and Locational Context

- 3.1.1 The Scheme is located in the East Midlands, straddling the boundary of two district authorities in two counties, these being West Lindsey in Lincolnshire and Bassetlaw in Nottinghamshire.
- 3.1.2 The Scheme consists of three distinct electricity generation stations known as West Burton 1, West Burton 2 and West Burton 3, connected to each other and to the grid connection point at West Burton Power Station, National Grid Substation, by underground cables.
- 3.1.3 The Order limits and Scheme Location are shown in **Appendix 1: Figure 1.1** of this document.
- [West Burton 1](#)
- 3.1.4 West Burton 1 totals 91.32 ha in area and is located to the east of Broxholme with the village of Bransby to the northwest. It lies within the parishes of Broxholme and Scampton. The developable area containing solar panels, substation and associated infrastructure totals 73.51ha. The remaining area is set aside for landscape and ecological mitigation.
- 3.1.5 The Site at West Burton 1 consists almost entirely of agricultural fields used for arable crops. The topography is relatively flat and is predominantly well screened from its immediate surroundings by tall hedges around the boundaries. The fields are generally large and typically have dividing hedgerows. There are only isolated trees outside of field margins. There are a number of existing farm access tracks and field accesses within the Site. Part of the Site adjoins the bank of a watercourse that drains into the River Till. Overhead lines cross part of the landholding. The site is traversed by Main Street, a public highway linking Broxholme village and A1500 Tillbridge Lane.
- 3.1.6 There are no Listed Buildings or Scheduled Monuments within the Site and it is not within a Conservation Area. There are no Statutory or Non-Statutory ecological designations or Ancient Woodland on the Site. The Site does not include nationally designated landscape or West Lindsey Area of Great Landscape Value (AGLV).
- 3.1.7 The surrounding area is predominantly arable farmland, interspersed with a significant number of woodland blocks. Immediately to the east of the Site is North Carlton Covert, a small block of woodland immediately adjacent to the Site's eastern boundary. The nearest settlement is the small village of Broxholme located immediately to the southwest of the Scheme. To the west lie the hamlets of Bransby and Ingleby and to the east lies the village of North Carlton. With the exception of the villages/hamlets mentioned above, the area is relatively sparsely populated with isolated residential properties and farmsteads dotted throughout the surrounding countryside.

- 3.1.8 The land is generally flat, defined by the floodplains of the River Trent and River Till with the limestone escarpment known as “The Ridge” located to the east. The River Till runs in a north south direction up to the northern boundary of West Burton 1.
- 3.1.9 The village of Broxholme village, immediately adjacent to the southwest of the Site, contains a scheduled monument and listed buildings. There are no ecological designations in proximity to the Site.
- [West Burton 2](#)
- 3.1.10 West Burton 2 sits to the west of West Burton 1 and is located to the north of the village of Saxilby. It lies within the parish of Saxilby with Ingleby and covers an area of 306.98ha. The developable area containing solar panels, substation, and associated infrastructure totals 149.62ha. The remaining area is set aside for landscape and ecological mitigation.
- 3.1.11 The Site at West Burton 2 consists almost entirely of agricultural fields used for arable crops. The topography is relatively flat and is predominantly well screened from its immediate surroundings by tall hedges around the boundaries. The fields are generally large and typically have dividing hedgerows. There are only isolated trees outside of field margins. There are a number of existing farm access tracks and field accesses within the Site. Part of the Site adjoins the bank of the River Till. Overhead lines cross part of the landholding. The B1241 Saxilby Road/Sturton Road runs north/south through West Burton 2. In the south-eastern corner of the holding, Broxholme Lane cuts across the land in an east/west direction.
- 3.1.12 There are no PRoW's located within West Burton 2 but there is an 'Other route with Public Access' (ORPA) which runs alongside part of the western boundary.
- 3.1.13 There are no Listed Buildings or Scheduled Monuments within the Site and it is not within a Conservation Area. There are no Statutory or Non-Statutory ecological designations or Ancient Woodland on the Site. The Site does not include nationally designated landscape or West Lindsey Area of Great Landscape Value (AGLV).
- 3.1.14 The surrounding area is predominantly arable farmland, interspersed with farms and villages, alongside the larger settlements of Saxilby and Sturton by Stow. The landform is relatively flat with a gentle slope to the east towards the River Till. Around 2.5km to the northwest of the Site lies the settlement of Sturton by Stow and the larger village of Saxilby is located approximately 2.5km to the southwest of the Site. To the west lie the hamlets of Bransby and Ingleby and to the east lies the village of North Carlton. With the exception of these villages/hamlets, the area is relatively sparsely populated with isolated residential properties and farmsteads dotted throughout the surrounding countryside. The landform within the surrounding area is relatively flat with a gentle slope to the east towards the River Till.
- 3.1.15 The closest listed building to the site is Grade II Listed Ingleby Chase (Listed Number: 1147263), located close to the Site's northern boundary. Within a 2km proximity

there are further Grade I and II Listed Buildings and Scheduled Monuments. There are no ecological designations in proximity to the Site.

West Burton 3

- 3.1.16 West Burton 3 sits to the north west of West Burton 2 and is located between the villages of Brampton and Marton within the parishes of Marton, Brampton and Stow. It covers an area of 370.78ha. The developable area containing solar panels, substation and associated infrastructure totals 284.31ha. The remaining area is set aside for landscape and ecological mitigation.
- 3.1.17 The Site at West Burton 3 consists almost entirely of agricultural fields used for arable crops. The topography is relatively flat and is predominantly well screened from its immediate surroundings by tall hedges around the boundaries. The fields are generally large and typically have dividing hedgerows. There are only isolated trees outside of field margins. There are a number of existing farm access tracks and field accesses within the Site and a redundant farmhouse which will remain and is not proposed to be redeveloped. The A1500 Stow Park Road/Till Bridge Lane runs along the northern boundary of West Burton 3. Cowdale Lane runs along the southern boundary. A section of public footpath Mton/68/1 runs though the northwest corner of the Site. The railway line between Lincoln and Gainsborough runs north-south between land parcels comprising the West Burton 3 Site.
- 3.1.18 There are no Statutorily or Non-statutorily designated ecological sites or Ancient Woodland within the Site. The Site does not include nationally designated landscape or West Lindsey Area of Great Landscape Value (AGLV).
- 3.1.19 The surrounding area is predominantly arable farmland. The Lincoln Golf Club is located to the southwest of the Site, surrounding the small hamlet of Brampton. A small number of residential properties on the eastern edge of the settlement are located adjacent to the southwestern corner of the Site. Located within the middle of the Site and straddling the railway line are Stow Park Farm and Marton Moor Farm, two large farmsteads with associated outbuildings and sheds that occupy the arable farmland to the south of the A1500.
- 3.1.20 To the immediate northwest of the Site is the settlement of Marton which occupies the hillside leading down from the arable plateau to the lower lying landform alongside the River Trent. A small number of residential properties on Adams Way and Spafford Close are located alongside the north-western corner of the Site. To the west of the Site the landform quickly drops away to the A156 and the River Trent. Embankments alongside the Trent help elevate it above of the surrounding lowland arable farmland. The eastern extents of the Site occupy the flatter arable plateau that is made up of gently rolling arable fields. With the exception of the villages/hamlets mentioned above, the area is relatively sparsely populated with isolated residential properties and farmsteads dotted throughout the surrounding countryside.

3.1.21 The Scheduled Monument Medieval Bishop's Palace and Deer Park, Stow Park (List Entry Number: 1019229), is located immediately adjacent to the Site. There are also a number of Scheduled Monuments and Listed Buildings close to the Site.

3.1.22 There are no statutory or non-statutory ecological designations within 2km of the Site. The nearest Ancient Woodland is 1.2km north of the Site at Gate Burton. Located approximately 350m to the northeast of the Site is West Lindsey AGLV3 (Laughton Wood).

[Cable Route Corridor](#)

3.1.23 The Sites are to be connected to each other and to the grid connection point by some 21.3km of high voltage cable routes. The cables run from West Burton 1 and 2 into West Burton 3 where the 400kV substation will be located. From there a 400kV cable runs to the Point of Connection (POC) at West Burton Power Station.

3.1.24 The Cable Route Corridor crosses predominantly agricultural land, taking care to avoid unnecessary disruption or severance of land or ecological features. The cable will need to cross a number of key obstacles via the use of horizontal directional drilling. The main drilling sites will be located where the cable needs to cross the River Till and the River Trent. Smaller drilling sections may be required for crossing other features such as roads and ditches. The cable route avoids villages such as Sturton Le Steeple and Marton.

[Additional Areas within the Order Limits](#)

3.1.25 The Order Limits contain the full land area required to develop, operate, maintain and decommission the Scheme. As such, these also include all access points and visibility splays, as well as any additional land required for the transportation of 'abnormal indivisible loads' (AIL).

3.2 Renewable Energy Constraints and Opportunities

3.2.1 The characteristics of the land and the Scheme's location are well suited for the generation of renewable solar energy. The land is predominantly flat or gently sloping, and predominantly (or capable of being) well screened from short- and long-range views. The Scheme is located in an area of the UK with good levels of solar irradiance, allowing the Scheme to efficiently produce energy. The Sites are well connected to the local highway network, allowing suitable construction and maintenance access. The Scheme is also located favourably close to a National Grid connection point with sufficient capacity as a result of the anticipated decommissioning of West Burton A Power Station.

3.2.2 The Scheme encompasses a number of design practices which are detailed within **Section 8** of this document, which identifies a series of design commitments to be secured as part of the DCO.

3.3 Context Mapping

3.3.1 The Scheme has been subject to a desk-based review of constraints and features in the local context. These are shown in **Appendix 1: Figures 2.1-2.5** at the end of this document, and relate to the following subsections.

3.4 Landscape Character and Green Infrastructure

3.4.1 The geographic spread of the Scheme falls across two National Character Areas (NCAs), which identifies landscape character at an England-wide scale. The Scheme also falls across four Regional Landscape Character Types (RLCT) as identified by The East Midlands Landscape Partnership, and three Local Character Areas identified by West Lindsey District Council and two Local Character Areas identified by Bassetlaw District Council. These character area maps are shown in **Appendix 1: Figures 2.1-2.2**. Full details of the character area assessments at all levels can be found in the ES Chapter 8: Landscape and Visual Assessment [**EN010132/APP/WB6.2.8**] and its associated figures.

3.4.2 All of the Sites and the whole of the cable route fall within NCA Profile 48: Trent and Belvoir Vales. This area is broadly characterised by undulating, strongly rural and predominantly arable farmland, centred on the River Trent. A low-lying rural landscape with relatively little woodland cover, the NCA offers long, open views. Newark-on-Trent (generally referred to as Newark) lies at the centre with Grantham, Nottingham, Lincoln and Gainsborough on the peripheries. The southern and eastern edges of the Vales are defined by the adjoining escarpments of the Lincolnshire Edge and the Leicestershire and Nottinghamshire Wolds NCA.

3.4.3 Part of the 5km Study Area for West Burton 1 and West Burton 2 falls within NCA Profile 45: Northern Lincolnshire Edge with Coversands, which is broadly characterised by a ridge of Jurassic limestone running north from Lincoln to the Humber Estuary where the scarp slope rises prominently from adjacent low-lying land, forming the Edge or Cliff, and giving panoramic views out, in particular to the west. The Cliff runs north-south, to the east of West Burton 1 and West Burton 2.

3.4.4 The Applicant has followed a step-by-step site selection process which confirms the location of the Scheme is suitable for a large-scale solar farm. This has included the avoidance of sensitive landscape and environmental designations in confirming site suitability and consideration of alternative sites. Details of the process are set out within the ES at Appendix 5.1: Site Selection Assessment [**EN010132/APP/WB6.3.5.1**].

3.4.5 The following priorities have influenced the design of the Scheme:-

- Proximity of residential properties – with a proposed minimum 50m offset to curtilage boundary
- Identification of key visual receptors and key views

3.4.6 Taking into account the baseline conditions, a number of opportunities for landscape and green infrastructure enhancement have been identified within the Order limits.

- 3.4.7 Where hedgerows and field-edge tree belts across the Order limits are fragmented or of a poorer quality, these can be improved through new supplementary planting and management of existing hedges to improve visual screening and ecological value. Within this, opportunity could be sought to diversify the age and species of the planting, whilst improving the provision of native species.
- 3.4.8 Whilst care has been given to exclude areas of greater landscape and ecological value from the Scheme Order limits, there are a number of valuable landscape features, such as woodland blocks and watercourses, that are within, bordered by, or encircled by the Order limits. The Scheme has therefore sought to avoid and reduce effects on such elements through adherence to minimum offsets and seeks to enhance these where possible. These offsets have been determined through baseline ecological and landscape assessments, and are secured through the Works Plans [EN010132/APP/WB2.3], Concept Design Parameters and Principles [EN010132/APP/WB7.13], and the Outline Landscape and Environmental Management Plan [EN010132/APP/WB7.3].
- 3.4.9 There are a number of isolated residential properties and farmsteads in proximity to the Order limits, including a very small number that are partially encircled. The Scheme layout should therefore actively be sensitive to residential views, avoiding or reducing change wherever possible, and mitigating views of the solar arrays and supporting infrastructure through tailored planting measures. The Applicant and consultant team have been in close liaison with residents of these properties throughout the concept design and pre-application stages to understand and seek to respond to their concerns.

3.5 Agricultural Land

- 3.5.1 The majority of the land area within the Order limits is arable agricultural land. The majority of the land falls within Agricultural Land Classification Grade 3b, which is currently classified as lower quality agricultural land. The remaining land, which accounts for no more than 26.24% of the area of the Sites is classified as “best and most versatile” (BMV) agricultural land. These areas are identified in **Appendix 1: Figure 2.3a-c**. The matter is reviewed in detail within ES Chapter 19: Soils and Agriculture [EN010132/APP/WB6.2.19].
- 3.5.2 The following priorities have influenced the design of the scheme:-
- The avoidance of development of best and most versatile land where possible.
- 3.5.3 The land maximises the utilisation of low grade, non-best and most versatile (BMV) agricultural land with 73.76% of the land being classified as non BMV land as set out within the ES at Appendix 5.1: Site Selection Assessment [EN010132/APP/WB6.3.5.1].

3.6 Ecology and Biodiversity

- 3.6.1 The habitats on the Sites are considered to be very much typical of their surroundings, and as such there is significant opportunity for Biodiversity Net Gain through the implementation of onsite habitat enhancement.
- 3.6.2 The Sites predominantly comprise large, open and generally flat arable fields characterised by winter-sown cereal crops with some fields of permanent pasture (mainly in West Burton 2), bounded by a network of managed hedgerows and ditches with narrow field margins, where present. While no significant woodland is present within the Sites, several small stands of managed and unmanaged woodland are present adjacent and in the surrounding landscape. A narrow belt of woodland known as the Codder Lane Belt bisects fields in the western half of West Burton 2 and is a relatively significant local green corridor. Permanent standing water is generally absent from the Sites, save for a small number of agricultural pools/pits, decoy ponds or managed recreational fishing ponds. Flowing water occurs occasionally in the form of various feeder streams running into more significant local watercourses as well as an extensive network of agricultural drainage ditches, many of which regularly dry out. The River Till runs adjacent to the eastern boundary of West Burton 2 and 400m west of West Burton 1. The River Trent runs 1.4km west of West Burton 3. Areas of known ecological value, or are of local, national, or international ecological designation are identified in **Appendix 1: Figure 2.4**.
- 3.6.3 Habitat creation and management priorities, as set out in the Outline Landscape and Ecological Mitigation Plan **[EN010132/APP/WB7.3]** will be in part driven by the Biodiversity Opportunities Mapping produced by Greater Lincolnshire Nature Partnership and local policies promoting the connection of Green Infrastructure and Nature Recovery Networks, such as those associated with the River Till.
- 3.6.4 The following opportunities and priorities have influenced the design of the scheme:-
- Avoidance of national ecological designations
 - Proximity to local ecological designations and sensitive ecological receptor – minimum 20m offset to designated area
 - Proximity to major watercourses – minimum 20m offset
 - Proximity to minor watercourses and ditches – minimum 8m offset
 - Proximity to badger setts – minimum 30m offset
 - Proximity to GCN sites – minimum 50m offset
 - Proximity to trees with low, medium or high bat roost potential – minimum 8m, 12m, 20m offset

3.7 Cultural Heritage

- 3.7.1 Details of the heritage assets in the study area are presented and assessed in full in ES Chapter 13: Cultural Heritage **[EN010132/APP/WB6.2.13]**.

- 3.7.2 Due to the large scale and spread of the Sites, a number of designated and non-designated built heritage assets are located within the site or within the study area of the solar array Sites. These cultural heritage assets are identified in **Appendix 1: Figure 2.5**.
- 3.7.3 Although none are located within the Order limits, the 5km study area as set out in the ES Chapter 13: Cultural Heritage **[EN010132/APP/WB6.2.13]** contains 17 Scheduled Monuments, and 25 Grade I or Grade II* listed buildings. The study area also contains or partially covers 4no. conservation areas. A 2km study area from the Sites has been used for Grade II listed buildings, of which 54 Have been identified. A further 19 Grade II listed buildings have been identified within 500m of the Cable Route. None of these are within the Scheme Order limits. There are also no non-designated heritage assets within the Order limits, with a total of 21 being located within 250m of the Sites. A smaller 1km study area for non-designated archaeological assets has identified a total of 72 assets within or near to the Order limits.
- 3.7.4 The following priorities were identified to be taken forward through the design process:
- Avoidance of national cultural heritage designations;
 - Areas of significant archaeology to be avoided;
 - Areas of moderate archaeology to be limited to restricted loading and non-penetrative foundations;
 - Context of cultural heritage assets to be considered.
- 3.7.5 ES Chapter 13: Cultural Heritage **[EN010132/APP/WB6.2.13]** addresses archaeological assessment and discusses the embedded mitigation measures that have been identified and adopted as part of the evolution of the project design at Section 13.6. This includes the removal of panels from especially archaeologically sensitive areas and the use of concrete feet and above ground cabling ducts to avoid impacts to archaeologically sensitive areas. Where assets have been identified as requiring preservation in situ, with standard mitigation in place in the form of placing the panels on concrete feet, impacts would be avoided.

3.8 Hydrology

- 3.8.1 The majority of the Sites are at low risk of fluvial or surface water (pluvial) flooding, however, the location of the Scheme means that the Sites are crossed or bounded by a large number of watercourses. In particular, the River Till and a major tributary bound West Burton 1 and West Burton 2. Both Sites at West Burton 1 and 2 contain areas designated as flood storage areas, and as such are not to be used for the placement of electrical infrastructure. Any other areas of the Sites closely related to watercourses are at greater risk of flooding. Surface water flooding channels also run through multiple parts of the Sites. Areas of known fluvial or pluvial flooding are

identified in the Flood Risk Assessment and Drainage Strategies at ES Appendices 10.1-10.6 **[EN010132/APP/WB6.3.10.1-6]**.

3.8.2 These Flood Risk Assessments have been prepared for all the Sites to assess the flood risk from all sources before and after development. The impacts of the development are assessed in ES Chapter 10: Hydrology, Flood Risk and Drainage **[EN010132/APP/WB6.2.10]**.

3.8.3 The following priorities were identified:-

- Avoidance of flood storage areas
- Avoidance of areas of surface water flooding greater than 1m depth

3.8.4 The design of the Scheme seeks to avoid the construction of vulnerable infrastructure in areas at risk of flooding. Less vulnerable infrastructure will be designed to ensure it can be resilient to flooding, and that its placement in areas of flood risk does not increase the risk of flooding elsewhere. Sustainable drainage systems (SuDS) will be implemented to ensure that the Scheme does not increase the risk of flooding elsewhere. The SuDS will be designed in such a way that they also deliver a biodiversity enhancement.

3.8.5 Inclusion of Sustainable Drainage Systems (SuDS) measures around any proposed vulnerable infrastructure (substations and batteries) and wildflower planting at the edge of the solar array areas will provide sufficient treatment as well as the attenuation required to maintain existing runoff rates.

3.9 Access and Movement

3.9.1 Each of the Sites has separate access routes, which will be used for construction, operation, maintenance and decommissioning. The local highway network has been assessed as being suitable for traffic associated with the Scheme at all phases.

3.9.2 Only the delivery of abnormal loads will require highways improvements or alterations, including the removal of boundary features to allow for the oversailing of third-party land.

3.9.3 ES Chapter 14: Transport and Access **[EN010132/APP/WB6.2.14]** details new accesses to be created/upgraded as part of the scheme.

3.9.4 There are 16 Public Rights of Way that will be impacted by the Scheme, that are identified within table 14.5 of ES Chapter 14: Transport and Access **[EN010132/APP/WB6.2.14]**. The Scheme has been designed so that it does not cause a permanent diversion or closure of a Public Right of Way, or make it so that the Public Right of Way is unsuitable or undesirable for use.

3.9.5 Where feasible, the design of the Scheme considers where additional accessibility, such as permissive paths or links between Rights of Way can be introduced to perform a level of community benefit or to enhance the walking and cycling network in the locality. This includes a new permissive path which is to be introduced to provide better connectivity and options for recreational walking between the

villages of Saxilby and Ingleby, allowing for circular walks. The permissive path route runs from the track off Sykes Lane along the Codder Lane Belt and then south and west to re-join Sykes Lane opposite Hardwick Scrub.

4 Design Objectives

4.1 Vision

4.1.1 As stated in the introductory section of this document, the Scheme intends to make a significant contribution to the production of renewable energy. The Applicant is aiming to deliver the substantial benefits of the Scheme whilst being sensitive to potential impacts on the surrounding environment.

4.1.2 The Scheme would contribute to the UK's energy system meeting its renewable energy targets and policy objectives, whilst taking into full account the baseline analysis of the Sites and the assessment of potential impacts. The Scheme will deliver a design that positively responds to its locational context, delivers substantial benefits to energy production, climate change, and biodiversity enhancement, whilst minimising negative impacts on the local and wider environment.

4.2 Objectives

4.2.1 As part of the design process, the Applicant identified a number of key design objectives in order to achieve the project vision.

4.2.2 These objectives have been formulated to align with guidance published by the National Infrastructure Commission, Solar Energy UK and BRE.

[Objective 1: Delivery of a significant amount of affordable, renewable energy to support policy objectives and national targets for reducing carbon emissions to net zero by 2050.](#)

4.2.3 Each of the Sites have been designed to have a generating capacity of over 50MWe, with the Scheme having a total expected generating capacity of c.480MW of renewable solar energy for approximately 40 years for distribution by the National Grid. This will make a significant contribution towards meeting national energy demand, replacing approximately 24% of the former generation capacity of the coal powered West Burton A Power Station.

4.2.4 The Scheme is anticipated to save a total of 3.9 million tonnes of carbon emissions to the atmosphere, as calculated in the ES Chapter 7: Climate Change **[EN010132/APP/WB6.2.7]**. This is in comparison to the level of carbon emitted for the same energy generation as a standard gas fired Combined Cycle Gas Turbine (CCGT). This carbon reduction will support policy objectives and national targets to reach net zero carbon emissions by 2050, and is thus in compliance with the policy objectives as set out in NPS EN-1, EN-3 (and their draft revisions), EN-5 (and draft revisions) and in the NPPF (and consultation iteration).

[Objective 2: Delivery of improved energy resilience by diversifying energy production and storing energy for when it is needed most.](#)

4.2.5 The Scheme generates electricity through solar energy, which improves national energy resilience by reducing the need for fossil fuel-based energy production,

which is influenced to a large degree by international energy market pricing and supply fluctuations, which are often affected by world events beyond the control of infrastructure developers. Solar energy is a method of energy production that is independent of, and not as influenced by, these external factors, which can contribute to creating a resilient supply of energy helping to fulfil domestic energy demand, which is less sensitive to price volatility.

- 4.2.6 The design of the Scheme includes a battery energy storage system (BESS), which can be stored from production on site, or from surplus energy on the Grid, so that it can be released back onto the Grid at times of peak demand. The inclusion of BESS on the Scheme has been selected by the developer to meet the predicted needs of the electricity market, and to allow for optionality to respond to advancements in solar panel and battery energy storage technology. This will help to support policy objectives for delivery of renewable energy by reducing demand for non-renewable energy at peak times, and by providing grid balancing services to help increase the resilience of the electricity distribution network.

[Objective 3: Contribution towards strategic improvements to local ecology and biodiversity.](#)

- 4.2.7 The area within the Order limits consists of fragmented areas of good quality ecological habitats, with much of the Scheme consisting of low biodiversity agricultural land. The Scheme will support, enhance, and link areas of ecological significance with green infrastructure interventions. The Scheme also will increase local biodiversity through new planting and groundcover where currently under arable agricultural use. The Scheme will deliver Biodiversity Net Gain as set out within ES Chapter 9: Ecology and Biodiversity **[EN010132/APP/WB6.2.9]**. This is due to the large-scale reversion of arable to permanent grassland, as well as the adoption of generous ecological buffer zones (including of watercourses and marginal habitat) which will be sympathetically managed to maximise biodiversity value (within the Outline Landscape and Ecological Management Plan (LEMP) **[EN010132/APP/WB7.3]**). Furthermore, significant planting of new hedgerows and tree lines will contribute to the enhancement of linear habitats.

[Objective 4: Develop the Scheme sensitively to the surrounding landscape, limiting the impact on views for key landscape receptors, residential properties, and recreational routes.](#)

- 4.2.8 The design of the Scheme ensures that the siting and scale of the development can be contained in the local landscape, with measures included to mitigate against direct impacts, whilst employing planting and landscaping improvements to enhance existing landscape features whilst helping to make the proposals assimilate with the existing working agricultural landscape. These improvements are set out within the Outline LEMP **[EN010132/APP/WB7.3]**, to be secured as part of the DCO.
- General Planting Implementation & Management
 - Hedgerow Planting and Management

- Hedgerow Tree Planting and Management
- Woodland and Shelterbelt Planting and Management
- Scattered Trees with Native Shrub Planting and Management
- Buffer Areas including Flower Rich Pollinator Strips and Successor Scrub
- Beneath Panel Habitats
- Bird Mitigation Habitats including Wetland Bird Habitat and Set-Aside

[Objective 5: Develop the Scheme sensitively with regard to heritage assets and their settings.](#)

4.2.9 The Scheme is designed to avoid direct impacts on above and below ground heritage assets and seeks to preserve the setting of heritage assets within the Order limits and in the surrounding context. The Outline Construction Environmental Management Plan **[EN010132/APP/WB7.1]** sets out that a number of measures will be taken to ensure impacts on heritage assets are avoided – this includes providing mitigation as follows:-

- Provision for archaeological mitigation and monitoring is detailed in the Written Scheme of Investigation (WSI, see ES Appendix 13.7 **[EN010132APP/WB6.3.13.7]**). The WSI must be adhered to during constructional phases.
- Areas where concrete feet are required will be laid out by a surveyor in line with the requirements of the WSI.
- All archaeological works will be undertaken by suitably qualified and experienced professional archaeological specialists.
- All archaeological works will be undertaken in line with national guidance (i.e. Historic England and CifA guidance).
- The Archaeological Project Manager and/or Lincolnshire Heritage Team will monitor the completion of works in accordance with the programme set out in the WSI.

[Objective 6: Safeguard the surrounding hydrological systems, ensure the Scheme is resilient to flooding and will not increase flood risk elsewhere, taking account of the impacts of climate change.](#)

4.2.10 The Scheme is designed to ensure that sensitive onsite infrastructure is not at risk from flooding, and that the development of the Scheme will not increase the risk of flooding elsewhere. This should also include measures to ensure the Scheme is resilient to climate change, and that changes to hydrological systems as a result of climate change, are not exacerbated by the Scheme. This is set out within Sections 10.7 and 10.8 of ES Chapter 10: Hydrology Flood Risk and Drainage **[EN010132/APP/WB6.2.10]** which lists mitigation measures that have been built into the design with regard to flood risk and drainage.

Objective 7: Ensure the protection, and where possible enhancement, of existing Public Rights of Way and ensure the continued safe use of the public highway network.

4.2.11 The design of the Scheme ensures that Public Rights of Way are safeguarded from unnecessary diversions or closures, with all efforts made to ensure they can be protected, integrated into the Scheme design, and where feasible enhanced by planting and greater connectivity through the introduction of permissive paths. The public highway should also be protected, and as such the design of the Scheme should ensure that access to it does not negatively impact on the safety and desirability of the use of the public highway for all users. The Outline CEMP [EN010132/APP/WB7.1] and Public Rights of Way Management Plan [EN010132/APP/WB6.3.14.3] set out how Public Rights of Way will be managed during construction.

4.3 Delivery of Design Objectives

4.3.1 The table below sets how each of the Scheme’s design objectives are addressed through the proposed design measures, and how these measures will be secured in the DCO application.

Table 4.1: Delivery of Design Objectives

Design Measure	How measures are secured.
Objective 1: Delivery of a significant amount of affordable, renewable energy to support policy objectives and national targets for reducing carbon emissions to net zero by 2050.	
Construction and operation of photovoltaic panels with a generating capacity over 50MW.	The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme (some 769.08 ha) permitted for the locating of PV panels.
Use of north-south axis tracking panels or east-west axis fixed panels. This will ensure that energy generation is optimised through the use of the most appropriate technology.	The Concept Design Parameters and Principles [EN010132/APP/WB7.13] defines the type of PV panels and mounting structures to be used in the Scheme and is secured by a DCO requirement.
Flexibility to select the most efficient technology, within defined parameters	The Concept Design Parameters and Principles [EN010132/APP/WB7.13] defines parameters for the component parts of the Scheme and is secured by a DCO requirement.
Objective 2: Delivery of improved energy resilience by diversifying energy production and storing energy for when it is needed most.	
The generating stations and energy storage systems will be connected to the National	The Works Plan [EN010132/APP/WB2.3] defines the extent of the energy storage system.

Grid at West Burton Power Station to allow for two-way transmission of electricity.	
A battery energy storage system will be included in the Scheme design to help to meet the needs of the electricity market, by reducing demand for non-renewable energy at peak times, and by providing grid balancing services to help increase the resilience of the electricity distribution network.	The Works Plan [EN010132/APP/WB2.3] defines the extents of the energy storage system (up to 1.75ha) permitted for the locating of the energy storage.
Objective 3: Contribution towards strategic improvements to local ecology and biodiversity.	
Include sufficient offsets from ecological receptors to onsite infrastructure	The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of PV panels, with the offsets detailed in the Outline Landscape and Ecological Mitigation Plan (OLEMP) [EN010132/APP/WB7.3] and is secured by a DCO requirement.
Provide planting to enhance linear green infrastructure to aid ecology and biodiversity improvement, and grassland and wildflower meadow planting underneath panelled areas to improve in-field biodiversity from the arable field baseline.	The Works Plan [EN010132/APP/WB2.3] defines the extents of the planting (Works No. 6) and habitat creation areas (Works No. 9 and 10), with the detailed measures set out in the OLEMP [EN010132/APP/WB7.3] and is secured by a DCO requirement.
Creation of permanent habitats for wetland, in-field, and field-side ecosystems.	The Works Plan [EN010132/APP/WB2.3] defines the extents of the planting (Works No. 6) and habitat creation areas (Works No. 9 and 10), with the detailed measures set out in the OLEMP [EN010132/APP/WB7.3] and is secured by a DCO requirement.
Objective 4: Develop the Scheme sensitively to the surrounding landscape, limiting the impact on views for key landscape receptors, residential properties, and recreational routes.	
The layout takes account of the surrounding landscape and respects the intrinsic value of the landscape character.	The Works Plan [EN010132/APP/WB2.3] (Works No. 1A, 1B, 1C) defines the extents of the Scheme permitted for the locating of PV panels, and for landscape planting measures.
Electrical and telecommunications cabling associated with the Scheme is to be buried in cable trenches.	The Concept Design Parameters and Principles [EN010132/APP/WB7.13] requires that sets out whether cabling will

	be above ground or below ground as well as the techniques to be used. Where possible, cabling will be below ground in order to minimise impacts.
Proposed planting has been designed to take account of sensitive views; and retain openness where important to key views.	The extents of where planting is proposed, and the nature of the planting proposed are set out in the OLEMP [EN010132/APP/WB7.3] and secured by a DCO requirement.
Land parcels known to be of greatest landscape sensitivity have been excluded from siting of PV panels. This has been established through the iterative design process as detailed in chapter 5 of this document (See 5.4.2-5.4.21)	The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of PV panels.
Minimum offsets from PV panels and associated infrastructure to woodland, hedgerows, PRowS and waterbodies are embedded in the Scheme design.	The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of PV panels, including where there are offsets from defined features.
Retaining existing field boundaries and on-site vegetation where practicable.	The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of PV panels, including where offsets from existing field boundaries are located. The extent of where on-site vegetation is proposed to be retained, removed, or enhanced, are set out in the OLEMP [EN010132/APP/WB7.3] and secured by a DCO requirement.
Siting energy storage and the onsite substations within visually contained parts of the Order limits. This will help meet the objective to develop the Scheme sensitively to the surrounding landscape, limiting the impact on views for key landscape receptors, residential properties, and recreational routes. This is detailed in parts 5.4 and 5.5 of this Statement.	The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of energy storage and substation infrastructure. The Concept Design Parameters and Principles [EN010132/APP/WB7.13] defines parameters for the component parts of the Scheme and is secured by a DCO requirement.
A baseline 50m offset has been provided from all residential property boundaries to the locating of PV panels.	The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of PV panels, including where there are offsets from defined features.
Further bespoke arrangement of the proposed panels close to residential	The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme

<p>properties as a result of LVIA and resident consultation. Where necessary, bespoke landscaping and planting will be delivered to mitigate impacts on amenity.</p>	<p>permitted for the locating of PV panels, including where there are offsets from defined features. The extents of where new planting areas are proposed are set out in the OLEMP [EN010132/APP/WB7.3] and secured by a DCO requirement.</p>
<p>Objective 5: Develop the Scheme sensitively in response to heritage assets and their settings.</p>	
<p>Refinement of the Order limits and extent of PV arrays and ancillary infrastructure in the vicinity of above and below ground heritage assets so as to reduce direct impact, and visual impact on the setting of the assets. Existing woodland and hedgerows have been used wherever possible to provide screening.</p>	<p>The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of PV panels, including where there are offsets from defined features. Key heritage assets have been identified and the impacts upon them assessed in the ES Chapter 13: Cultural Heritage [EN010132/APP/WB6.2.13]. The extents of where new planting areas are proposed are set out in the OLEMP [EN010132/APP/WB7.3] and secured by a DCO requirement.</p>
<p>Areas of archaeological interest within the Order limits have been carefully avoided through the removal of PV panel structures, or overlaid by PV panel structures with non-intrusive foundations.</p>	<p>The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of PV panels, including where there are offsets from defined features. Areas of archaeological interest requiring non-intrusive foundations have been identified and mapped in the ES Chapter 13: Cultural Heritage [EN010132/APP/WB6.2.13]. This is set out within Works Nos. 1A, 1B and 1C.</p>
<p>Objective 6: Safeguard the surrounding hydrological systems, ensure the Scheme is resilient to flooding and will not increase flood risk elsewhere, taking account of the impacts of climate change.</p>	
<p>All onsite infrastructure will be located to be resilient to flooding. Sensitive infrastructure will be located solely in Flood Zone 1 or where able, lifted above maximum flood depths. Only compatible infrastructure will be located in Flood Zone 2 or 3.</p>	<p>The Works Plan [EN010132/APP/WB2.3] defines the extents of the Scheme permitted for the locating of any infrastructure. Areas of greater risk of flooding are identified in the Flood Risk Assessments with mitigation strategies set out in the ES Chapter 10: Hydrology, Flood Risk and Drainage [EN010132/APP/WB6.2.10] and Appendices 10.1-10.5 [EN010132/APP/WB6.3.10.1 - WB6.3.10.5].</p>

<p>Where electrical cabling is required to cross a major watercourse, these will be buried below the bed of the watercourse and be constructed by directional drilling.</p>	<p>The Crossing Schedule [EN010132/APP/WB7.15] sets out the requirements for where directional drilling of electrical cabling is needed to cross major watercourses, and is secured by a DCO requirement.</p>
<p>The drainage design strategy takes account of the impacts of climate change and will ensure that there is no increase in flood risk.</p>	<p>The drainage and SuDs strategy is set out in the ES Chapter 10: Hydrology, Flood Risk and Drainage [EN010132/APP/WB6.2.10] and Appendices 10.1-10.5 [EN010132/APP/WB6.3.10.1 - WB6.3.10.5].</p>
<p>The detailed design of drainage features will consider their potential to enhance biodiversity.</p>	<p>The drainage and SuDs strategy is set out in the ES Chapter 10: Hydrology, Flood Risk and Drainage [EN010132/APP/WB6.2.10] and accompanying Flood Risk Assessment and Drainage Strategy set out in Appendices 10.1-10.5 [EN010132/APP/WB6.3.10.1 - WB6.3.10.5]. Additional drainage features for biodiversity enhancement are set out in the OLEMP [EN010132/APP/WB7.3].</p>
<p>Surface water run-off rates will be limited to greenfield rates.</p>	<p>The drainage and SuDs strategy is set out in the ES Chapter 10: Hydrology, Flood Risk and Drainage [EN010132/APP/WB6.2.10] and accompanying Flood Risk Assessment and Drainage Strategy set out in Appendices 10.1-10.5 [EN010132/APP/WB6.3.10.1 - WB6.3.10.5].</p>
<p>Objective 7: Ensure the protection, and where possible enhancement, of existing Public Rights of Way and ensure the continued safe use of the public highway network.</p>	
<p>Existing PRoWs will be retained in all instances with no permanent closures or diversions proposed. Temporary closures and local diversions during construction will be limited to minimum duration required to ensure continued connectivity.</p>	<p>The Access Plan [EN010132/APP/WB2.5] and the Public Rights of Way Plan [EN010132/APP/WB2.4] show the PRoW and highway network within the Order limits. The Outline Construction Environmental Management Plan [EN010132/APP/WB7.1] details how construction impacts on PRoW are to be managed and is secured by a DCO requirement.</p>
<p>The safe use of PRoWs and highways will be managed through design mitigation and onsite construction traffic management including dedicated crossing point and</p>	<p>The safe use of PRoWs and highways has been assessed in the ES Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]. Any required</p>

<p>banks/paths for highway accesses where required.</p>	<p>mitigation or management measures are set out in the Construction Traffic Management Plan [EN010132/APP/WB6.3.14.2] and is secured by a DCO requirement.</p>
<p>The new permissive path will enhance connectivity around Ingleby and Saxilby</p>	<p>The Works Plan [EN010132/APP/WB2.3] defines the extents of the proposed permissive path, with details of planting set out in the OLEMP [EN010132/APP/WB7.3] and secured by a DCO requirement.</p>
<p>Proposed points of access have been designed including temporary accesses for construction and decommissioning, permanent access for construction, or maintenance and operation, or for all stages of the development.</p>	<p>The Access Plan [EN010132/APP/WB2.5] and the Public Rights of Way Plan [EN010132/APP/WB2.4] show the locations and design of accesses associated with the Scheme development, and has been influenced by engagement with stakeholders, including the relevant highway authorities. The proposed new permissive path follows Statutory Consultation in order to address the comments of consultees, as detailed in part 5.5 of this Statement.</p>
<p>Adequate visibility splays will be provided at all new access points, commensurate with existing vehicle speeds or speed limits.</p>	<p>The Access Plan [EN010132/APP/WB2.5] and the Public Rights of Way Plan [EN010132/APP/WB2.4] show the locations and design of accesses associated with the Scheme development. Full details of the accesses, traffic counts, and visibility requirements are set out in the ES Chapter 14: Transport and Access [EN010132/APP/WB6.2.14] and the Construction Traffic Management Plan [EN010132/APP/WB6.3.14.2] and secured by a DCO requirement.</p>
<p>Temporary highway improvements, such as widening, bridge strengthening, hedge and verge clearance, and oversail areas will be required to facilitate the movement of Abnormal Indivisible Loads to the Sites during construction.</p>	<p>The Works Plan [EN010132/APP/WB2.3] defines the extents of the works required for AIL movements, with full details set out in the Construction Traffic Management Plan [EN010132/APP/WB6.3.14.2].</p>

5 Design Evolution

5.1 Introduction

5.1.1 The design and extent of the Scheme has been subject to an iterative process involving the Applicant, the design team and the environmental consultant team. The design has also been informed by considering feedback from various forms of consultation including with stakeholders and statutory consultees, host authorities, local communities, local residents and through the EIA scoping process.

5.1.2 This section presents a summary of the design evolution of the Scheme – from the first round of non-statutory consultation in November 2021 to the point of submission in March 2023. It describes the main design changes associated with the solar array sites, supporting landscaping and ecological mitigation design, substation design, and the development of the cable routes. A more detailed description of these stages is set out in ES Chapter 5: and Alternatives and Design Evolution [EN010132/APP/WB6.2.5]. Where field reference numbers are used, refer to **Appendix 1: Figures 6.1-6.3**.

5.2 Stage 1 – Non-Statutory Consultation November-December 2021

5.2.1 Early feasibility work including site identification and the consideration of constraints and opportunities took place throughout 2021.

5.2.2 The initial phases of the Scheme design were developed through Applicant and landowner parameters, set against desk-based assessment work to determine outline design objectives and identify areas of required preliminary investigation.

5.2.3 The primary site selection stage was undertaken by the Applicant and landowners following the establishment of the grid connection offer at West Burton Power Station. The sites selected and optioned by the Applicant were chosen on the basis that they were a suitable proximity to the point of connection, avoided specific heritage and ecological designations, and areas known to be of high agricultural land value. Cable routes were selected on the basis of using the shortest possible routes whilst avoiding environmental designations, but with a large amount of optionality available.

5.2.4 On-site options for the locations of substations and battery storage areas were explored in tandem with the non-statutory consultation using a desk-based approach. The proposed locations of these pieces of on-site infrastructure were at an early stage during this Stage 1 Consultation and as such were not included in the consultation materials.

5.3 Stage 2 – EIA Scoping January 2022

5.3.1 The EIA Scoping for the Scheme signified the first formal stage of engagement with statutory bodies. For this stage, the outline design of the Scheme published at non-statutory consultation was presented alongside desk-based and initial field assessments of the proposed Scheme. The boundary of the Scheme subject to EIA Scoping can be found at **Appendix 1: Figure 3.1**. This Scheme comprised four Sites:

West Burton 1, 2 and 3 located to the southeast of West Burton Power Station; and West Burton 4, located to the northwest of West Burton Power Station.

5.3.2 Internally, a maximum capacity layout was produced to help the project team identify where predicted significant effects with respect to all ES chapters were likely to be generated as a result of the Scheme, or if the anticipated effects were expected not to be significant, thus allowing for the relevant topic or assessment area to be requested to be scoped out of the ES. These findings were then presented to the Planning Inspectorate (PINS) and the notified statutory bodies to comment on the scope of assessment required for the proposals, through the submission of the EIA Scoping Request.

5.3.3 The Scheme's main substation was chosen to be located near to the Grid Connection Point due to the geographic spread of the four constituent Sites. As such, an initial investigation was undertaken within a 2km search radius of the National Grid substation at West Burton Power Station to determine the most suitable location. Due to the proximity of the power station to the villages of Sturton le Steeple, Bole, and isolated properties in the hamlet of West Burton, a significant proportion of the search area was dismissed due to potential for residential amenity impacts. Preliminary results published at EIA Scoping identified two main target areas for the siting of the substation and battery energy storage, to the south and to the northwest of the Grid Connection Point.

5.4 Stage 3 – PEIR/Statutory Consultation June-July 2022

5.4.1 Following feedback from the Planning Inspectorate and statutory consultees during the EIA Scoping stage, the design of the Scheme evolved in tandem with further desk-based and field assessments. Consultation with neighbouring residential properties was undertaken during this period to determine any direct impacts and suitable mitigation measures. The preliminary designs produced during February to April 2022, along with the Preliminary Environmental Information Report, were presented to the public and statutory consultees for statutory consultation in June-July 2022. The preliminary Order limits and site layout design presented at statutory consultation has been provided at **Appendix 1: Figures 3.2-3.3**.

Solar Array Sites

5.4.2 For PEIR and statutory consultation, the chosen panel design across the Scheme was presented as a split-type design with both tracker panels and fixed panels presented. This was presented to provide a maximum design scenario for the purpose of assessment, retaining flexibility for future changes provided they fell within the maximum parameters set out, whilst also responding directly to known locational constraints. At this stage, the Sites at West Burton 1 and 3 were presented as likely to be tracker panels, whilst at West Burton 2 and West Burton 4, the use of fixed panels was presented.

5.4.3 The chosen tracker panel design was aligned on a north-south axis, with a maximum height of 4.5m above ground level when the panel is at its greatest rotation – 60°

from horizontal. Fixed panels were aligned east-west, and south facing, with a maximum height of 2.9m, and angled a minimum of 15° from horizontal.

- 5.4.4 The design of the mounting structures at this point was for screw piles as standard, or for shallow concrete feet where non-intrusive foundations were required for archaeological mitigation.
- 5.4.5 The design for the solar array sites was initiated through the development and subsequent implementation of key design parameters. These parameters were set out in response to initial findings from the project EIA team, Applicants, nearby resident consultation, and landowner requirements.
- 5.4.6 The implementation of key parameters sought to regularise the solar array across the Sites by providing buffers for hydrological features such as ditches, drains, and ponds, ecological features, utilities and telecoms, and a standardised 50m offset from residential curtilage boundaries. Additional setoffs were introduced at this stage along the River Till due to flood risk and its designation as a major watercourse and its surrounding fields as functional flood water storage. Areas of flood depths of more than 0.9m were to be avoided entirely, with only non-vulnerable infrastructure to be located within areas of shallower than 0.9m flooding. Offsets from important roads and railways were introduced to reduce potential glint and glare impacts or provide space to allow for mitigation measures to be installed.
- 5.4.7 Specific design changes were made to each of the Sites ahead of publication for PEIR and statutory consultation.
- 5.4.8 On West Burton 1, buffers to adjacent residential premises in field M2 and M3 (refer to field numbering plans at **Appendix 1: Figures 6.1-6.3**) were formalised with the instruction of a 50m buffer from the curtilage of residences to the solar panel areas. Furthermore, offsets from the 132kV overhead lines were formalised. In Field M1, the buffers to the River Till tributary were introduced and the area set aside for flood water storage formalised.
- 5.4.9 On West Burton 2, significant areas adjacent to the River Till were excluded from the solar array area due to its designation as flood water storage, and the depth of water storage being far too great for panels to be located thereon. This therefore affected fields N24-31, plus the eastern portions of fields N19-20 and N22-23. Fields N15-16 were excluded from the placement of solar panels and any associated infrastructure due to these fields containing the remains and scheduled area of Ingleby mediaeval village. Geophysical surveys undertaken ahead of PEIR identified a greater extent of archaeology associated with the mediaeval village, and as such, solar panels were removed from N18 and the western part of N20. Ahead of PEIR, fields N11 and N17 were excluded from the siting of solar panels as agreed with Saxilby and Ingleby Parish Council, due to landscape impact on Ingleby Road and the preservation of views between Ingleby mediaeval village and the church in Saxilby. Offsets to hedgerows and trees were refined following completion of ecological surveys, which included the surveying and offsetting from identified badger setts. Buffers to residences were regularised in fields N13-14. The locations of underground utilities

were confirmed by geophysical surveys and as such were offset from in fields N1, N5, N9-10, and N14. Finally, the access point to fields N21-23 was moved southwards to utilise an existing field entrance, and options for the inclusion of a footpath along the Codder Lane Belt were explored.

5.4.10 On West Burton 3, key offsets to overhead and underground infrastructure was implemented, affecting fields P2, Q7, Q13, Q15-16, Q19, and Q22-23. Updates to ecology surveys triggered amendments to offsets to hedgerows and trees, including the clearing of these offsets of security fencing. The seasonal ditch between fields Q25 and Q26 was reconsidered and was duly offset from. The locating of panels in field Q1 was truncated at the public right of way to avoid enclosing the footpath, and provide additional offsetting from residences in Marton. Similarly, field Q2, and a wedge of field Q18 adjacent to Brampton village were removed from the solar panel area for the benefit of residential amenity. Noise buffers were also added to inverters and substation where directed by noise impact modelling. The location of the western extent of panels in fields Q5-8 was amended and moderated with a prospective landscaping mitigation planting regime due to potential impacts of long views of the Site due to the location of a ridge through these fields. Updated flood modelling identified an area of notable flood risk through the centre of the Site, requiring an optioneering program to be undertaken to determine if raised mounting structures or fixed panels through centre of site could be used to retain solar array coverage in these areas.

5.4.11 West Burton 4 was considerably altered ahead of PEIR as a result of its sensitive location and existence of long-range views from residential receptors. Panels were removed from the northern halves of fields R1 and R3, all of R4-10, and south of R13 to reduce impacts on long-range views from the A631, and Gringley Road. Furthermore, panels were removed from fields R7-10 due to them containing the areas of highest agricultural land quality. Panels were also removed from fields R23-24 due to proximity and views from Mill Lane, whilst panels were removed from fields R33-34 due to location next to the crossing of a Public Right of Way (Clayworth BW7), and the Trent Valley Path (variant route) (Clayworth FP9/Gringley on the Hill FP16). Furthermore, an old hedgerow across R35, identified through historic mapping searches, was to be reintroduced. In response to public comments regarding floodwater originating from the Site and Toft Dyke, options for surface water flow rate reduction features were explored as potential community benefit measures.

[Supporting Infrastructure and Design Measures](#)

5.4.12 'Supporting infrastructure' consists of equipment such as conversion units, means of enclosure and measures such as landscape and ecological enhancements.

5.4.13 For PEIR, conversion units (consisting of switchgear and inverters) were preliminary designed to be singular containerised units, located to service approximately 3MW-5MW of solar panel capacity.

5.4.14 Across the four Sites, proposals for noise barriers were introduced around conversion units where potential impacts on residential amenity were found through detailed assessment work.

5.4.15 Where field areas were removed from solar panel siting, ecological and landscape mitigation measures were included to compensate for loss of habitat (such as for skylarks) elsewhere on the Site, and for views into the Site from sensitive receptors to be mitigated.

Substations and Energy Storage

5.4.16 The siting of the Scheme substations and energy storage were provisionally determined through a desk-based “RAG” rating, taking into account a number of technical constraints and electrical design requirements.

5.4.17 The initial location identified as preferred for the siting of the substation at West Burton 1 was a broad area in the northwest quarter of the Site due to an absence of significant constraints. Within this, the southwest corner of field M4 was initially chosen for its easy access from Broxholme Lane. Ahead of PEIR, the location of the substation was moved by approximately 200m to the northwest corner of field M5, which sits centrally in the Site, and immediately adjacent to the originally identified preferred area. This was as a result of preliminary landscape assessment, which identified the corner of field M5 as a preferable location due to the immediate impact on views for users of Broxholme Lane had the substation remained in field M4. This move did not cause any conflict with any other identified constraints.

5.4.18 The substation for West Burton 2 was provisionally located in field N2 on the basis of initial RAG ratings identifying fields N1-N2 as most preferable for the siting of the substation, subject to avoidance of offsets from residences and from surface water flow paths. The southwest corner of N2 was chosen due to its position away from dwellings, its accessibility, and its lower elevation and therefore reduced visual impact. For PEIR, the primary constraint of surface water flooding was investigated further and was determined not to be a risk to substation infrastructure. As such, the location of the substation was not moved prior to PEIR.

5.4.19 Due to the anticipated location of the cable route leaving West Burton 3, the northwest corner of the Site was identified as the preliminary exploration area for the location of the substation. Taking into account a number of significant constraints including offsets to residential properties, overhead power lines, underground gas and fuel pipelines and a public right of way, the preferred location was determined to be the southeast corner of field Q4. Further surveys and baseline recording confirmed that this location was the most preferable, and as such was retained for PEIR.

5.4.20 As a result of its position to the northwest of the Grid Connection Point, the southeast of West Burton 4 formed the initial area of investigation for the placement of the substation on the Site, as led by electrical design requirements. Offsets from public rights of way, overhead power lines, and watercourses were considered in

the RAG assessment in November 2021 to determine the preferred areas in fields R29-R30 and R33-R35. Thereafter, landscape concerns were raised due to topography and openness of the preferred area and the substation was moved to field R19, located to minimise landscape impact, residential amenity impact, and impacts from flooding from Toft Dyke. This was further amended for PEIR by changing the substation design from air-insulated, to an enclosed gas-insulated design. This was favoured from a landscape context perspective as the substation building could be given an agricultural aesthetic and sited closer to the existing farmstead at Highfield Farm. The enclosure of the substation also allowed for greater noise insulation, thus reducing risks of impacts on residential amenity. Subsequently, for PEIR, the substation was located in the south of field R15.

- 5.4.21 RAG ratings for the main substation were concluded during and following the receipt of the EIA Scoping report. Once final considerations including landscape, heritage, flood risk, and ecology were considered, the fields due west of West Burton A Power Station, known for the RAG rating as fields S3 and S4 were determined as the preferred location for the Scheme's main substation and energy storage. Ahead of PEIR, detailed consideration of on-site surface water paths, and offsetting from an underground water mains determined the developable footprint of the substation plot. In the adjoining field, sufficient space was found for the locating of an up to 20MWh battery energy storage system. For publication at PEIR, these fields were renumbered as S1 and S2 for the battery storage and substation respectively, and collectively named as West Burton Sub.

Cable Routing and Grid Connection

- 5.4.22 The cable corridor presented at the PEIR stage was based on the initial cable route options from EIA Scoping. Optionality remained a driving factor in retaining a wide cable route, as constraints and environmental assessments were only progressed to a preliminary stage. The cable routes presented at this time, consisted of entire fields, with any enclaved residential or business premises excluded from further investigation. A number of small amendments to the cable route corridor were made to better align with land ownership boundaries and existing field boundary features. Intra-site cable routes were also partially developed to demonstrate the Sites' interconnectivity. Intra-site cable routing between discontinuous parts of the Sites were also amended to reflect landowner feedback and to address onsite constraints such as crossing points for major watercourses and important areas of archaeology.
- 5.4.23 The cable route options for crossing the River Trent were reduced ahead of PEIR, primarily as a result of the progression of archaeological and ecological baseline and survey works. The previous approximately 4.8km of the River Trent within the search area was reduced down to a 2.7km stretch of the River Trent. Route options to the north of Marton were removed due to significant heritage concerns regarding impacts on Roman artifacts associated with the Roman Road and nearby Segelocum Roman Town at Littleborough.

- 5.4.24 No changes were made to the provision of the Grid Connection Point at West Burton Power Station ahead of PEIR and statutory consultation as there were no reasonable alternatives, such as at Cottam or High Marnham Power Stations that if used would not have significantly altered the Scheme design.

5.5 Stage 4 – DCO Submission Layout January – March 2023

- 5.5.1 Stage 4 of the design process takes on the feedback received during statutory consultation, including feedback from members of the public, statutory consultees, and final design requirements from landowners. The development of the Environmental Impact Assessment has also had a reciprocal impact on the design, as mitigation requirements for hydrology, landscape, ecology and other environmental topics were fed back into the overall Scheme design. The development of the design through Stage 4 has culminated in the site layout masterplan for submission as part of the DCO application.

Solar Array Sites

- 5.5.2 In response to statutory consultation with landowners, local residents, and local parish groups, and additional focussed non-statutory consultation with nearest neighbours to the Sites, a number of changes to the solar array Sites have been implemented in preparation for the DCO application submission.
- 5.5.3 On all Sites, the buffer zones to ecological receptors, watercourses, and utilities have been remodelled following completion of baseline surveys; and receipt of updated information from utilities undertakers with assets that could be affected by the Scheme.
- 5.5.4 The design of the solar panels and their mounting structures across the Scheme has largely remained as per the maximum design scenario set out at PEIR. As a requirement for the ES assessment, maximum parameters set out for the proposed panel, whilst retaining flexibility for future changes. The panel design for submission is for either tracker or fixed panels. Tracker panels are aligned on a north-south axis, with a maximum height of 4.5m above ground level when the panel is at its greatest rotation – 60° from horizontal. Fixed panels are aligned in east-west rows, have a maximum height of 3.5m, and are angled facing south with a fixed slope of between 15° and 35° from horizontal. The design of the mounting structures allows for screw piles or driven piles as standard, or for shallow concrete feet where non-intrusive foundations were required for archaeological mitigation.
- 5.5.5 On West Burton 1, changes to the panel arrangement have primarily been minor and in direct response to remodelled buffer zones to key site constraints. Notably, the panel area in field M1 has been recessed further from the River Till, whilst the two fenced areas within field M1 have been combined into a single fenced area.
- 5.5.6 On West Burton 2, panels have been removed from field N14 due to finding of additional archaeology related to the mediaeval village at Ingleby, and as a result of responses to consultation identifying concerns regarding residential amenity impacts to adjacent properties. As a result of the removal of all panels from fields

N14-N18, and the lack of ability to use the land for ecological mitigation due to the underlying heritage assets, these fields were removed entirely from the Order limits.

- 5.5.7 In response to the outcomes of statutory consultation, and the completion of environmental surveys and assessments, the layout of West Burton 3 has been altered notably since PEIR. Notably, a considerable area in fields P1 and P4, to the north of the Bishop's Palace Scheduled Monument, has been removed as a result of the finding of significant heritage remains associated with the scheduled monument. This area, including the full extent of the scheduled area has also been removed from the Order limits. Panel areas in fields Q4 and Q13 have altered as a result of the relocation of the Site substation. This is detailed more in paragraph 5.5.19. Panels in fields Q6-Q8 have been extended to be closer to the Order Limits, associated with a strengthened landscape mitigation strategy to screen long-range views of this side of the Site, secured through the strategies set out in the Outline Landscape and Ecological Management Plan **[EN010132/APP/WB7.3]**.
- 5.5.8 During statutory consultation, results of updated agricultural land classification reports were published, demonstrating that the entirety of West Burton 4 constituted land of Best and Most Versatile (BMV) agricultural land. In addition to significant objection from residents in Clayworth and Gringley-on-the-Hill, and concerns raised by statutory consultees, it was decided to remove the entirety of West Burton 4 (and its associated cable route) from the Scheme.
- [Supporting Infrastructure and Design Measures](#)
- 5.5.9 Conversion units, consisting of inverters, transformers, switchgear, and monitoring and control systems have been designed as having flexibility to be either singular containerised units, or small compounds containing standalone equipment. Either design is able to be sat on standard concrete and aggregate foundations or non-intrusive concrete plinths where required. Conversion units are to be located to service a minimum of 2.5MW of peak installed solar capacity.
- 5.5.10 Alongside the solar arrays, an outline landscaping and ecological mitigation design has been developed to supplement the design of the Scheme. These have been detailed and assessed in full in the relevant chapters of the ES and supporting documents. Full details are set out in the Outline LEMP **[EN010132/APP/WB7.3]**.
- 5.5.11 The landscaping mitigation set out in the Outline LEMP consists of areas of planting for mitigation, such as woodland, tree belt and hedgerow planting, both new and enhancement of existing. On site, landscape planting includes low level planting such as native scrub and wildflower meadow planting. This has the triple purpose of providing biodiversity net gain, providing groundcover to let the soils underneath rest, and allowing for potential grazing options for optioned farm holdings. Within the Sites, low-level growth is proposed to ensure that the landscaping proposals do not conflict with the operational efficiency of the arrays. Furthermore, internal access tracks have been remodelled to ensure they avoid buffers to ecological receptors where possible.

- 5.5.12 The ecological mitigation set out in the Outline LEMP seeks to provide biodiversity net gain across the Scheme through the supplementation of existing habitats and provision of new species rich planting, whilst providing mitigation for loss of habitat for ground-dwelling bird species.
- 5.5.13 On West Burton 1, changes to supporting infrastructure and other design measures are limited to the minor movement of some inverters in response to the remodelling of internal access tracks.
- 5.5.14 Similarly, on West Burton 2 some inverters and internal access tracks have been remodelled in response to updated buffer zones and an overall simplification and regularisation of the internal layout. Access arrangements to fields N6-N7 have been altered to allow for construction and maintenance vehicles to route through the Site from the north, thus avoiding the need for additional traffic movements along Sykes Lane though Saxilby. In addition to the wetland habitat creation in the east of West Burton 2, an area of approximately 1.07 hectare has been set aside in field N7 for ecological habitat creation in collaboration with Saxilby Nature Project, to whom management of the habitat area is to be ceded to for the lifetime of the Scheme.
- 5.5.15 In addition to minor alternations to the positions of inverters, access tracks, fencing, and other supporting infrastructure, the Site at West Burton 3 has been given a new access point for construction and maintenance. As a result of the removal of the area to the north of the Bishop's Palace from the Order limits, a replacement main Site access is required to access field P1-P6 and fields Q24. This has therefore been provided via Stow Park Road to the east of the Doncaster-Lincoln/Sheffield-Lincoln railway line.

[Substations and Energy Storage](#)

- 5.5.16 For the DCO application, full detail plans and elevations of the substations have been provided by the electrical design consultants as part of ES Appendix 4.1 Engineering Drawings and Sections **[EN010132/APP/WB6.3.4.1]**. The layout of the substations and energy storage are also shown as part of the Illustrative Site Layout Drawings at **Appendix 1: Figures 4.1**. As part of this, input from noise and hydrology consultants have been brought in to determine the suitable location of noise attenuation barriers, and of any flood mitigation requirements, or firefighting water storage and catchment features. These matters are to ensure the substations are sufficiently mitigated with regard to impacts on any nearby residential dwellings and public rights of way, and that fire safety and flood resilience are designed into the substation and energy storage layouts.
- 5.5.17 The control buildings will be a painted block building with external colours and finishes to be confirmed prior to construction but likely to be a grey colour such as Goose Grey (HEX code 848889). Maximum parameters for control buildings are based on indicative substation layout designs with an additional level of tolerance to allow for detailed building designs to be determined prior to construction.

- 5.5.18 The substation at West Burton 1 has undergone a minor revision as a result of updated substation layout details. The position of the substation in the Site has moved approximately 20m from PEIR to allow for better access into the substation compound. The substation on West Burton 2 has not moved.
- 5.5.19 As a result of the removal of West Burton 4 from the Scheme, the Scheme's main 400kV substation and battery energy storage system has been moved to West Burton 3, superseding the previous 132kV substation on the Site. Due to the larger scale of the 400kV substation and battery energy storage system, these have been located in field Q13 instead of field Q4. Field Q13 has been selected for the main Scheme substation and battery energy storage system due to its removed setting from residential properties, minimal landscape setting impacts, and sufficient space for siting of the substation and energy storage, avoiding constraints from overhead power lines and underground gas pipeline. The area of field Q4 originally proposed for the 132kV substation is now proposed for the siting of solar panels.
- 5.5.20 A full indicative layout of the energy storage has been presented for submission. The design incorporates flood resilience measures, such as location away from surface water flood paths and appropriate surface water drainage, and integrated and external fire suppression systems, with the layout itself meeting industry standards to limit the propagation of flames. Water storage for firewater has been designed to retain optionality at the DCO submission stage both with regard to design and location. The sizing of water storage for firewater is set at a minimum of 228,000 litres per source as agreed with Lincolnshire Fire and Rescue Services. Water would be stored in either steel panel tanks or bunded open water areas. Used firewater would then be contained through channelling from the impermeable energy storage area surface into a bunded lagoon with excess capacity to accommodate used firewater from an emergency event.
- 5.5.21 The proposed design includes the following fire safety measures:-
- The **Concept Design Parameters and Principles [EN010132/APP/WB7.13]** for the Scheme include the following for water storage structures for the purposes of firefighting.
 - External firefighting water storage structures will be located no less than 50m and no more than 300m from the battery containers.
 - The external firefighting water storage units will be no less than 228,000 litres in capacity.
 - Water storage will either be in sectional steel panel tanks, or cylindrical steel tanks, above or below ground; or will be bunded or excavated ponds.
 - Where above ground, tanks will be supported on structural concrete slab foundations to a maximum depth of 1m.
 - The **Illustrative Layout Plan** for West Burton Energy Storage **[EN010132/APP/WB6.4.4.4]** (also shown in this document at **Appendix 1:**

Figures 4.1d) show the potential location of the water storage facilities (tanks or ponds).

Cable Routing and Grid Connection

- 5.5.22 The design of the cable route corridor has been significantly developed for submission of the DCO application, with a preferred route selected based on landowner requirement, baseline conditions determined through the PEIR, and surveyed and assessed in full for the ES, and collaboration with Cottam Solar Project and Gate Burton Energy Park. That notwithstanding, the routing of the cable through the solar array Sites retains significant flexibility to be located as required to align with the final detailed layout design of the Scheme. An indicative cable route has been integrated into the illustrative Design Masterplan shown at **Appendix 1: Figures 4.1-4.2.**
- 5.5.23 The cable route corridor running between the Sites has been developed through landowner and technical consideration. Landowners affected by the PEIR cable corridor were contacted to discuss their preferred route for the cable crossing their land. These preferences were combined to form a continuous primary target route corridor. This indicative route corridor – predominantly 100m in width, was fully surveyed by geophysical surveys, ecological surveys, and landscape assessments to generate options within the target route. An optioneering workshop was undertaken to determine a final cable route corridor. This route was determined through consideration of archaeological potential, avoidance of ecological features of significance, and limiting the number of hedgerow crossings required. Further consideration was given to ensure the cable route largely lay alongside existing linear features to minimise the impact on the future productivity and accessibility of agricultural land and mineral resources.
- 5.5.24 The final cable route corridor is predominantly 50m in width. This allows for micro-siting of the cable route therein to avoid identified archaeology, linear features, and provides sufficient flexibility to include for the micro-siting therein of construction laydown areas, and sections requiring directional drilling. Drilling is required underneath major obstacles such as ditches, major roads, railways, and rivers to avoid ecological and landscape impacts or major disruption to key transport corridors.
- 5.5.25 A section of the cable route corridor will be shared with the Cottam Solar Project and Gate Burton Energy Park. This retains a greater width to account for micro-siting of cables associated with all three projects and associated working areas. The increased spatial requirements of the shared route requires greater flexibility to ensure avoidance of archaeology, important linear features, and that there is sufficient space for parallel drilling sites where required.
- 5.5.26 Access to the cable route for construction has also been included within the Order limits to ensure construction access (including that for abnormal loads) is possible for the entirety of the length of the cable route.

- 5.5.27 As a result of the removal of West Burton 4 and West Burton Substation from the Scheme, the western extents of the cable route corridor have been removed from the Order Limits. The route of the final approach of the cable into the Grid Connection Point is still undergoing negotiation with EDF and the National Grid, and as such a large area of the fields immediately south of the Grid Connection Point have been retained in the Order Limits to allow for a multitude of options to be explored and utilised once agreed.

6 The DCO Design Masterplan

6.1 Design Masterplan

- 6.1.1 The Design Masterplan is a collective set of plans showing how the Site may be developed as part of the DCO application. This information is indicative, as opposed to the information within the Works Plan which is fixed.
- 6.1.2 The design masterplan submitted with the DCO application consists of the illustrative layouts for each Site, and the site landscape layout and mitigation strategy plans for each Site. These are provided at **Appendix 1: Figures 4.1a-d** and **Figures 4.2a-c**.
- 6.1.3 The design masterplan represents the completion of an extensive exercise as described within Chapter 5 of this document, from development concept to DCO application submission. The design addresses the findings of a multi-disciplinary baseline study and environmental assessment, with input from the local community, stakeholders and technical consultants.
- 6.1.4 The DCO design masterplan demonstrates how the Applicant has pursued the development of an exemplar Scheme that meets the design objectives set within Section 4 of this document; is sensitive to its receiving environment, mitigates impacts, provides benefits to local communities whilst making a significant contribution to renewable energy generation.

7 Access

7.1 Overview

7.1.1 The access strategy developed for the Scheme has been formulated to ensure safe access to and from the Order limits through the construction, operational, and decommissioning phases of the Scheme. Access and accessibility are addressed and secured through the DCO application in the following documents which should be read in conjunction with this document:

- Public Rights of Way Plan [EN010132/APP/WB2.4];
- Access Plan [EN010132/APP/WB2.5];
- ES Appendix 14.2: Construction Traffic Management Plan (CTMP) [EN010132/APP/WB6.3.14.2];
- Outline Construction Environment Management Plan (OCEMP) [EN010132/APP/WB7.1]; and
- Outline Decommissioning Statement [EN010132/APP/WB7.2].

7.1.2 The Access Plan and Public Rights of Way Plan together provide a visual representation of the location of the access and egress points for all vehicular, cycling, and pedestrian movements within and associated with, the Order limits, whilst the CTMP, CEMP and Outline Decommissioning Statement set out the detailed measures required to ensure the feasibility of construction traffic movements and the safety of the public and workers on the Site is maintained at all phases of the development of the Scheme. Those documents also contemplate collaboration with the Cottam Solar Project and Gate Burton Energy Park to mitigate potential cumulative impacts on the road network. These documents are secured as requirements of the DCO.

7.1.3 Access points to and public rights of way within, the Order limits, have been visually summarised in the Access to Works Plan and Public Rights of Way Plan presented at **Appendix 1: Figure 5.1** and **5.2** respectively.

7.2 Construction Access

7.2.1 Traffic movements generated by the construction of the Scheme can be broken into three main groups:

- Construction worker traffic movements;
- Construction HGV movements; and
- Abnormal Indivisible Loads.

7.2.2 It can be approximated that the movements and locational requirements for construction access will be the same for decommissioning on the solar array Sites.

7.3 Maintenance Access

7.3.1 All of the Sites will need to retain access routes throughout the operational lifetime of the Scheme. However, the number of vehicles required is anticipated to be small and will consist predominantly of light goods vehicles or vans for landscaping management, site management and inspection, and operational maintenance purposes. Larger vehicle movements would only be required in the event of a replacement piece of equipment being required, and as such would be ad hoc and limited in nature. This is assessed within **ES Chapter 14: Transport and Access [EN010132/APP/WB6.2.14]**, specifically within Section 14.7.

7.4 Access Locations

7.4.1 The location of access points to the Sites for construction, operation, and decommissioning are listed in **Table 7.1** below (and shown on the Access to Works Plan presented at **Appendix 1: Figure 5.1**).

Table 7.1: Accesses to the Scheme

Scheme Access Ref	Location	Type and Phase Use of Access
1 West Burton 1	Main Street, 880m south of A1500 junction	Improved existing field access Construction use and permanent operational access
2 West Burton 1 119 Cable Route Corridor	Main Street, 1,200m south of A1500 junction	Improved existing field access Construction use, AIL access (transformer and cable drum) and permanent operational access
3 West Burton 2 117 Cable Route Corridor	B1241 (Sturton Road), south of Levertons Caravan Storage	New access Construction use, AIL access (cable drum) and permanent operational access
4 West Burton 2 116 Cable Route Corridor	B1241 (Sturton Road), north of Levertons Caravan Storage	Existing field access Construction use, AIL access (transformer and cable drum) and permanent operational access
5 West Burton 2	B1241 (Sturton Road), adj to Ingleby Hall Livery	Existing agricultural access Construction use and permanent operational access
6 West Burton 2	Sykes Lane, 600m northeast of Church Lane	Existing agricultural access Permanent operational access

7 West Burton 3 113 Cable Route Corridor	A1500 (Stow Park Road/Tillbridge Lane), east of the railway line	Improved existing access Construction use, ALL access (cable drum) and permanent operational access
8 West Burton 3	A1500 (Stow Park Road), west of the railway line	Improved existing access Construction use, ALL access (transformer and cable drum) and permanent operational access
101 Cable Route Corridor	Gainsborough Road, 300m north of Station Road	Existing access Temporary construction use, ALL access (cable drum)
102 Cable Route Corridor	Common Lane, 200m east of North Street Farm	Improved existing field access Temporary construction use, ALL access (cable drum)
103 Cable Route Corridor	Littleborough Road, 20m west of Upper Ings Lane	New access Temporary construction use, ALL access (cable drum)
104 Cable Route Corridor	Fenton Lane, 1000m east of Three Leys Lane	Improved existing field access Temporary construction use
105 Cable Route Corridor	Northfield Road (north), 450m west of Thornhill Lane	Improved existing field access Temporary construction use, ALL access (cable drum)
106 Cable Route Corridor	Northfield Road (south), 450m west of Thornhill Lane	Improved existing field access Temporary construction use, ALL access (cable drum)
107 Cable Route Corridor	Coates Road, 500m south of Northfield Road	Improved existing field access Temporary construction use, ALL access (cable drum)
108 Cable Route Corridor	Coates Road, 200m south of Coates Farm	New access Temporary construction use, ALL access (cable drum)
109 Shared Cable Route Corridor	A156 (High Street) (west), opp. sewage works	Improved existing field access Temporary construction use, ALL access (cable drum)
110 Shared Cable Route Corridor	A156 (High Street) (east), adj. sewage works	Improved existing field access Temporary construction use, ALL access (cable drum)

111 Shared Cable Route Corridor	A156 (Gainsborough Road), 750m north of Brampton Lane	Improved existing field access Temporary construction use, AIL access (cable drum)
112 Shared Cable Route Corridor	A1500 (Stow Park Road), 300m east of Adams Way	New access Temporary construction use and AIL access (transformer and cable drum)
114 Cable Route Corridor	Cowdale Lane (north), 600m west of Gorwick Lane	Existing field access Temporary construction use, AIL access (cable drum)
115 Cable Route Corridor	Cowdale Lane (south), 600m west of Gorwick Lane	Improved existing agricultural access Temporary construction use, AIL access (cable drum)
118 Cable Route Corridor	Main Street, 1,600m south of A1500 junction	Improved existing field access Temporary construction use, AIL access (cable drum)

7.5 Public Rights of Way and Highways

7.5.1 The Order limits encompass a large geographic area, and as such a number of Public Rights of Way (PRoW) and local highways will be directly and indirectly impacted by the Scheme. The **Public Rights of Way Plans [EN010132/APP/WB2.4]** and **Access to Works Plans [EN010132/APP/WB2.5]** submitted with the DCO application show those PRoWs that fall within or immediately adjacent to the Order limits.

7.5.2 As detailed in the preceding section, the scheme has been designed to avoid the need to close or divert Public Rights of Way unless this is unavoidable. A full table of the identified PRoWs and local highways is shown below, with their location and nature of impact, or how the Scheme interacts with them documented.

Table 7.2: Public Rights of Way Within or Bounded by the Order Limits

Public Right of Way Identifier	Location	Nature of Impact
LINCOLNSHIRE		
Brox/197/1 Public footpath	Broxholme CP West of West Burton 1	Joins construction access route (temporary impacts) Crossed by cable corridor (temporary impacts) Visual impacts only (permanent impacts)

Brox/196/1- Scmp/196/1 Public footpath	Broxholme CP West of West Burton 1	Joins construction access route (temporary impacts) Visual impacts only (permanent impacts)
Mton/68/1 Public footpath	Marton CP Northwest of West Burton 3 (Q1)	Crosses part of Site Visual impacts only (permanent impacts) Joins construction access route (temporary impacts) Crossed by shared cable corridor (temporary impacts)
Mton/66/4 Public footpath	Marton CP West of West Burton 3	Construction access route (temporary impacts) ALL route requiring alterations (temporary impacts) Crossed by shared cable corridor (temporary impacts)
NOTTINGHAMSHIRE		
Cottam FP1 Public footpath	Cottam CP West of River Trent	Crossed by shared cable corridor (temporary impacts)
Unnamed footpath (marked on OS mapping)	North Leverton with Habblesthorpe CP West of River Trent	Crossed by cable corridor (temporary impacts) Joins construction access route (temporary impacts)
North Leverton with Habblesthorpe RB25 Restricted bridleway	North Leverton with Habblesthorpe CP West of River Trent	Crossed by cable corridor (temporary impacts) Joins construction access route (temporary impacts)
North Leverton with Habblesthorpe BOAT14 Byway open to all traffic (known as Craikbank Lane)	North Leverton with Habblesthorpe CP Southeast of grid connection point	Crossed by cable corridor (temporary impacts) Joins construction access route (temporary impacts)
North Leverton with Habblesthorpe FP18 Public footpath	North Leverton with Habblesthorpe CP Southeast of grid connection point	Crossed by cable corridor (temporary impacts)

Sturton le Steeple BW5 Public bridleway (known as Fenton Lane)	Sturton le Steeple CP Southeast of grid connection point	Crossed by cable corridor (temporary impacts) Construction access route (temporary impacts)
Sturton le Steeple RB32 (adj. to Littleborough Road) Restricted byway (known as Cross Common Lane)	Sturton le Steeple CP Southeast of grid connection point	Crossed by cable corridor (temporary impacts) Joins construction access route (temporary impacts)
Sturton le Steeple RB32 (Common Lane) Restricted byway	Sturton le Steeple CP South of grid connection point	Crossed by cable corridor (temporary impacts) Construction access route (temporary impacts)
Sturton le Steeple FP39 Public footpath	Sturton le Steeple CP South of grid connection point	Crossed by cable corridor (temporary impacts) Joins construction access route (temporary impacts)
Sturton le Steeple FP15 Public footpath	Sturton le Steeple CP South of grid connection point	Crossed by cable corridor (temporary impacts) Joins construction access route (temporary impacts)
Sturton le Steeple FP17 Public footpath	Sturton le Steeple CP South of grid connection point	Crossed by cable corridor (temporary impacts) Joins construction access route (temporary impacts)

Table 7.3: Highways Within or Bounded by the Order Limits

Highway Identifier	Location	Nature of Impact
LINCOLNSHIRE		
Main Street C-class highway (LCC hierarchy 4)	Broxholme CP West Burton 1	Construction access point AIL route requiring alterations Crossed by cable route corridor
Broxholme Lane	Saxilby with Ingleby CP	Visual impacts only

C-class highway (LCC hierarchy 4)	Between West Burton 2 (between N29 and N30-31)	
B1241 Sturton Road B-class highway (LCC hierarchy 3)	Saxilby with Ingleby CP West Burton 2	Construction access point AIL route Crossed by cable route corridor
Cowdale Lane C-class highway (LCC hierarchy 4)	Saxilby with Ingleby CP/ Stow CP/ Sturton by Stow CP/ Torksey CP Southeast of West Burton 3	Construction access point Crossed by cable route corridor
Station Road C-class highway (LCC hierarchy 4)	Stow CP/ Torksey CP South of West Burton 3	Visual impacts only
A1500 Tillbridge Lane A-class highway (LCC hierarchy 2)	Stow CP/ Marton CP North of West Burton 3	Construction access point AIL route
A1500 Stow Park Road A-class highway (LCC hierarchy 2)	Marton CP North of West Burton 3	Construction access point AIL route
Stow Park Road Unclassified highway (LCC hierarchy 7)	Marton CP West Burton 3	Construction access point
A156 High Street A-class (LCC hierarchy 1)	Marton CP West of West Burton 3	Construction access point AIL route requiring alterations Crossed by shared cable corridor
NOTTINGHAMSHIRE		
Headstead Bank Unclassified highway	Cottam CP / North Leverton with Hablesthorpe CP West of River Trent	Construction access point AIL route Crossed by cable corridor
North Leys Road / Coates Road Unclassified highway	North Leverton with Hablesthorpe CP West of River Trent	Construction access point AIL route
Northfield Road Unclassified highway	North Leverton with Hablesthorpe CP	Construction access point AIL route

	West of River Trent	Crossed by cable corridor
Littleborough Road C-class/unclassified highway	Sturton le Steeple CP Southeast of grid connection point	Construction access point AIL route Crossed by cable corridor
Gainsborough Road C-class highway	Sturton le Steeple CP West of grid connection point	Construction access point AIL route

7.6 Permissive Paths

7.6.1 The Scheme incorporates a new permissive path, defined as Work No. 11 in **Schedule 1** of the **Draft DCO [EN010132/APP/WB3.1]**, which is to be introduced to provide better connectivity and options for recreational walking between the villages of Saxilby and Ingleby. The permissive path route runs from the track off Sykes Lane along the Codder Lane Belt and then south and west to rejoin Sykes Lane opposite Hardwick Scrub. The path was included in the Scheme following consultation with Saxilby with Ingleby Parish Council and Saxilby Nature Project between the EIA Scoping and the Statutory Consultation periods.

8 Commitments

8.1 Project Flexibility and Concept Design Parameters

- 8.1.1 National Policy Statements acknowledge that with Nationally Significant Infrastructure Projects there will be some uncertainty regarding the exact design, layout and technology to be used given their timescales.
- 8.1.2 The Scheme has employed a maximum design scenario approach (the 'Rochdale Envelope'). This provides a 'worst case' scenario approach to the assessment of environmental impacts. It allows for the project to be framed within set parameters, for these parameters to be assessed in order to provide flexibility, while ensuring all potentially significant effects (positive or adverse) have been considered. The use of a Rochdale Envelope is acknowledged by Energy Statement EN-1.
- 8.1.3 The maximum design scenarios are identified from the range of potential options for each design parameter for the Scheme. These have been determined through baseline surveys and analysis of the existing physical and environmental constraints relating to landscape, ecology, flooding, cultural heritage, built environment, and utilities and telecommunications infrastructure. The maximum design scenario assessed is that which would give rise to the greatest potential impact. These maximum design scenarios define the parameters set out in the Concept Design Parameters and Principles **[EN010132/APP/WB7.13]** document which is secured by a requirement in the Draft DCO.
- 8.1.4 Parameters have been selected in order to ensure that the proposed Scheme meets the objectives identified. They are categorised as either relating to the Scale of Development (i.e. it's extent or size), location, or design parameters.
- 8.1.5 The DCO process enables flexibility to be built into the Scheme (through the definition of the authorised development as set out in Schedule 1 of the Draft DCO **[EN010132/APP/WB3.1]** and the Works Plan **[EN010132/APP/WB2.3]**). Key areas of optionality that have been included in this application are:
- i. PV panel type – 'trackers' and 'fixed'. Whilst it is currently envisaged that the Scheme will utilise tracker solar panels, the DCO application seeks consent for the Applicant to be able to utilise either tracker or fixed panels in order to allow use of tracker technology if this becomes feasible. Tracker panels have a maximum height of 4.5 metres, whereas fixed panels are up to 3.5 metres. The tracker panels have been assessed as a worst-case option for most environmental disciplines, with both tracker and fixed panels being considered where relevant to ensure all impacts are assessed.
 - ii. Energy Storage. The application proposes that the energy storage for the Scheme will be located within the West Burton 3 Site, covering an area of up to 1.75 ha. This will help meet needs of the electricity market, support policy objectives for delivery of renewable energy at peak times, and by providing grid balancing services to help increase electricity distribution network.

- iii. Fire suppression water storage. Water will be stored on site in close proximity to the energy storage systems. This water will be stored in either above ground tanks or open water bodies so that they can be accessed by the fire service in the unlikely event of a fire. Both options are included in the DCO application within Work Package No. 2 and assessed in the ES, being set out in ES Chapter 4: Scheme Description **[EN010132/APP/6.2.4]**.
- 8.1.6 The DCO Works Plans show the maximum extents of different types of elements within the development (i.e. panels, substations, cabling etc.). The Works Plans show the parameters within which each Works Package comprising the authorised development may be constructed. These parameters have been assessed within the Environmental Statement.
- 8.1.7 Whilst illustrative layout plans (as shown at **Appendix 1: Figure 4.1a-d**) have been included in the DCO application, this represents one way in which the Sites could be developed. The ability of the Applicant to micro-site during construction is an important consideration and is necessary in order to incorporate any technological advancement or changes in plant design or shape. The Draft DCO **[EN010132/APP/WB3.1]** submitted with the application includes pre-commencement Requirements for the submission and approval of detailed design proposals prior to construction. These Requirements are intended to, and would have the effect of, clarifying the construction & operational sequencing of the Scheme.
- 8.1.8 Demonstrating that the final detailed design remains within the parameters set out in the Concept Design Parameters and Principles **[EN010132/APP/WB7.13]** and therefore the Rochdale Envelope assessed in the ES. The requirements must be approved by the LPAs, meaning they retain a degree of control over the final design for the Scheme, to ensure it is acceptable and within the limits of what was assessed in the DCO application.
- ## 8.2 The DCO
- 8.2.1 Development consent for the Scheme is granted by the DCO. Schedule 1 to the DCO defines the “authorised development” for which development consent is granted.
- 8.2.2 The development listed in Schedule 1 comprises the Scheme in its entirety. The key elements of the Scheme are allocated specific Work Numbers. Schedule 2 to the DCO sets out the Requirements in accordance with which the Scheme must be constructed, operated, maintained and decommissioned. This includes a requirement that the Scheme is developed in accordance with the Concept Design Parameters and Principles **[EN010132/APP/WB7.13]** and that the detailed design of the Scheme will be required to be submitted to and approved by the relevant planning authorities.
- 8.2.3 As part of the DCO application, a Draft DCO **[EN010132/APP/WB3.1]** and accompanying Draft Explanatory Memorandum **[EN010132/APP/WB3.2]** have been prepared by the Applicant. The draft DCO sets out the intended scope of the DCO

powers applied for, whilst the supporting memorandum provides and explains how the provisions of the draft DCO secure and control how the Scheme can be built and operated.

8.3 Works Plan

8.3.1 The Works Plans **[EN010132/APP/WB2.3]**, define the locations and extents of each of the works numbers set out in Schedule 1 to the DCO within the Order limits. The DCO, if granted, would not permit any work number outside the land in which it is shown to be located by the Works Plans.

8.4 Environmental Commitments

8.4.1 The landscape and ecological features of the design described in this Design Statement will be delivered through the Outline Landscape and Ecological Management Plan **[EN010132/APP/WB7.3]**. Matters of flood risk mitigation and drainage are committed to and delivered through the measures set out in ES Chapter 10: Flood Risk, Hydrology and Drainage **[EN010132/APP/WB6.2.10]** and its supporting Flood Risk Assessment and Drainage Strategies at ES Appendices 10.1-10.5 **[EN010132/APP/WB6.3.10.1 - WB6.3.10.5]**, as well as the Outline Construction Environmental Management Plan **[EN010132/APP/WB7.1]**. Delivery of the commitments set out in these documents will also be secured by requirements of the DCO. These will commit the Applicant to developing a detailed landscape and ecology management plan and a detailed surface water drainage scheme which accord with the relevant outline plans referred to above.

9 References

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- Ref.2 CABE (2007). Design and Access Statements: How to Write, Read and Use Them. London: Commission for Architecture and the Built Environment. Available at [REDACTED]
- Ref.3 DCLG (2010). Guidance on Information Requirements and Validation. London: Department for Communities and Local Government
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- Ref.5 Department of Energy and Climate Change (2011). National Policy Statement for Renewable Energy Infrastructure (EN-3). London: The Stationery Office.
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- Ref.9 Ministry of Housing, Communities & Local Government (2021). National Planning Policy Framework. London: The Stationery Office.
- Ref.10 Department for Levelling Up, Housing and Communities (2022). Open Consultation – Levelling-up and Regeneration Bill: Reforms to National Planning Policy. Available at: www.gov.uk/government/consultations
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- Ref.12 North Kesteven District Council, Lincoln City Council, West Lindsey District Council (2022). Central Lincolnshire Local Plan Review: Proposed Submission. Sleaford: North Kesteven District Council.
- Ref.13 Saxilby with Ingleby Parish Council (2017). Saxilby with Ingleby Neighbourhood Development Plan Final Version (February 2017). Gainsborough: West Lindsey District Council.
- Ref.14 Sturton by Stow Parish Council and Stow Parish Council (2022). Sturton by Stow and Stow Neighbourhood Plan 2019 – 2036 Final Approved Version March 2022. Gainsborough: West Lindsey District Council.
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- Ref.16 Bassetlaw District Council (2022). Bassetlaw Local Plan 2020-2038 Publication Version Composite. Worksop: Bassetlaw District Council.
- Ref.17 Sturton Ward Planning Group (2021). Sturton Ward Neighbourhood Plan Review 2021-2037. Worksop: Bassetlaw District Council.
- Ref.18 AECOM (2020). Sturton Ward: North and South Wheatley, Sturton le Steeple and North Leverton with Habbleshthorpe Design Code. Worksop: Bassetlaw District Council.
- Ref.19 Treswell and Cottam Parish Council (2019). Treswell and Cottam Neighbourhood Plan Referendum Version. Worksop: Bassetlaw District Council.
- Ref.20 Treswell and Cottam Parish Council (2022). Treswell and Cottam Neighbourhood Plan Review Pre-Submission Draft. Worksop: Bassetlaw District Council.
- Ref.21 National Infrastructure Commission Design Group (2020). Design Principle for National Infrastructure. National Infrastructure Commission: London. Available at [REDACTED]
- Ref.22 Solar Energy UK (2022). 11 Commitments on Solar Farms. Solar Trade Association 2022: London. Available at [REDACTED]
- Ref.23 BRE (2013). Planning guidance for the development of large scale ground mounted solar PV systems. Available at: [REDACTED]

Appendix 1: Supporting Figures

Order Limits

- 1.1 Order Limits and Scheme Location Plan

Scheme Context and Constraints Mapping

- 2.1 National Landscape Character Area Mapping
- 2.2 Regional and Local Landscape Character Types Mapping
- 2.3a-c ALC Mapping
- 2.4 Ecological designations
- 2.5 Cultural heritage designations

Previous Design and Layout Iterations

- 3.1 Scoping Red Line
- 3.2 PEIR Red Line
- 3.3a-e PEIR layouts

Design Masterplan

- 4.1a-d Submission Illustrative Site Layouts
- 4.2a-c Landscape Layouts and Mitigation Strategy

Access Points

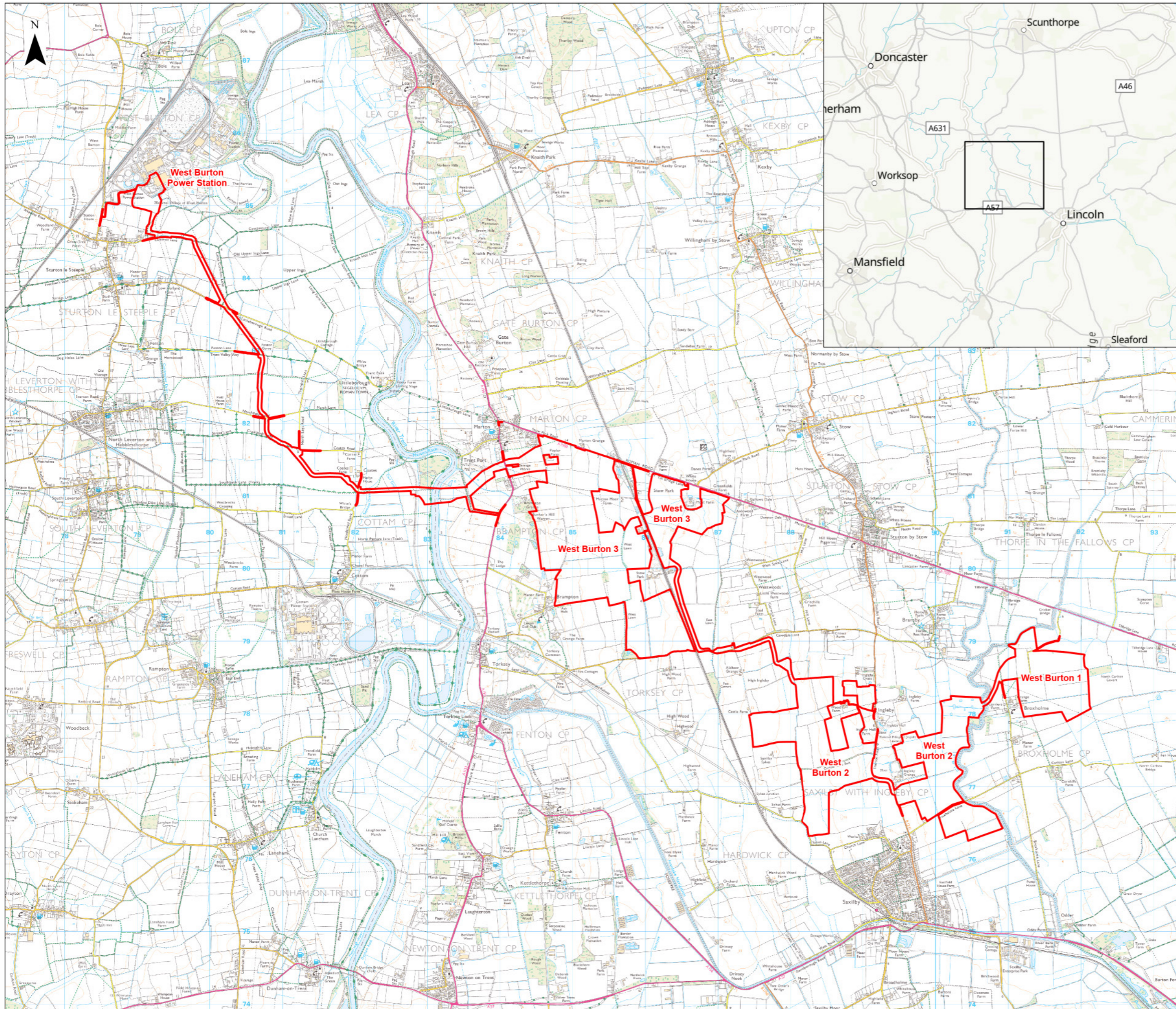
- 5.1 Access to Works Plan
- 5.2 Public Rights of Way Plan

Field Numbering

- 6.1 Field Numbering Plans - West Burton 1, 2 and 3
- 6.2 Field Numbering Plans - West Burton Power Station

Figure 1.1

Order Limits and Scheme Location Plan



Key

Order Limits

Layers: Lanpro, 2023; IGP, 2023
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 Esri UK, Esri, HERE, Garmin, Foursquare, FAO, METI/NASA, USGS

0 1 2 3 km
 Scale: 1:50,000@ A3

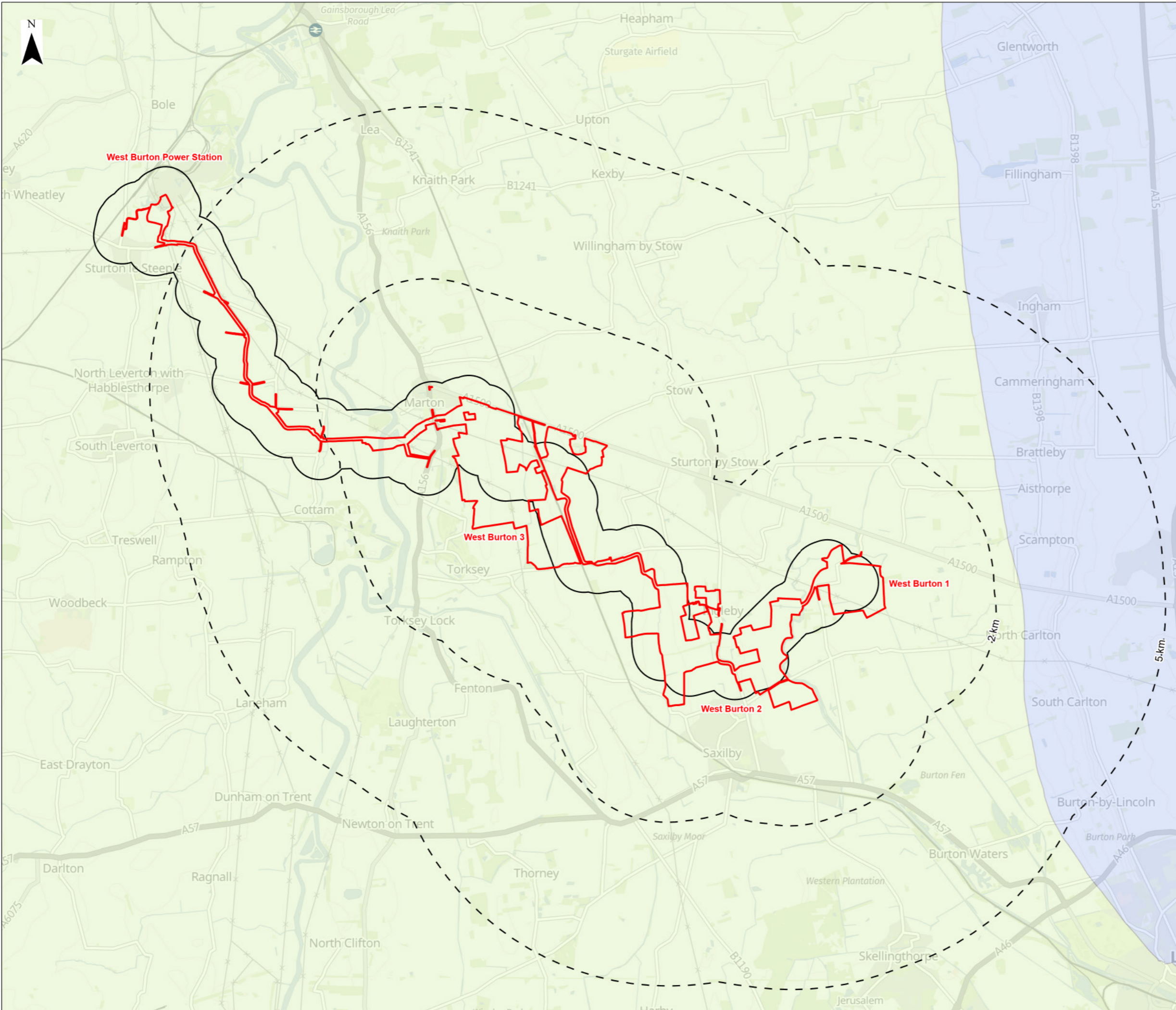
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Ref: P2983_LPR_ZZ_ON_DR_Z_0231	Date: 26/01/2023
Drawn by: AZ	Checked by: ID

Figure 1.1
 West Burton
 Site Location Plan

WEST BURTON SOLAR PROJECT
 Introduction
 Environmental Statement (ES)

Figure 2.1

National Landscape Character Area Mapping



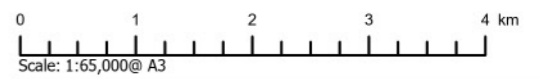
Key

- Order Limits
- Study Area
- 500m Cable Corridor Study Area

National Character Area (NCA)

- Northern Lincolnshire Edge with Coversands (45)
- Trent and Belvoir Vales (48)

Layers: Natural England, 2023; Liz Lake Associates, 2023; Lanpro, 2023
 Base map: Contains OS data © Crown Copyright and database right 2022
 Contains data from OS Zoomstack

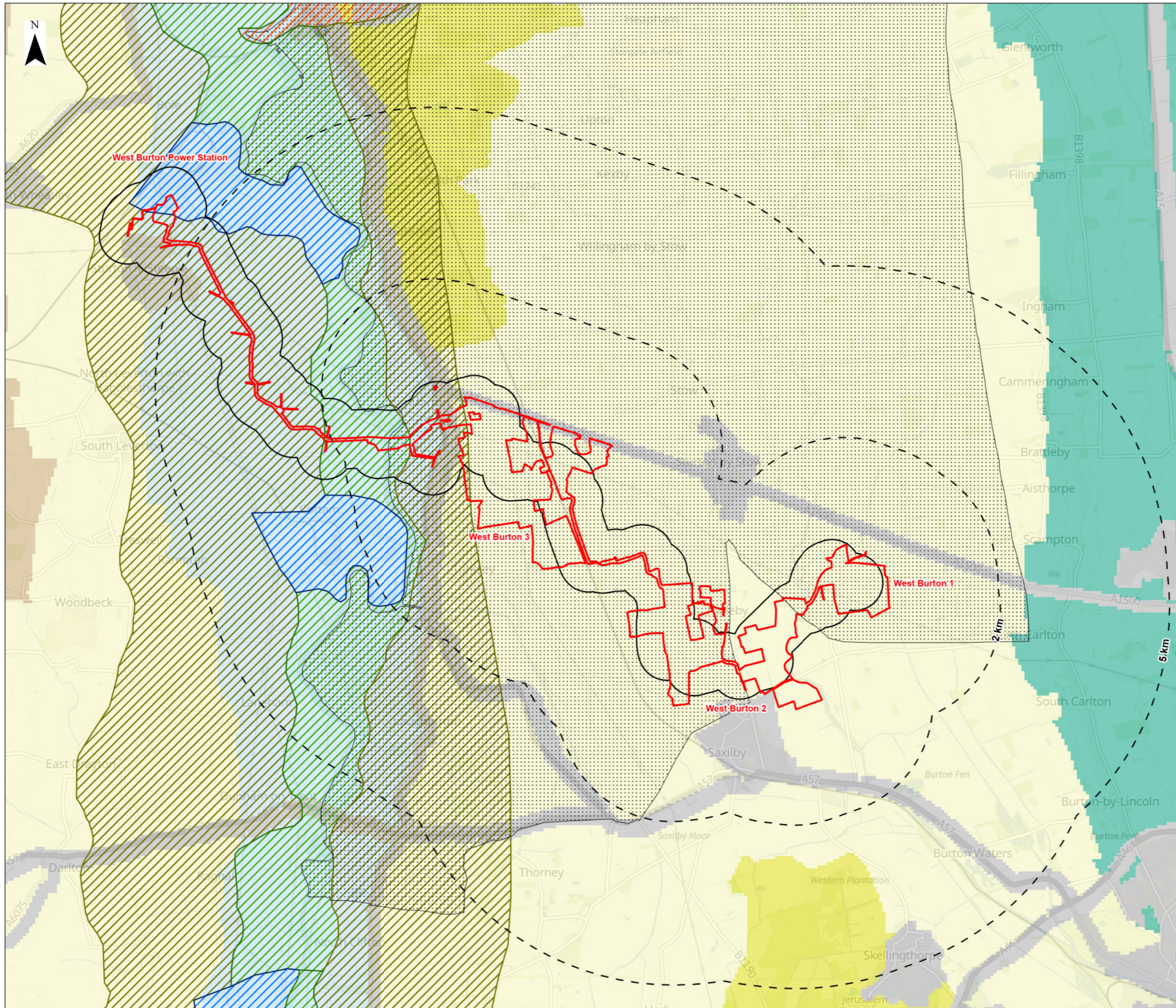


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


Figure 8.4
 West Burton 1, 2 and 3
 Landscape Character - National
WEST BURTON SOLAR PROJECT
 Landscape and Visual Impact Assessment
 Environmental Statement (ES)

Figure 2.2





Regional and Local Landscape Character Types Mapping









Key

-  Order Limits
-  Study Area
-  500m Cable Corridor Study Area
-  The Historic Landscape Character of The County of Lincolnshire (Sept 2011)

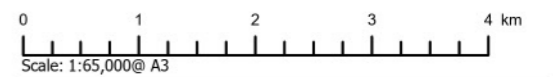
Trent Vale Landscape Character Area

-  TVP One - Vale Market Towns
-  TVP Two - Vale Meadowlands
-  TVP Three - Industrial / Restored Vale
-  TVP Four - Vale Farmlands

East Midlands Regional Landscape Character Area

-  3a: Floodplain Valleys
-  4a: Unwooded Vales
-  4b: Wooded Vales
-  5b: Wooded Village Farmlands
-  6a: Limestone Scarps and Dipslopes
-  Built-up Area

Layers: Natural England, 2023; Trent Vale Partnership, 2023; Liz Lake Associates, 2023; Lanpro, 2023
 Base map: Contains OS data © Crown Copyright and database right 2022
 Contains data from OS Zoomstack

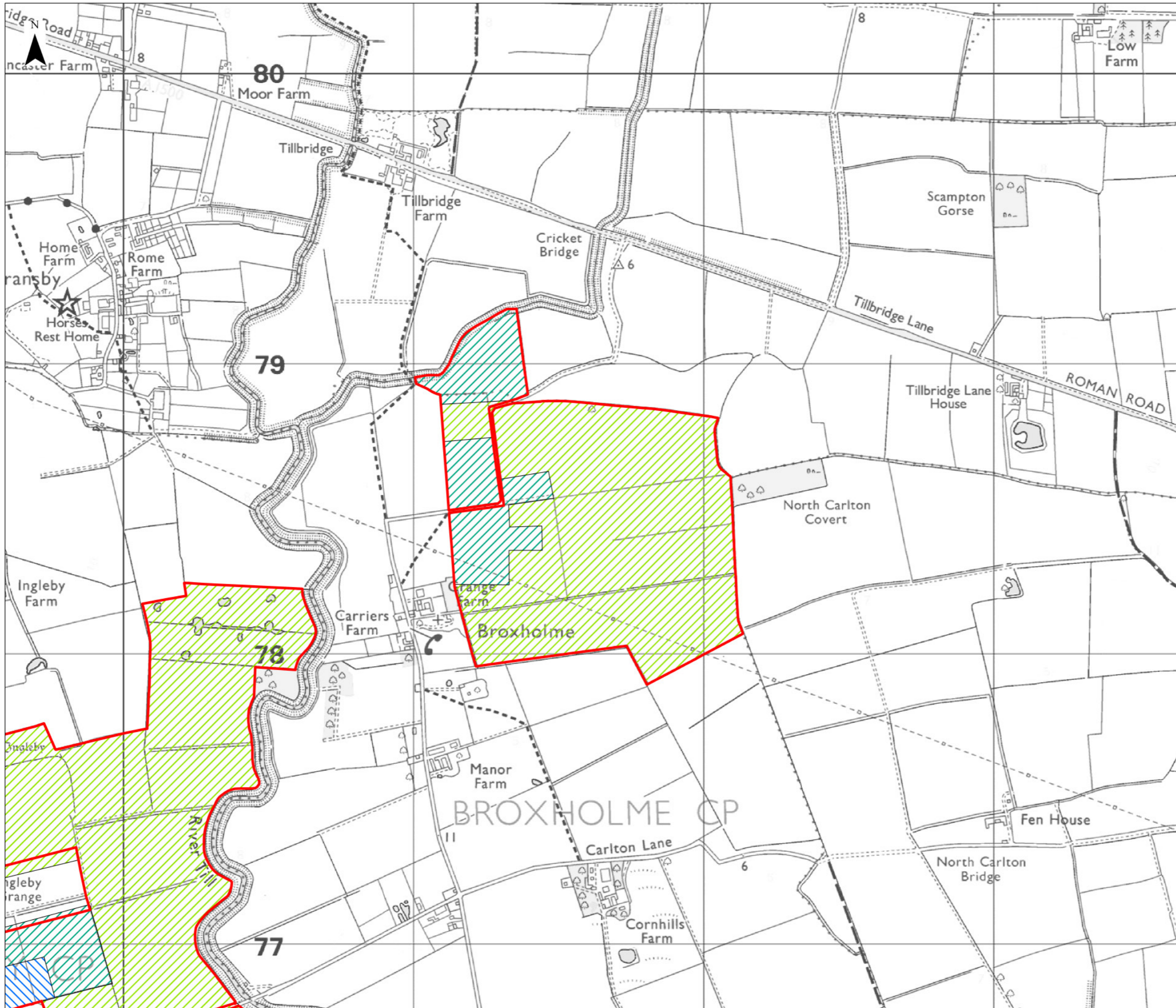


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Drawn by: AZ	Checked by: CJ

Figure 8.5
 West Burton 1, 2 and 3
 Landscape Character - Regional
WEST BURTON SOLAR PROJECT
 Landscape and Visual Impact Assessment
 Environmental Statement (ES)

Figures 2.3a-c

ALC Mapping



Key

- Order Limits
- Detailed Agricultural Land Classification (ALC)**
- Grade 2
- Grade 3a
- Grade 3b

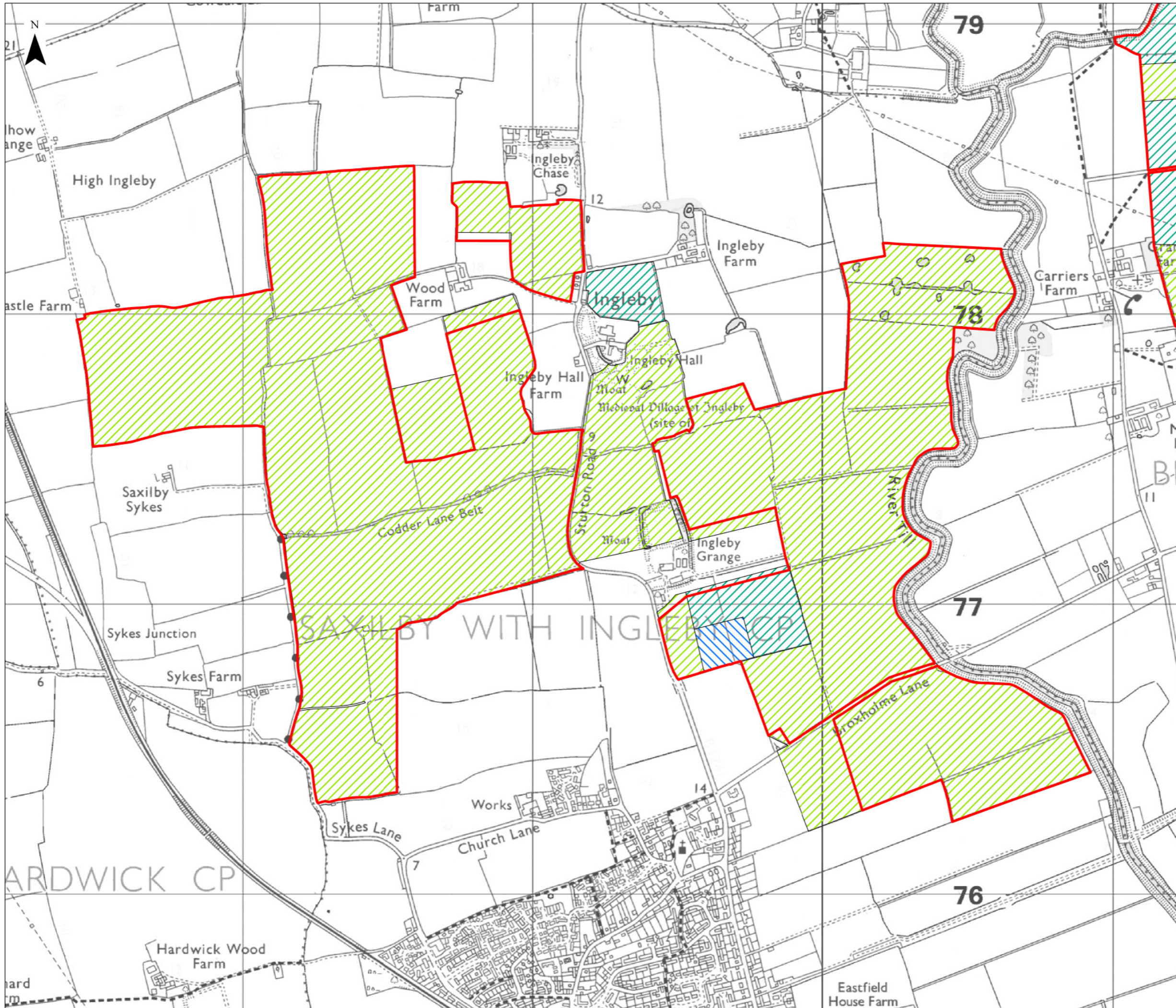
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Ref: P2983_LPR_ZZ_ON_DR_Z_0235	Date: 27/01/2023
Drawn by: AZ	Checked by: DB

Figure 19.1
West Burton 1
Agricultural Land Classification Grade Distribution

WEST BURTON SOLAR PROJECT
Soils and Agriculture
Environmental Statement (ES)



Key

Order Limits

Detailed Agricultural Land Classification (ALC)

Grade 2

Grade 3a

Grade 3b

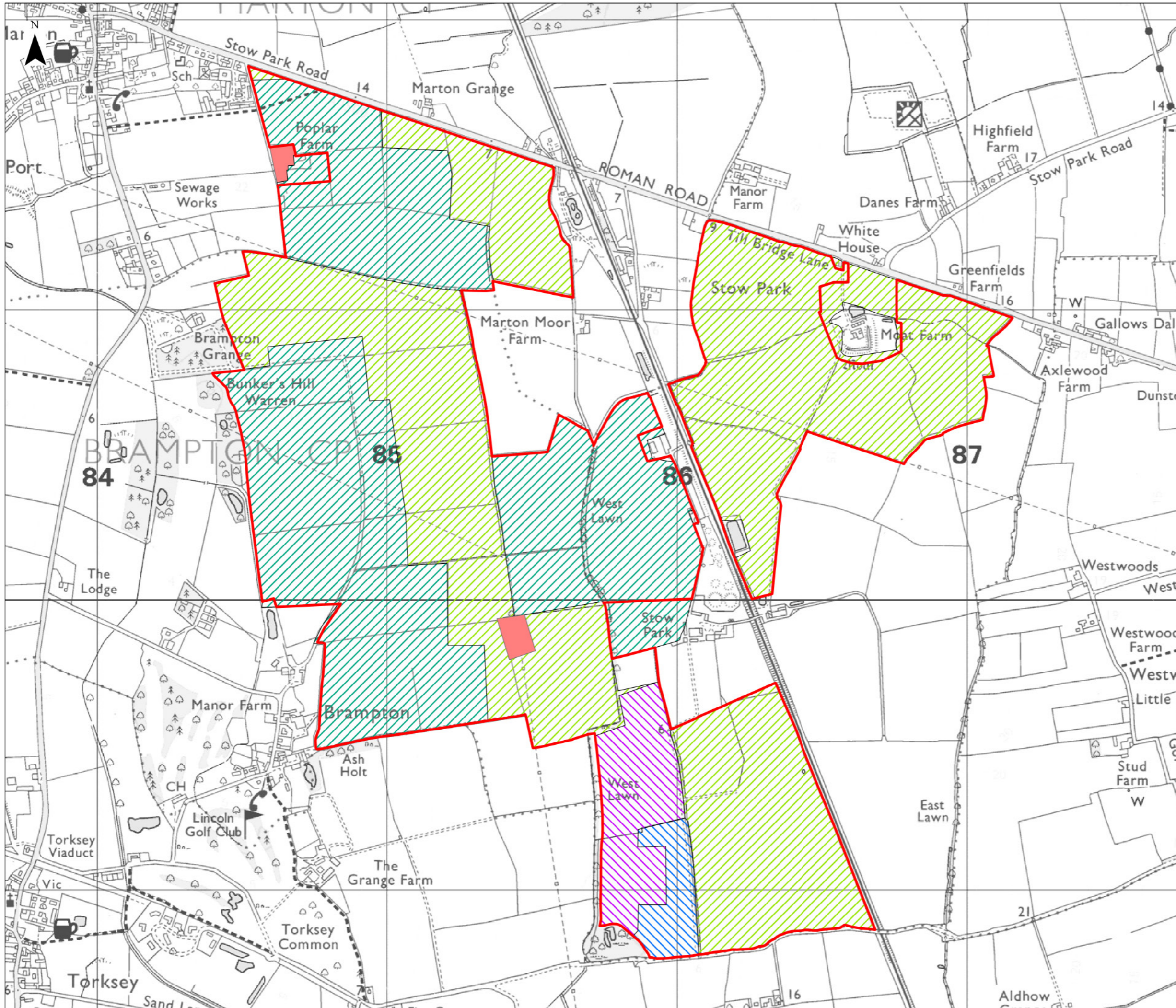
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Ref: P2983_LPR_ZZ_ON_DR_Z_0235	Date: 27/01/2023
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Figure 19.2
 West Burton 2
 Agricultural Land Classification Grade Distribution

WEST BURTON SOLAR PROJECT
 Soils and Agriculture
 Environmental Statement (ES)



Key

- Order Limits
- Detailed Agricultural Land Classification (ALC)**
- Grade 1
- Grade 2
- Grade 3a
- Grade 3b
- Non-agri

Layers: AmetProperty, 2023; Lanpro, 2023
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
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Ref: P2983_LPR_ZZ_ON_DR_Z_0235	Date: 27/01/2023
Drawn by: AZ	Checked by: DB

Figure 19.3
West Burton 3
Agricultural Land Classification Grade Distribution

WEST BURTON SOLAR PROJECT
Soils and Agriculture
Environmental Statement (ES)

Figure 2.4

Ecological Designations

Key
 Order Limits
 Site of Special Scientific Interest (SSSI)
 Local Wildlife Site (LWS)

Layers: Natural England, 2023; Lanpro, 2023; IFS, 2023
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Ref: P2983_LPR_ZZ_ON_DR_Z_0208	Date: 08/02/2023
Drawn by: AZ	Checked by: ID

Plan of Statutory / Non-statutory Sites or Features of Nature Conservation

WEST BURTON SOLAR PROJECT

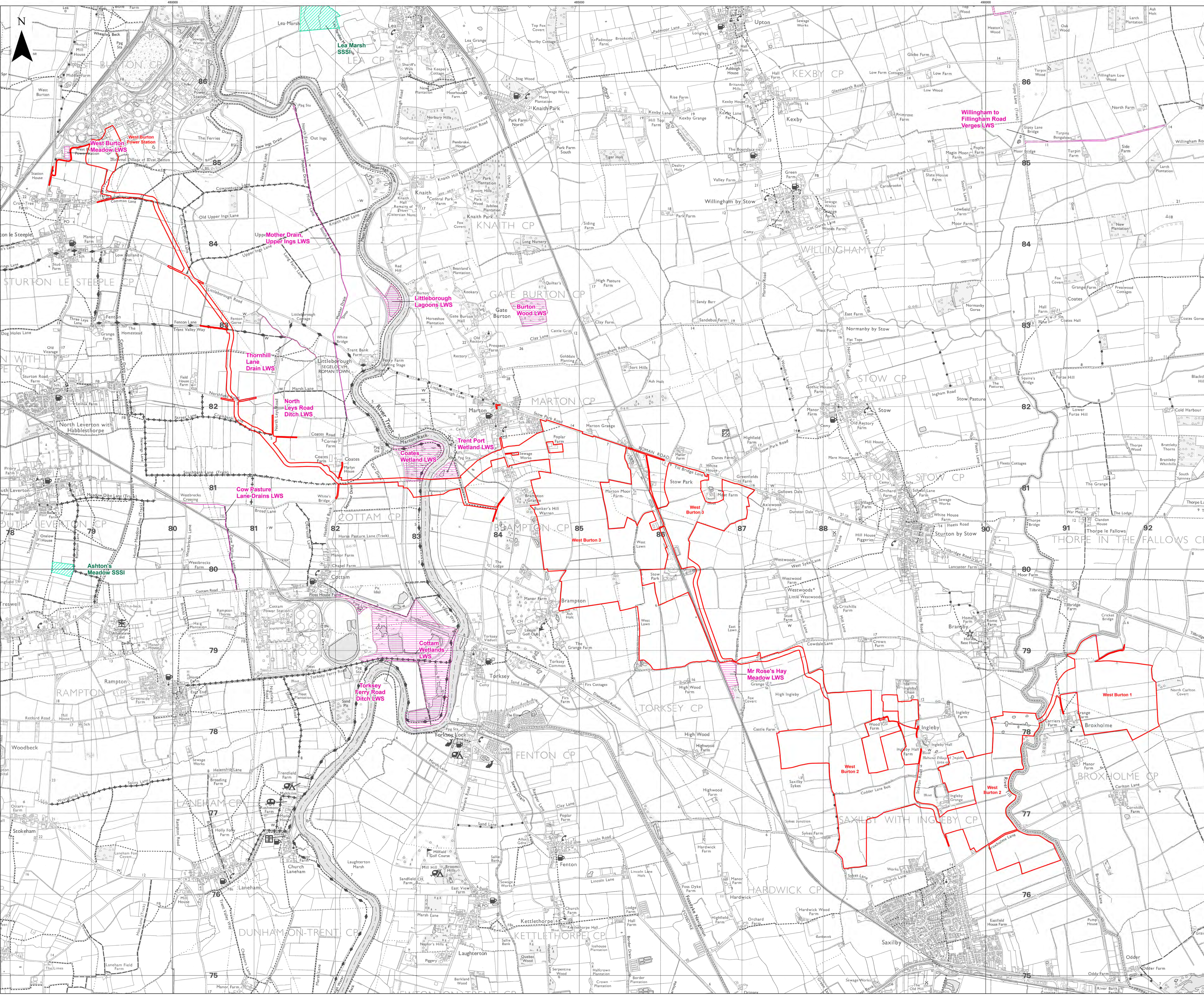


Figure 2.5 Cultural Heritage Designations

Key

- Order Limits
- Sheet Index
- County Boundary
- Listed Building
- Grade
- I I
- II II
- Conservation Area
- Scheduled Monument
- Registered Park and Garden
- Lincolnshire HER (point)
- Building
- Find Spot
- Monument
- Lincolnshire HER (Line)
- Building
- Monument
- Lincolnshire HER (poly)
- Building
- Monument
- Park and Garden
- Nottinghamshire HER (point)
- ▲ Building
- ▲ Element
- ▲ Find Spot
- ▲ Monument
- ▲ Nottinghamshire (poly)
- Building
- Element
- Monument
- Park and Garden

Note: Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

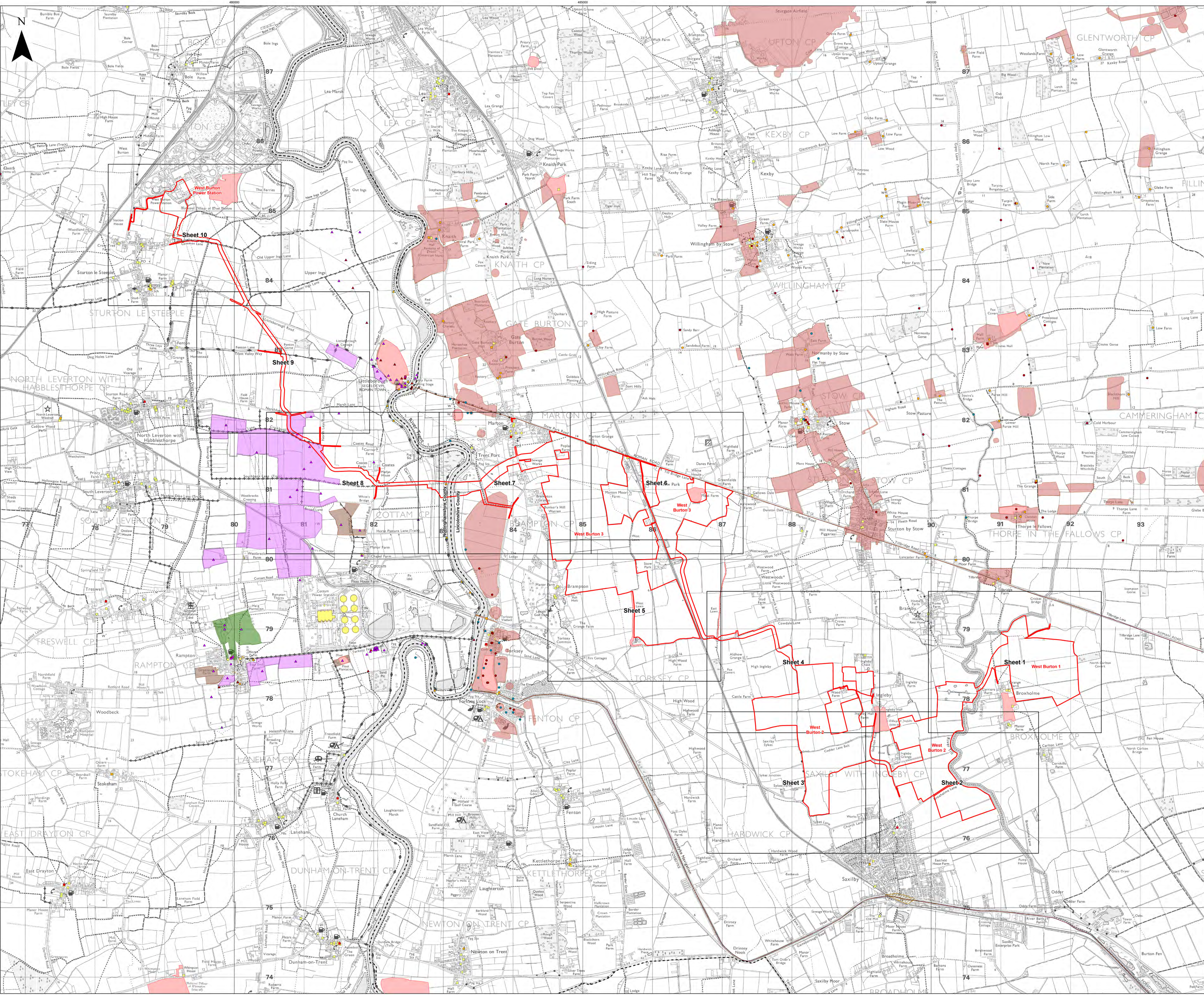
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




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Plan of Statutory and Non-statutory Features of Historic Environment Index Sheet

WEST BURTON SOLAR PROJECT

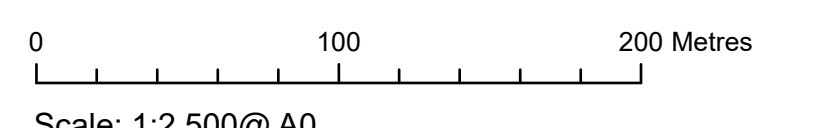


Key

-  Order Limits
-  Sheet Index
-  Listed Building
- Grade**
-  II
-  Scheduled Monument
- Lincolnshire HER (Line)**
-  Monument
-  County Boundary

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

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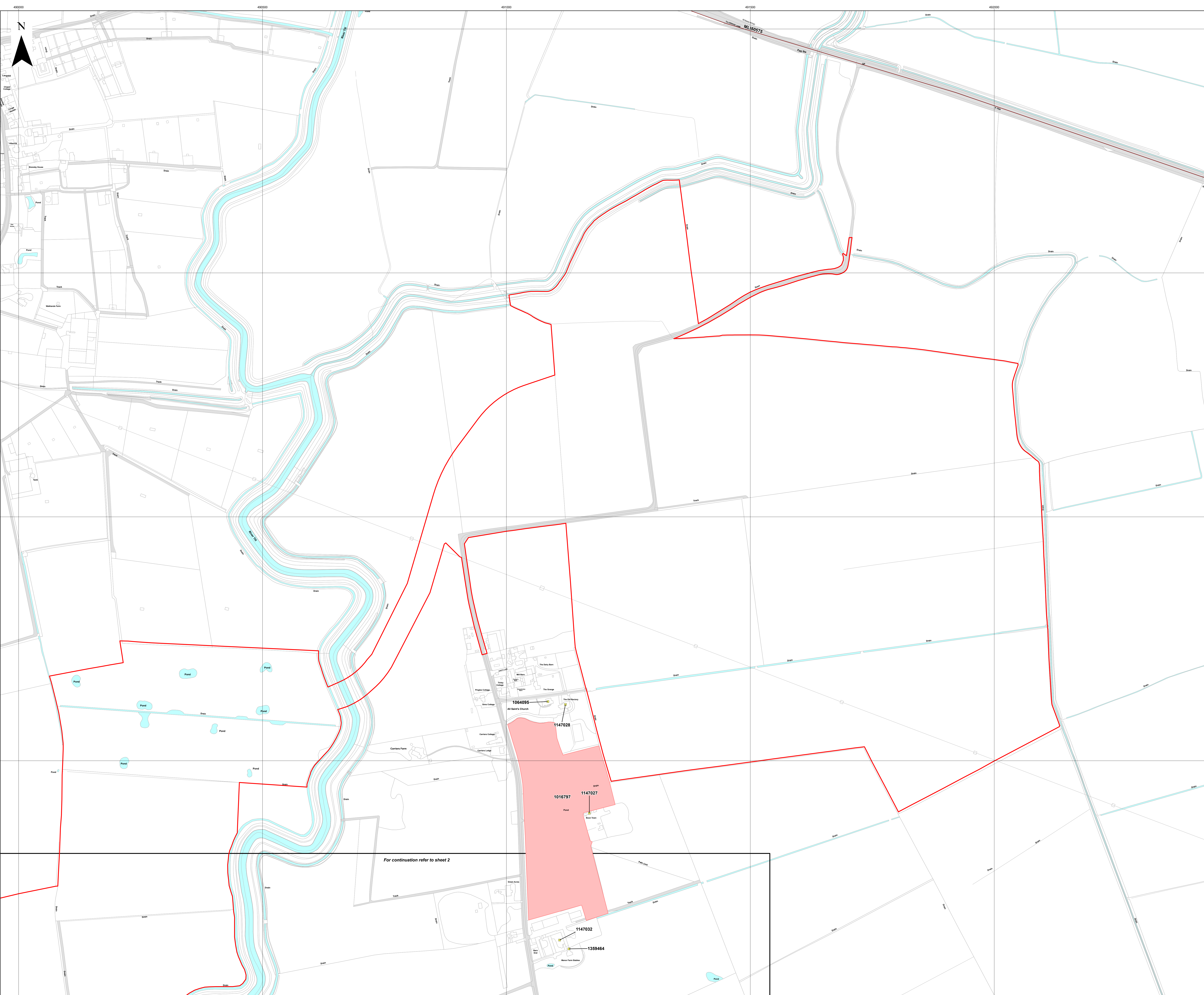


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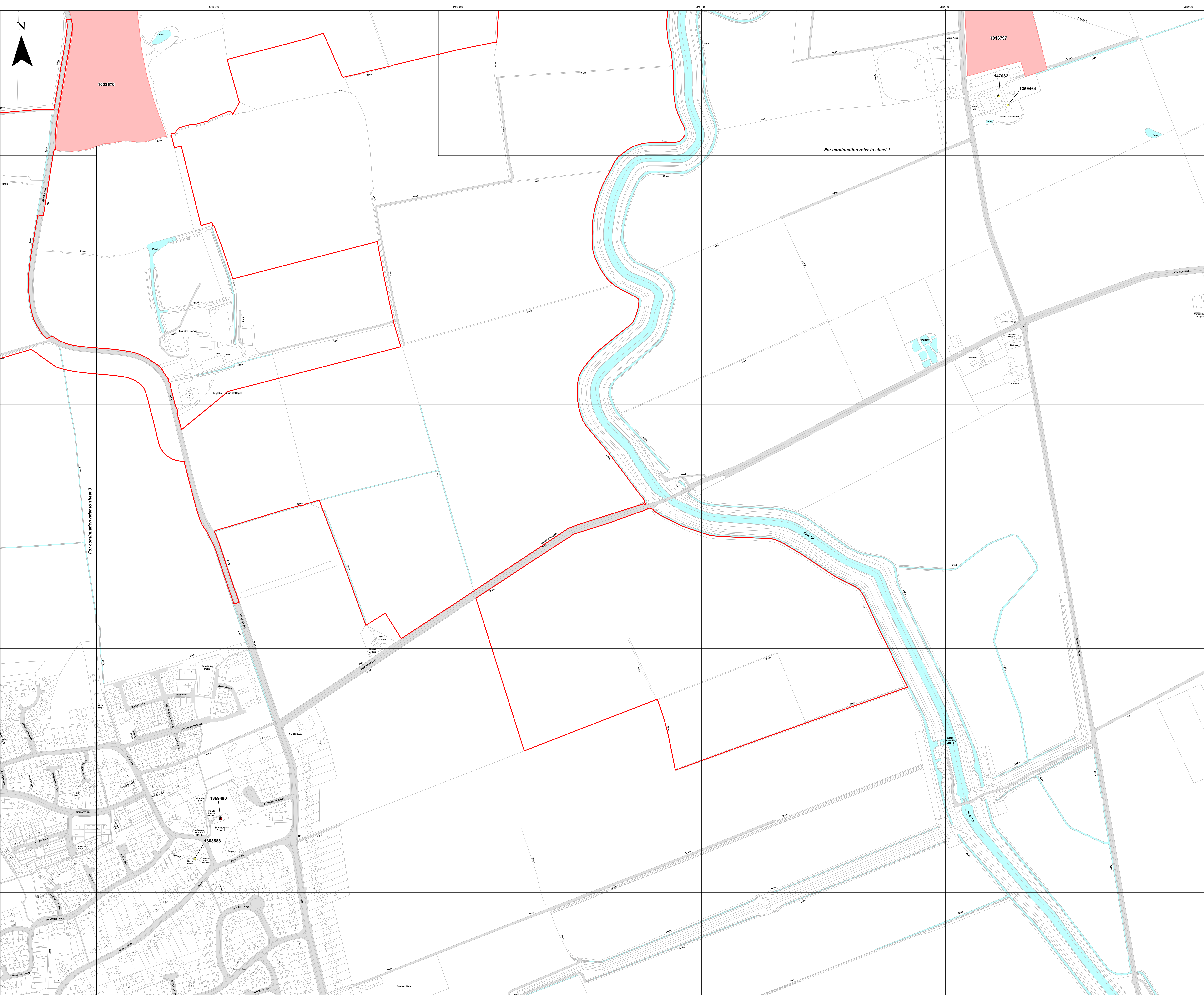
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**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 1 of 10

WEST BURTON SOLAR PROJECT



For continuation refer to sheet 2

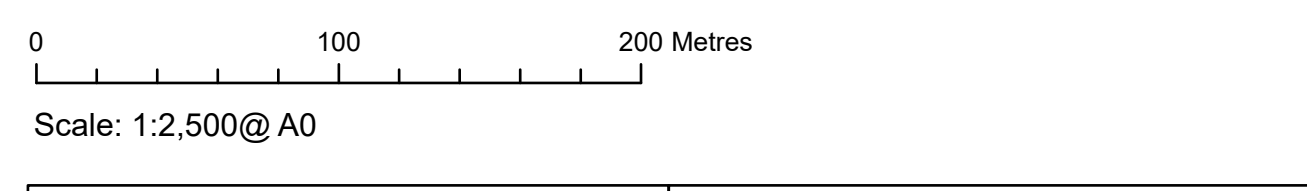


Key

- Order Limits
- Sheet Index
- Listed Building
- Grade**
- I
- II
- Scheduled Monument
- County Boundary

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

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**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 2 of 10

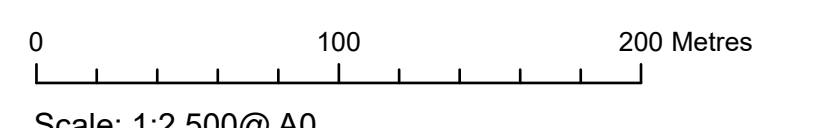
WEST BURTON SOLAR PROJECT

Key

- Order Limits
- Sheet Index
- Scheduled Monument
- County Boundary

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

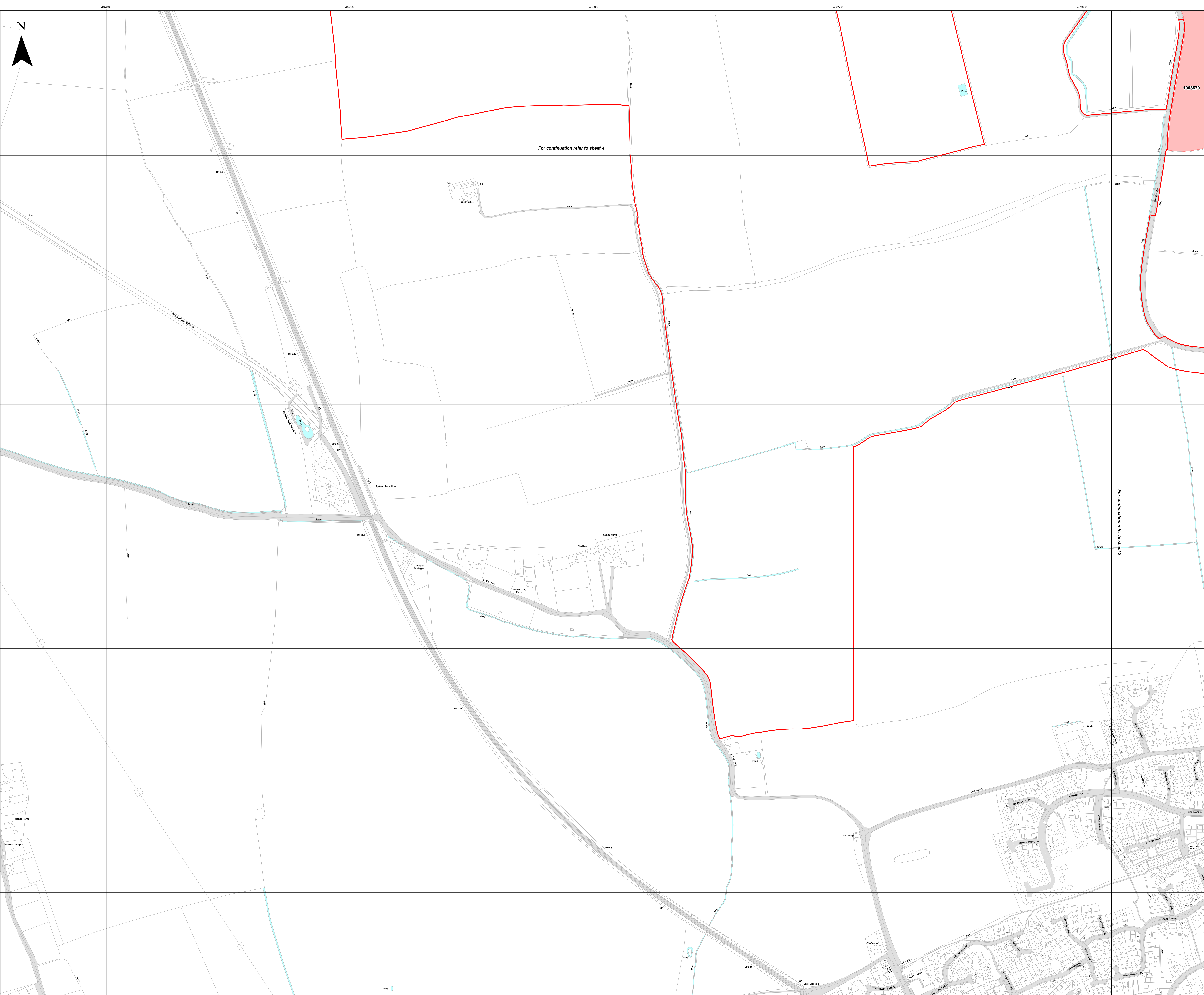
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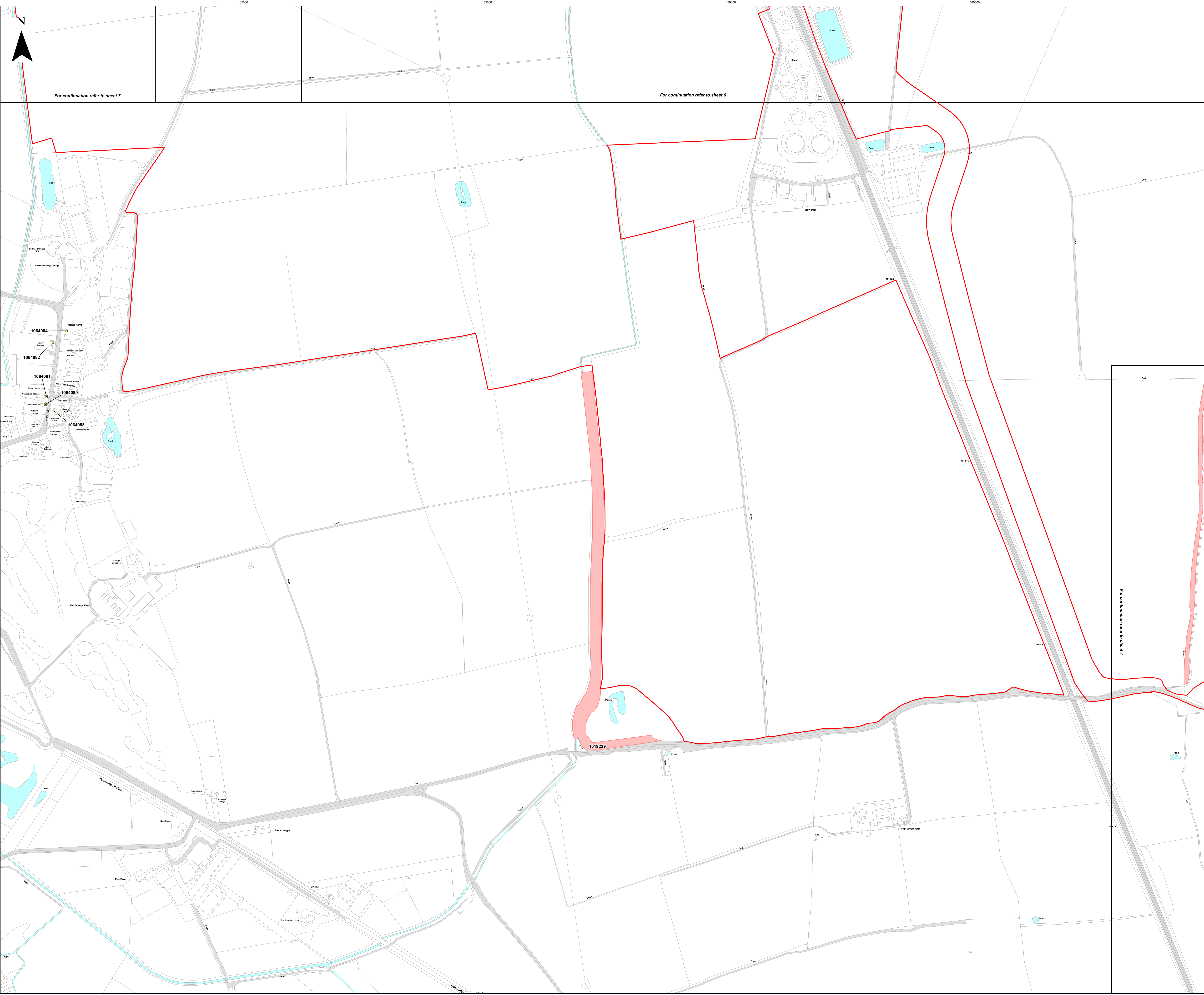


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Ref: P2963_LPR_ZZ_ON_DR_Z_0204	Date: 23/02/2023
Drawn by: AZ	Checked by: ID

**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 3 of 10

WEST BURTON SOLAR PROJECT



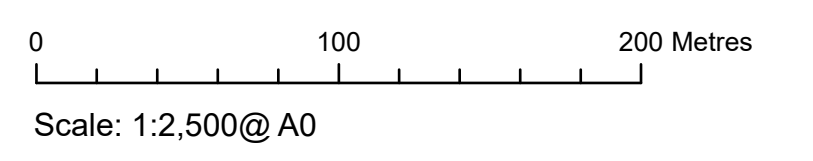


Key

- Order Limits
- Sheet Index
- Listed Building
- Grade
- II
- Scheduled Monument
- County Boundary

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

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**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 5 of 10

WEST BURTON SOLAR PROJECT

Key

- Order Limits
- Sheet Index
- Listed Building
- Grade**
- II
- Scheduled Monument
- Lincolnshire HER (Line)
- Monument
- County Boundary

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

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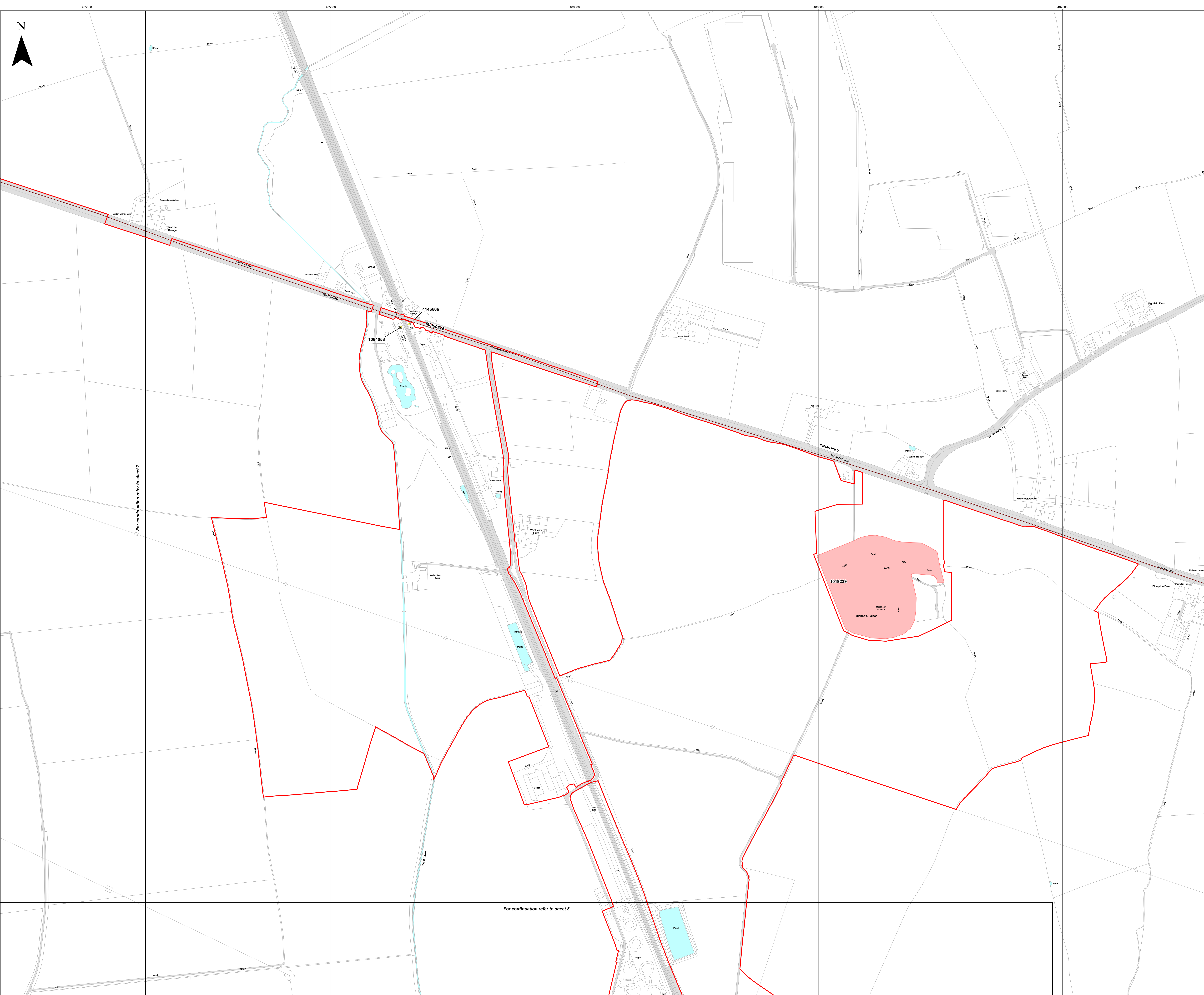
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**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 6 of 10

WEST BURTON SOLAR PROJECT

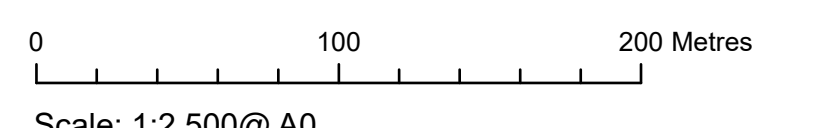


Key

- Order Limits
- Sheet Index
- Listed Building
- Grade**
- I
- II
- Scheduled Monument
- Lincolnshire HER (point)
- Find Spot
- Lincolnshire HER (Line)
- Monument
- Building
- Monument
- Nottinghamshire HER (point)**
- Building
- Element
- County Boundary

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

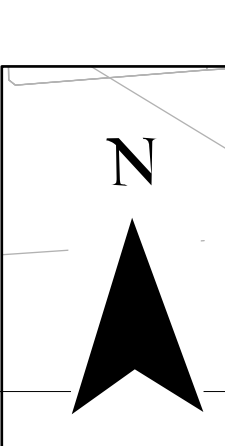
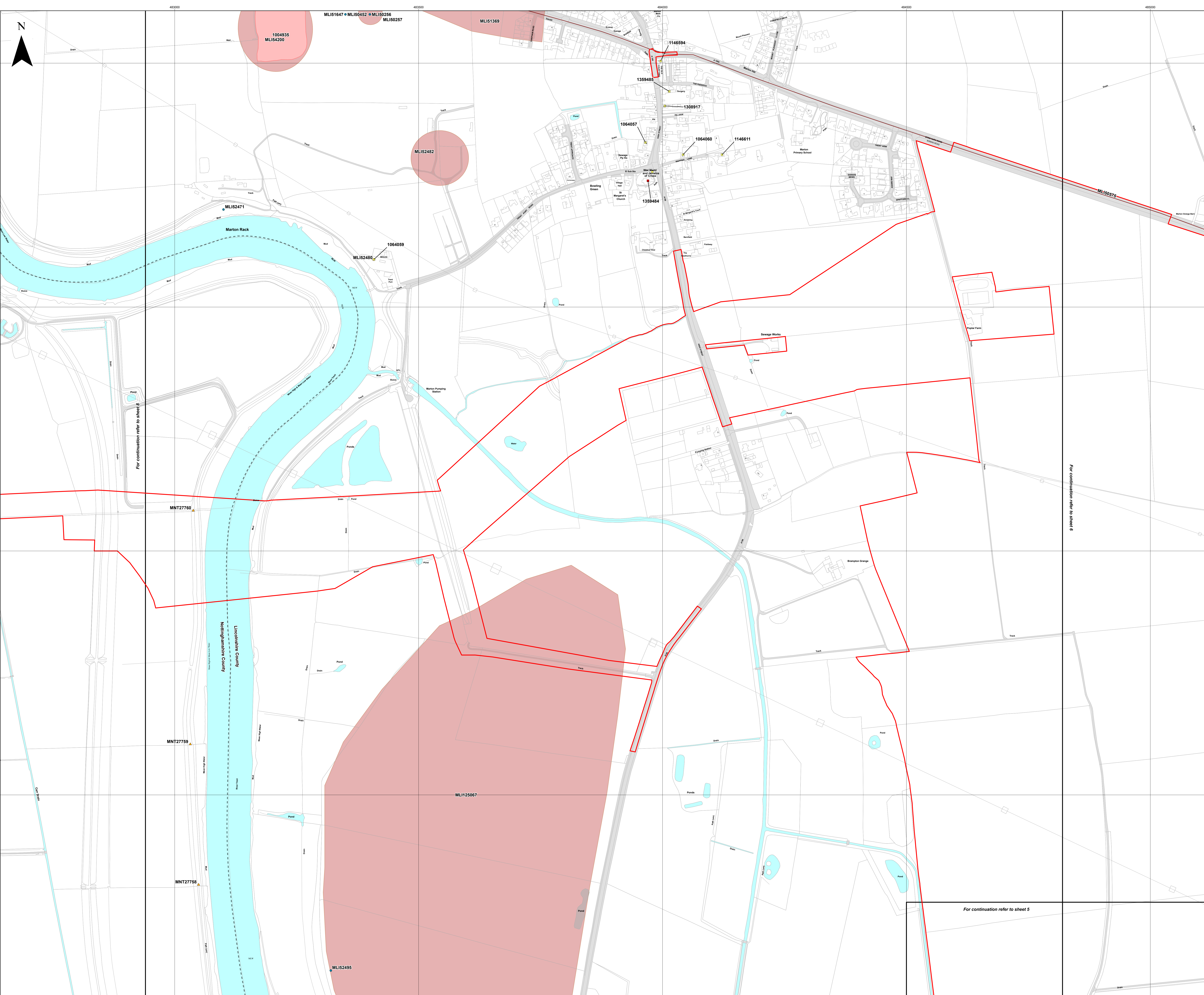
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**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 7 of 10

WEST BURTON SOLAR PROJECT



For continuation refer to sheet 8

For continuation refer to sheet 6

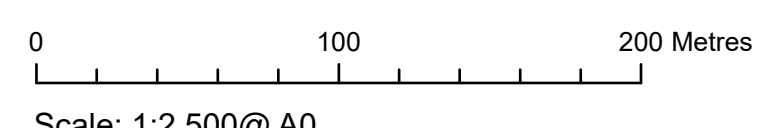
For continuation refer to sheet 5

Key

- Order Limits
- Sheet Index
- Nottinghamshire HER (point)**
- Building
- ▲ Element
- ▲ Monument
- Nottinghamshire (poly)**
- Element
- Monument
- County Boundary

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

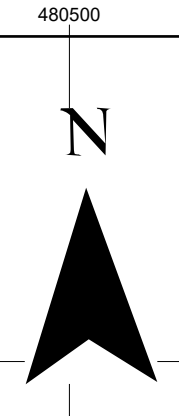
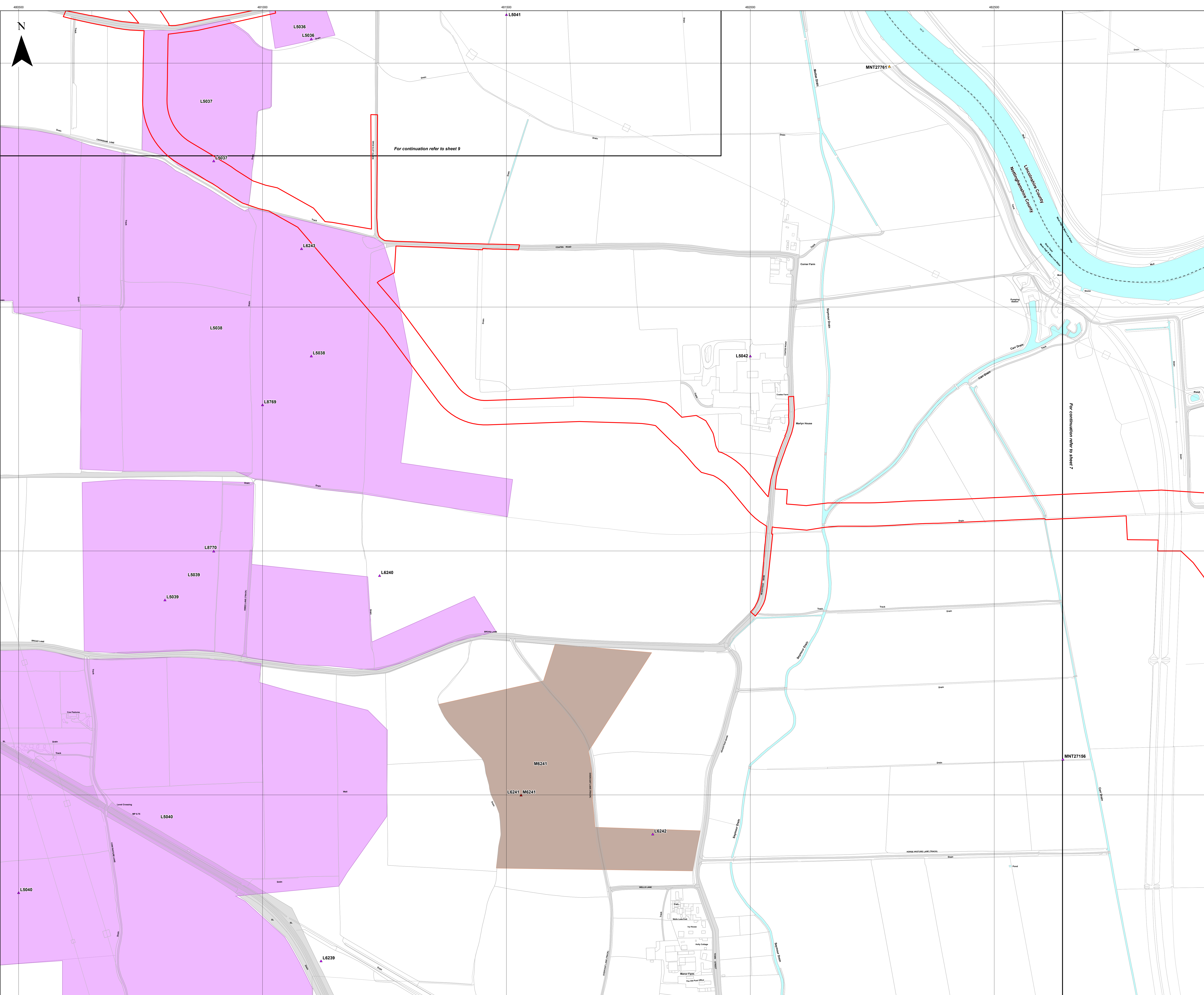
Layers: Historic England, 2023; Nottinghamshire County Council, 2023; Lincolnshire County Council, 2023; Lanpro, 2023; KSR, 2023
Base map: Reproduced from Ordnance Survey digital map data © Crown copyright 2023. All rights reserved. License number: 0100011673



APFP Regulation: 5(2)(m)	Application Doc No. WB2.8
Ref: P2963_LPR_ZZ_ON_DR_Z_0204	Date: 23/02/2023
Drawn by: AZ	Checked by: ID

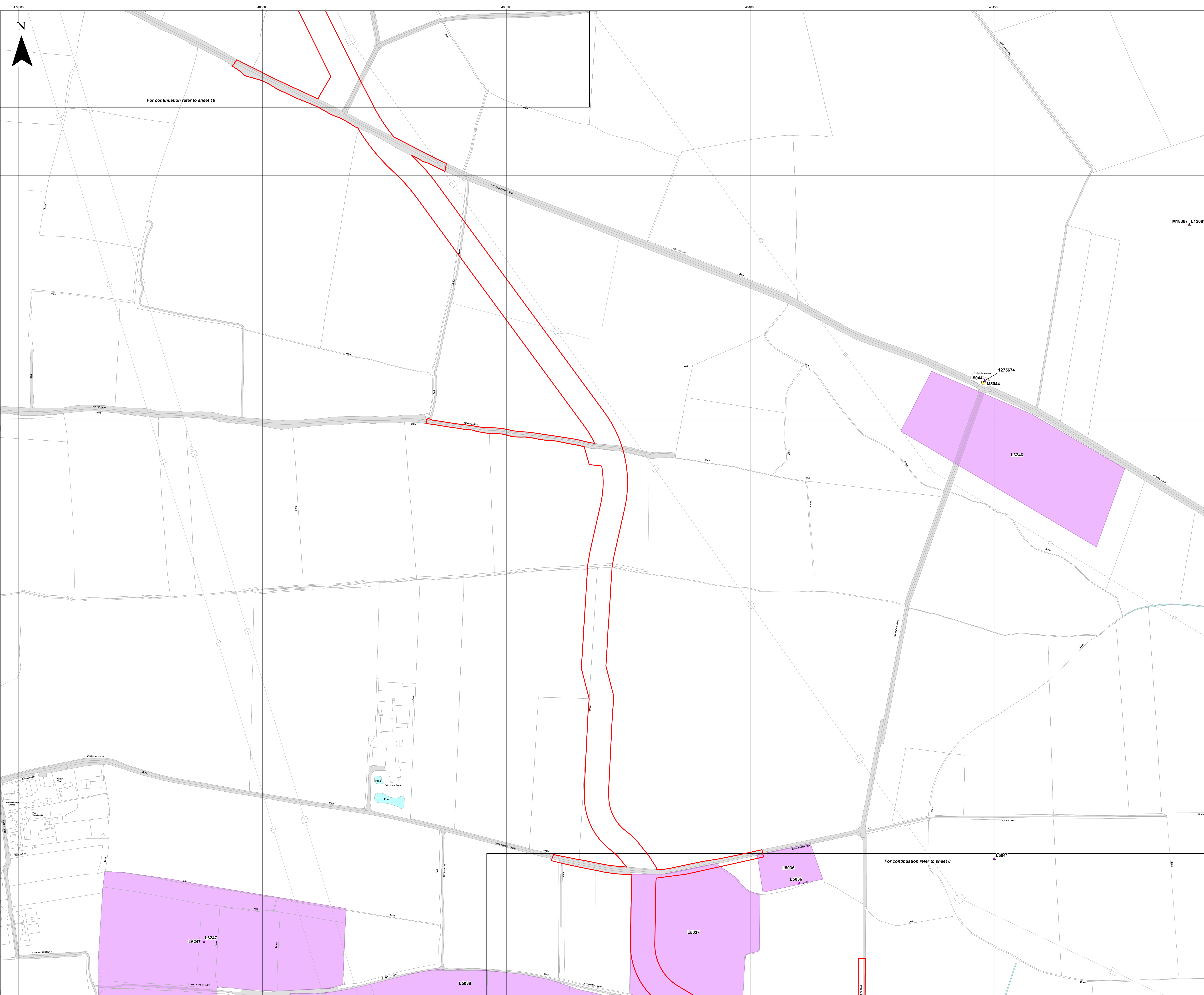
**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 8 of 10

WEST BURTON SOLAR PROJECT



For continuation refer to sheet 9

For continuation refer to sheet 7

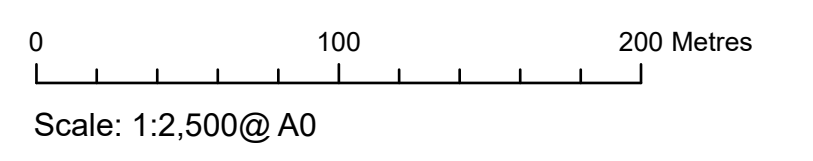


- Key**
- Order Limits
 - Sheet Index
 - Listed Building
 - Grade
 - II
 - ▲ Nottinghamshire HER (point)
 - ▲ Element
 - ▲ Monument
 - ▲ Nottinghamshire (poly)
 - Building
 - Element
 - County Boundary

M18387 ▲ L12081

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

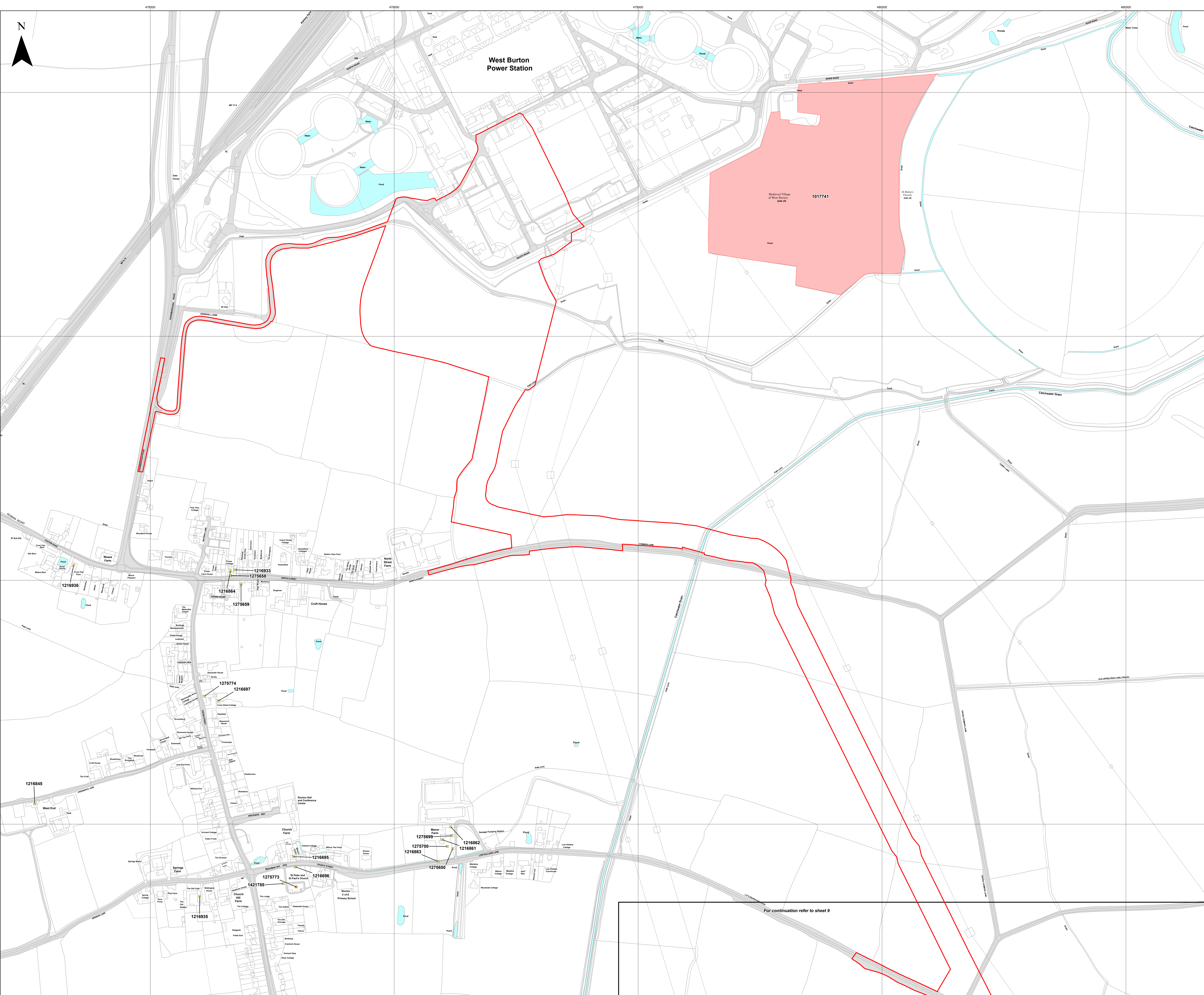
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APFP Regulation: 5(2)(m)	Application Doc No. WB2.8
Ref: P2983_LPR_ZZ_ON_DR_Z_0204	Date: 23/02/2023
Drawn by: AZ	Checked by: ID

**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 9 of 10

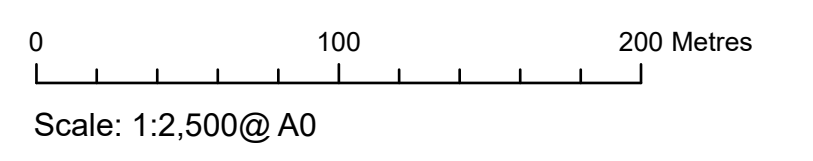
WEST BURTON SOLAR PROJECT



- Key**
-  Order Limits
 -  Sheet Index
 - Listed Building**
 - Grade**
 -  II*
 -  II
 -  Scheduled Monument
 -  County Boundary

Note:
Full details of the Historic Environmental Record (HER) sites and monuments depicted can be found in the gazetteers within the Desk Based Assessment (DBA) which are included in Appendix 13.1 of the Environmental Statement (ES), and the designated assets on Historic England's National Heritage List for England are discussed in detail in the Heritage Statement included in Appendix 13.5 of the ES

Layers: Historic England, 2023; Nottinghamshire County Council, 2023; Lincolnshire County Council, 2023; Lanpro, 2023; K&P, 2023
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APFP Regulation: 5(2)(m)	Application Doc No. WB2.8
Ref: P2963_LPR_ZZ_ON_DR_Z_0204	Date: 23/02/2023
Drawn by: AZ	Checked by: ID

**Plan of Statutory and Non-statutory
Features of Historic Environment**
Sheet 10 of 10




WEST BURTON SOLAR PROJECT

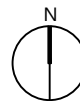
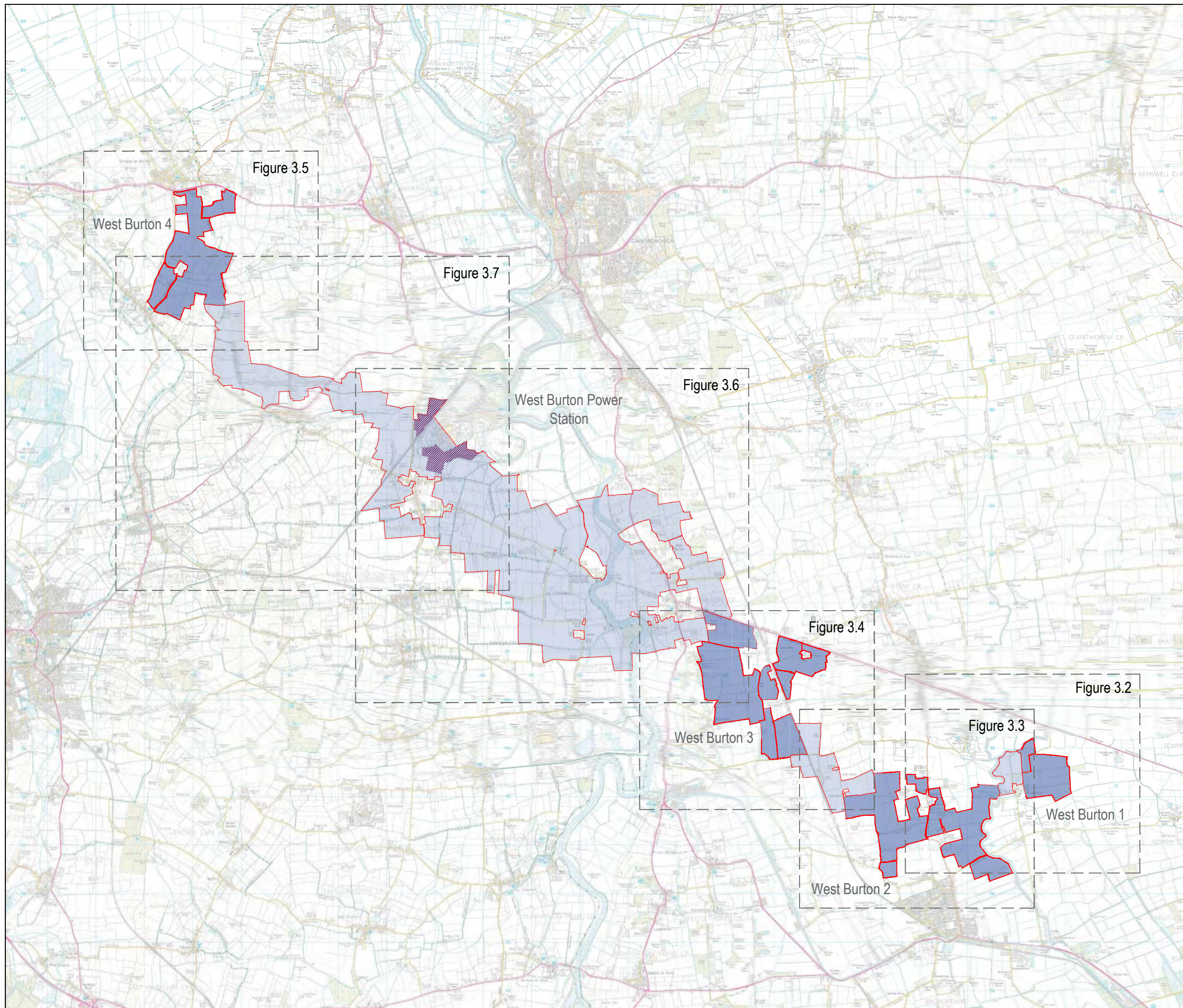
For continuation refer to sheet 9

Figure 3.1

Scoping Red Line

Key

-  Area for solar panels and associated development
-  Cable Route Search Corridor
-  Potential area for energy storage and associated development



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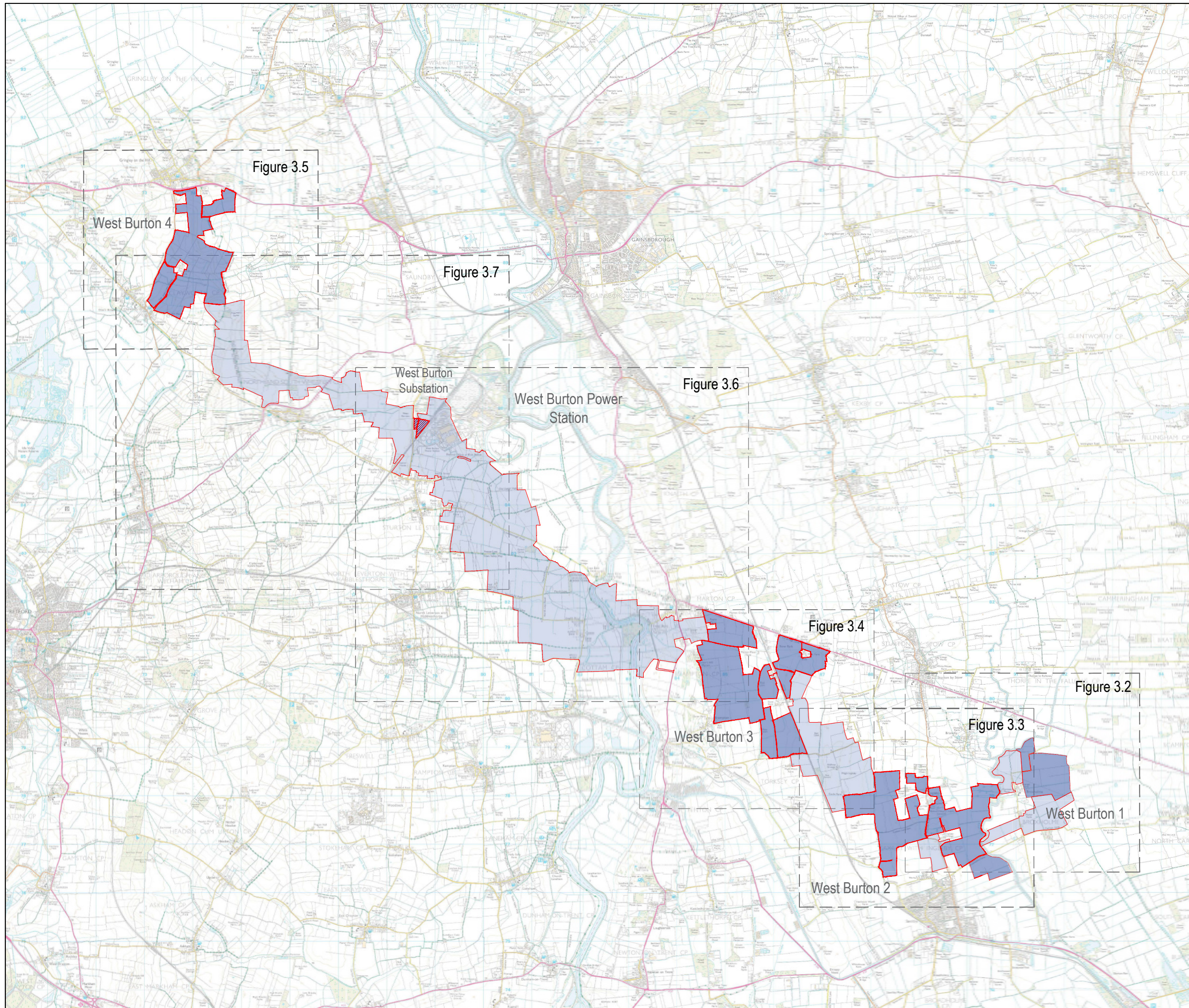
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Checked by: JC	Date: 05/01/2022

Figure 3.1
Site Plan




WEST BURTON SOLAR PROJECT

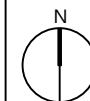
Figure 3.2

PEIR Red Line



Key

-  Area for solar panels and associated development
-  Cable Route Search Corridor
-  Potential area for energy storage and associated development



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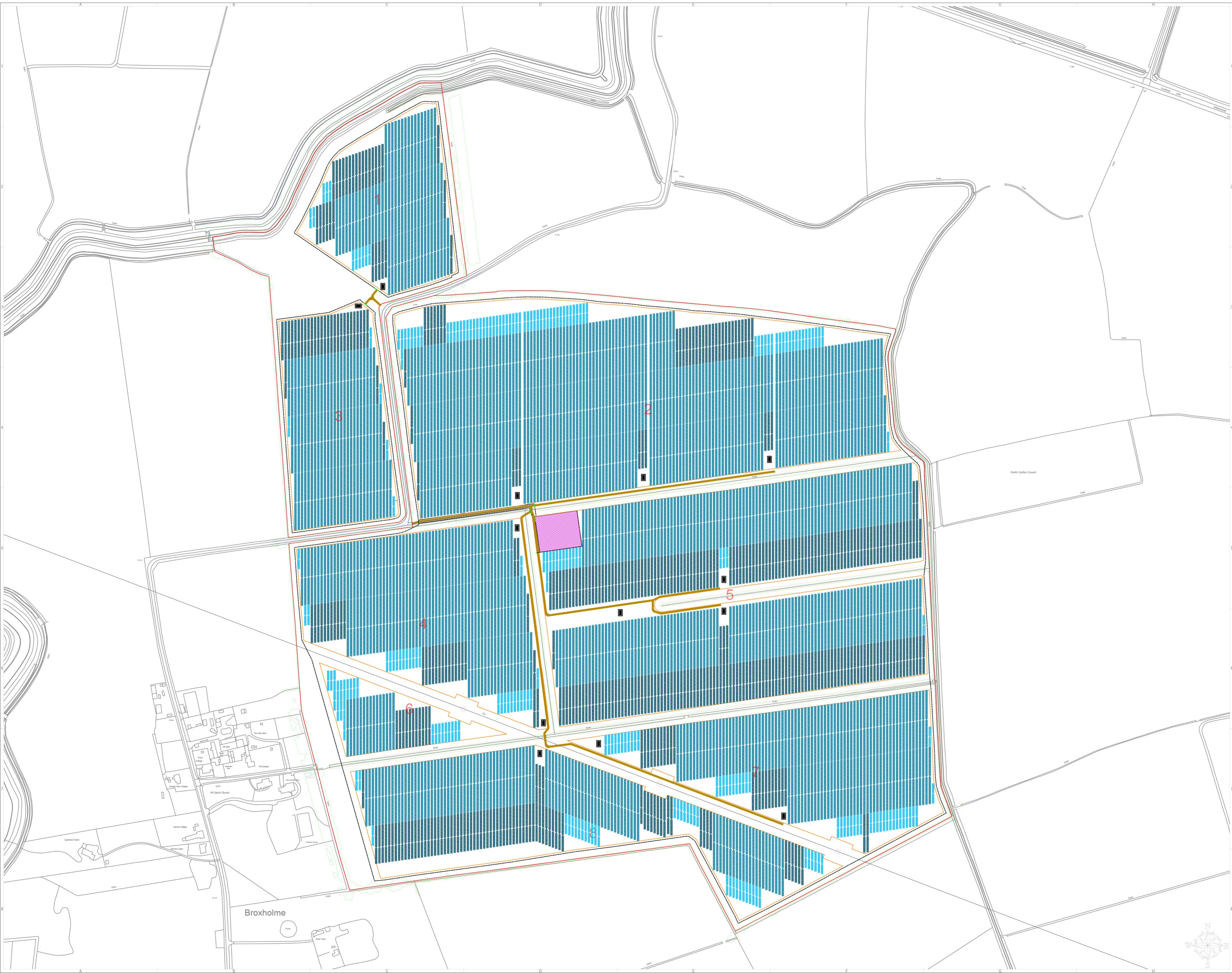
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Checked by: JC	Date: 25/05/2022

Figure 3.1
Site Plan

WEST BURTON SOLAR PROJECT
PEIR

Figures 3.3a-e

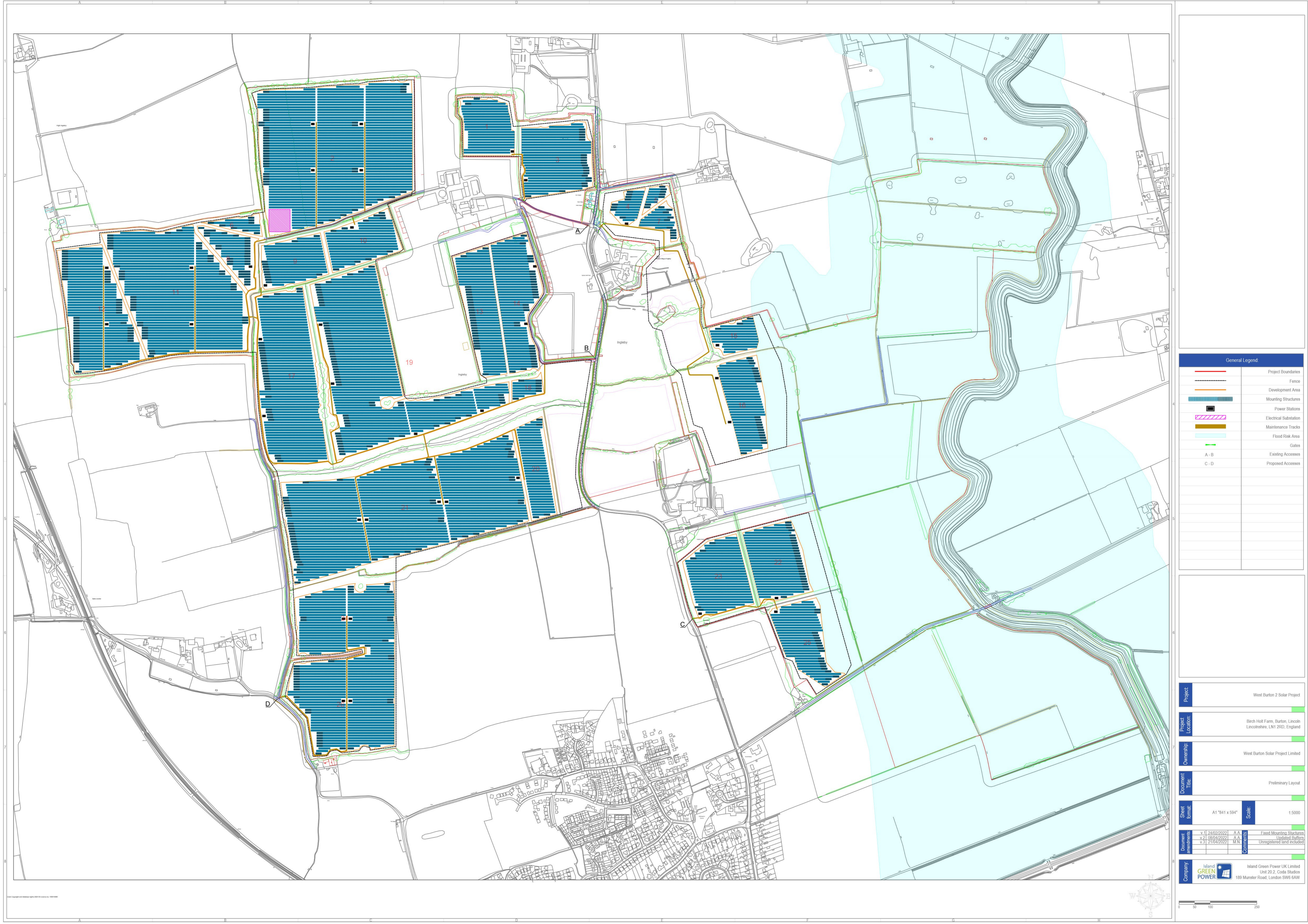
PEIR layouts



General Legend	
	Project Boundaries
	Fence
	Development Area
	Electrical Substation
	Maintenance Tracks
	Gates

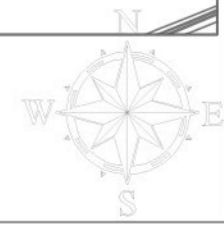
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	Tracker with 48 modules
	Tracker with 24 modules
	Power Station MVPS:
	• 1 Inverters SMA SC
	• 1 Step Up Transformer
	• 1 MV Switchboard

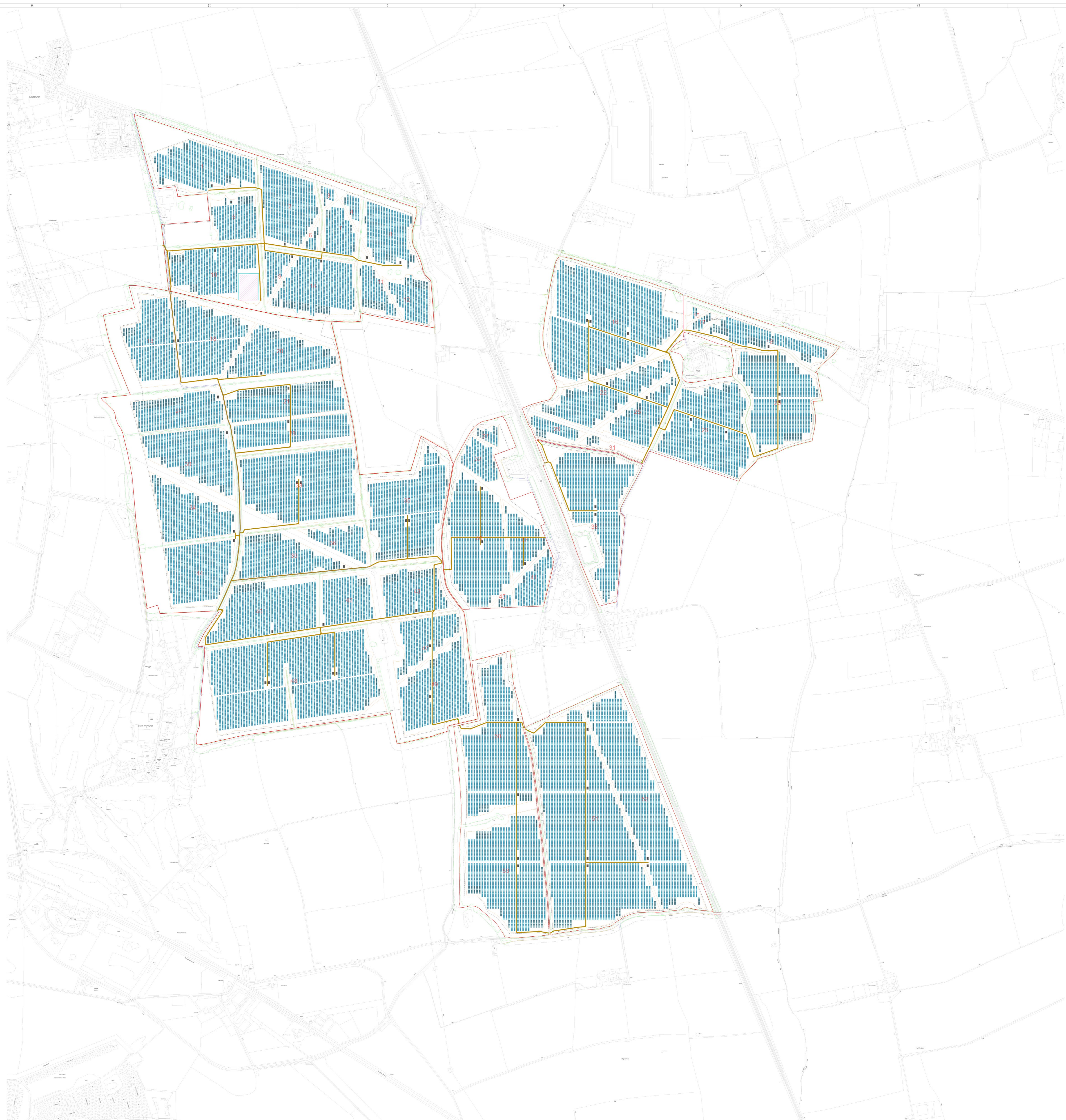
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Project Location:	Land East of Broxholme, Lincolnshire, LN1 2ZS		
Ownership:	West Burton Solar Project Limited		
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Document amendments:	v.1: 14/02/2022 v.2: 01/04/2022 v.3: 21/04/2022	Comments:	Preliminary Layout 1D Tracker Layout Buffer Update
Company:	 Island Green Power UK Limited Unit 20.2, Coda Studios 189 Munster Road, London SW6 6AW		



General Legend	
	Project Boundaries
	Fence
	Development Area
	Mounting Structures
	Power Stations
	Electrical Substation
	Maintenance Tracks
	Flood Risk Area
	Gates
	A - B Existing Accesses
	C - D Proposed Accesses

Project:	West Burton 2 Solar Project																
Project Location:	Barth Holt Farm, Burton, Lincolnshire, LN 2RD, England																
Ownership:	West Burton Solar Project Limited																
Document Title:	Preliminary Layout																
Sheet Format:	A1 "841 x 594"	Scale: 1:5000															
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v.2	08/04/2022	A.A.	Updated Buffers														
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Company:	 Island Green Power UK Limited Unit 20.2, Coda Studios 189 Munster Road, London SW6 6AW																

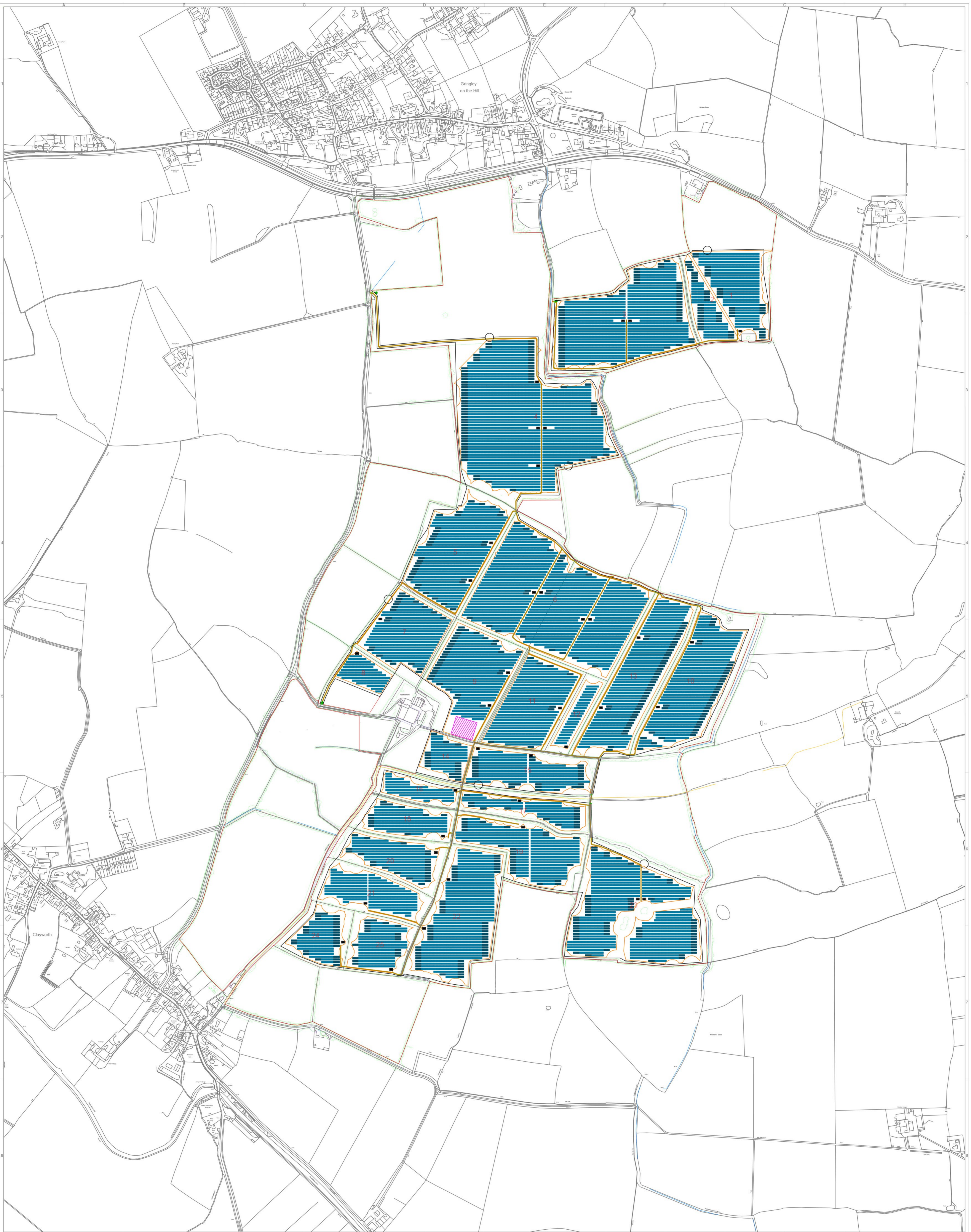




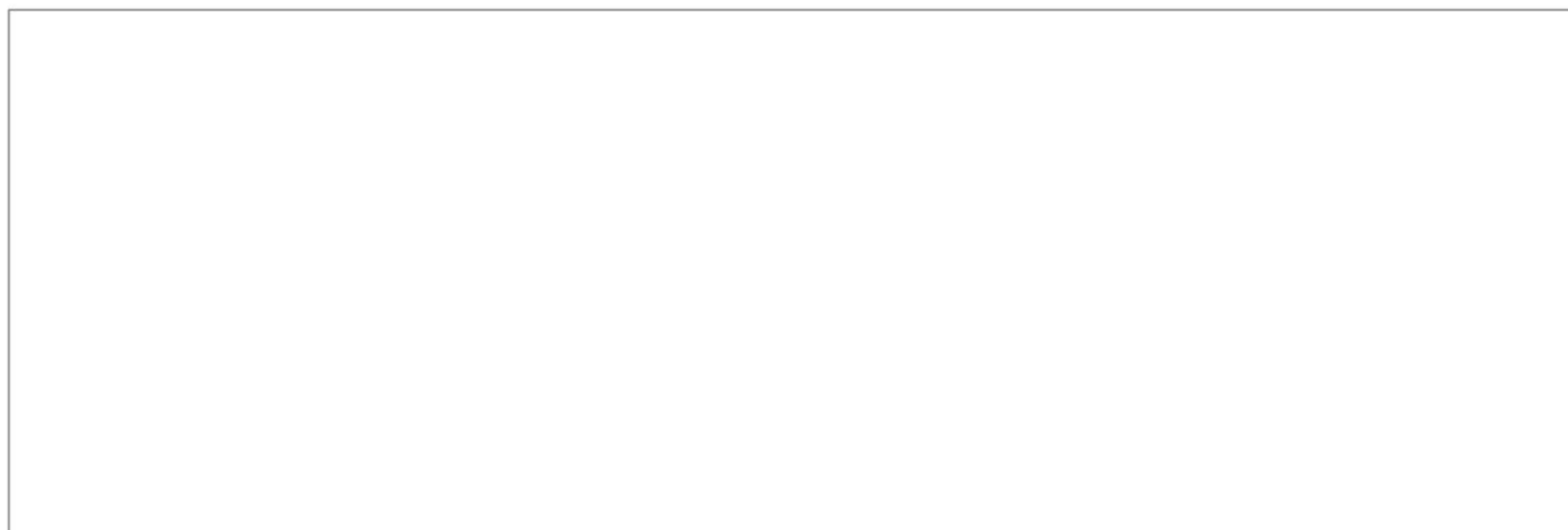
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	Project Boundaries
	Fence
	Development Area
	Mounting Structures
	Power Stations
	Electrical Substation
	Maintenance Tracks
	Gates
	Acoustic Barrier

Project:	West Burton 3 Solar Project		
Project Location:	Land at Bellwood Grange farm, Brampton, LN1 2EG		
Ownership:	West Burton Solar Project Limited		
Document Title:	Preliminary Layout		
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Company:	 Island Green Power UK Limited Unit 20.2, Coda Studios 189 Munster Road, London SW6 6AW		





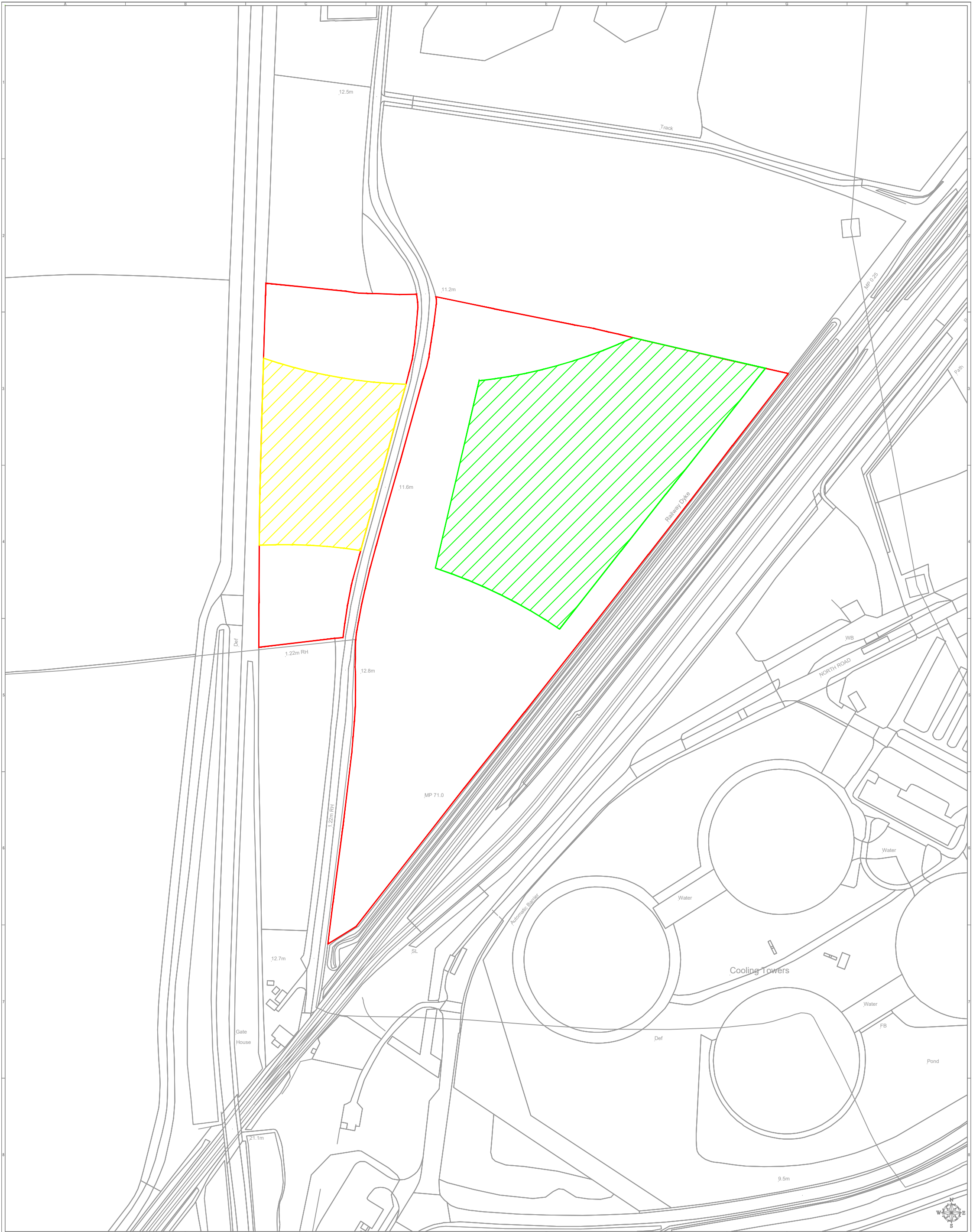
General Legend	
	Project Boundaries
	Fence
	Development Area
	Mounting Structures
	Power Stations
	Electrical Substation
	Maintenance Tracks
	Gates
	PfRoW Footpaths
	PfRoW Bridleway



Project:	West Burton 4 Solar Project
Project Location:	Land at Clayworth, Retford Nottinghamshire DN22 9AW
Project Ownership:	West Burton Solar Project Limited
Document Title:	Preliminary Layout



Sheet Format:	A1 "841 x 894"	Scale:	1:5000
Document amendments:	v.1 06/03/2022 A.A. Preliminary Layout		
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	v.3 21/04/2022 M.N. Updated Layout		
Company:	Island GREEN POWER	Island Green Power UK Limited	Unit 20.2, Coda Studios 189 Munster Road, London SW6 6AW



General Legend			
	Option Area		
	Substation Area		
	Energy Storage Area		

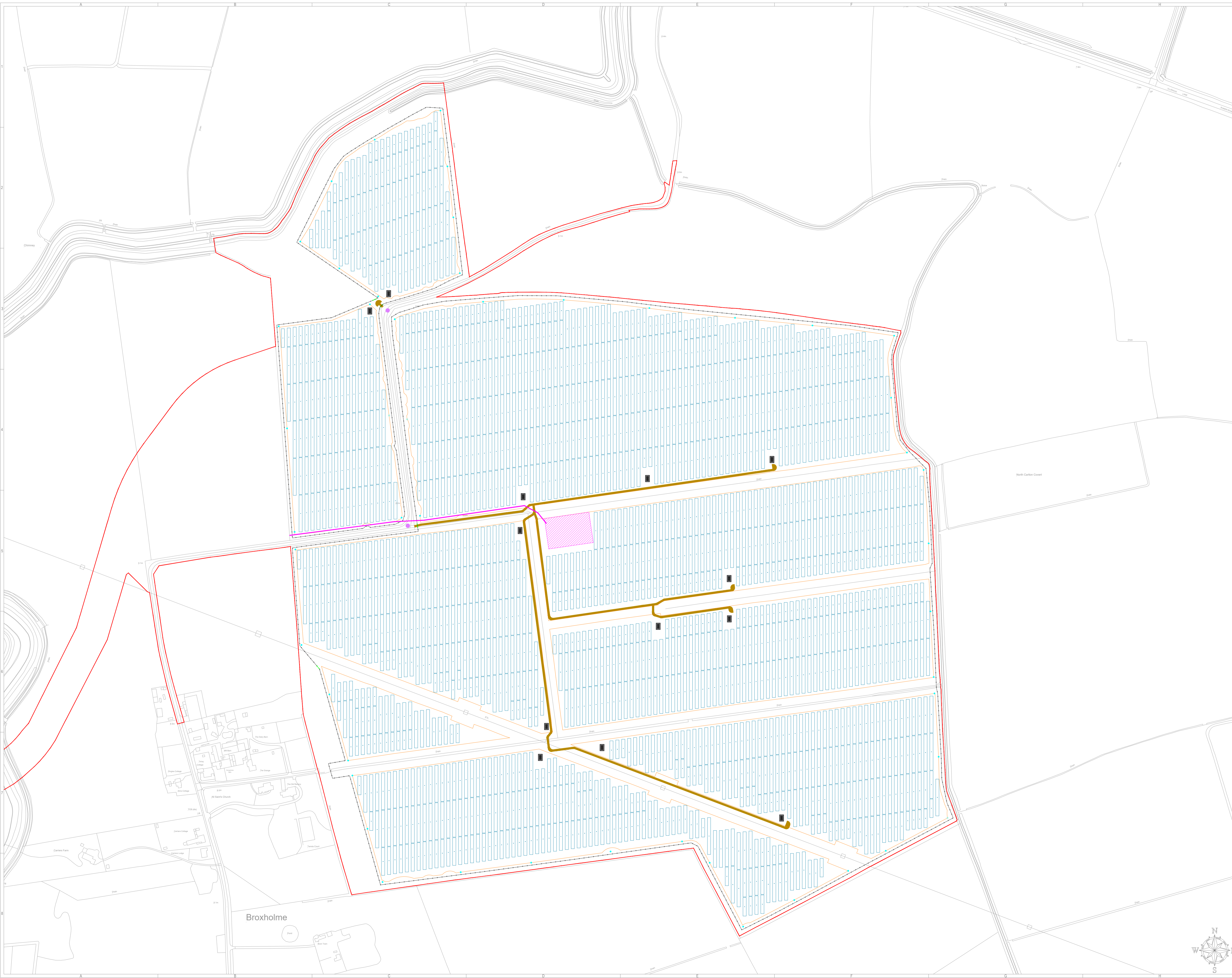


Project:	West Burton Solar Project
Project Location:	Land near Gainsborough, Lincolnshire DN21 3QA, England
Project Ownership:	TBC
Document Title:	Substation and Energy Storage Area

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v.2	22/05/2022	M.N.	Key Amendment								
Company:	 Island Green Power UK Limited Unit 20.2, Coda Studios 189 Munster Road, London SW6 6AW										

Figures 4.1a-d

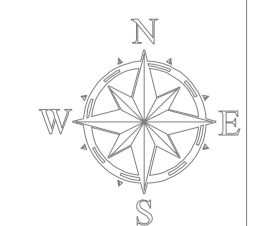
Submission Illustrative Site Layouts

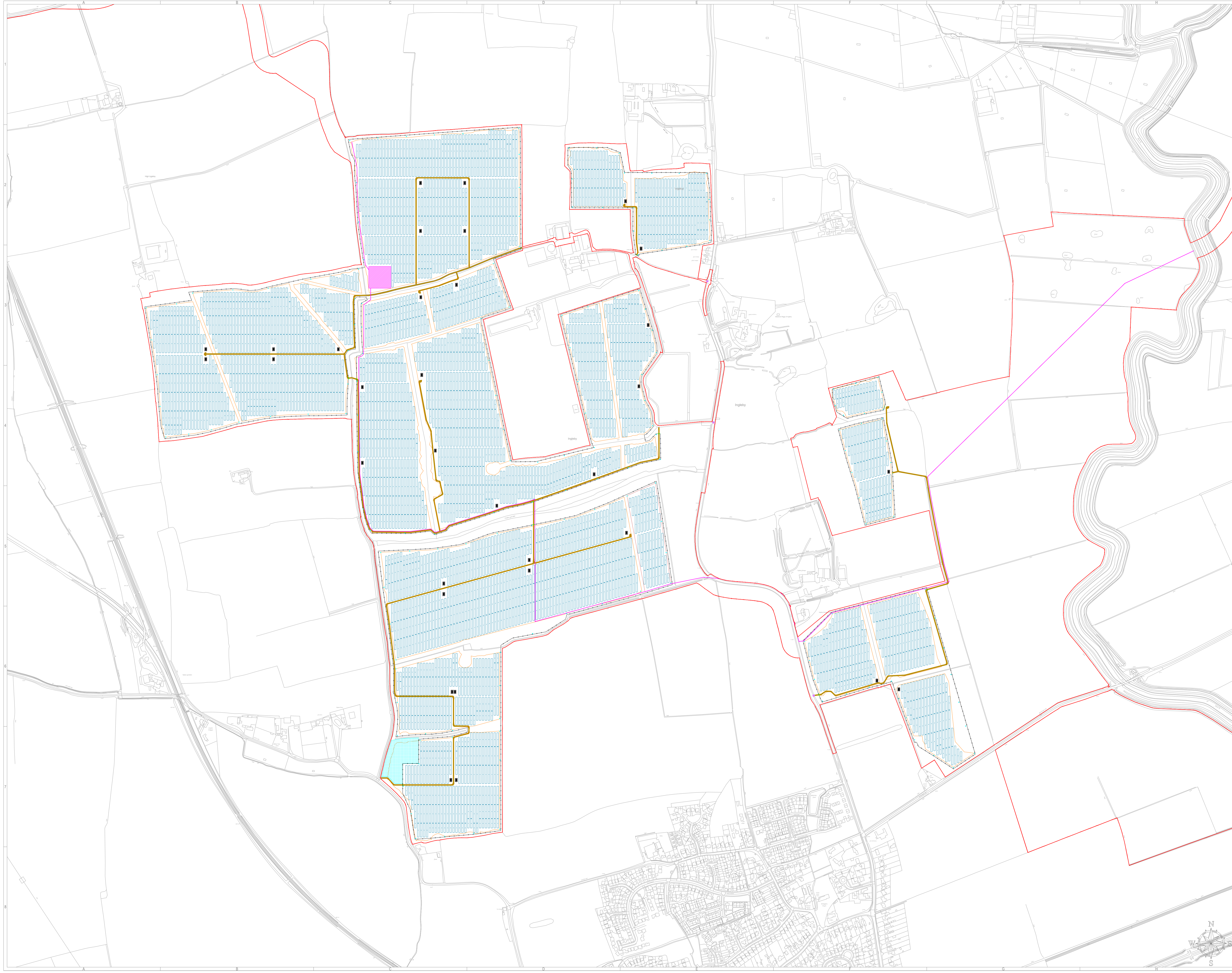


General Legend:	
	Order Limits
	Fence
	Potential Development Area
	Mounting Structures and Solar PV Modules
	Conversion Units
	Electrical Substation
	High Voltage Electricity Cable
	Maintenance Tracks
	Gates
	Site Access
	CCTV

Project:	West Burton 1 Solar Project																								
Project Location:	Land East of Broxholme, Lincolnshire, LN1 2ZS																								
Ownership:	West Burton Solar Project Limited																								
Document Title:	Figure 4.1 Illustrative Site Layout Plan (WB1) Document Ref: APP/WB6.4.4.1 APPP Regulation: 5(2)(a)																								
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Version	Date	Author	Comments																						
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Company: Island Green Power UK Limited
Unit 20.2, Coda Studios
189 Munster Road, London SW6 6AW

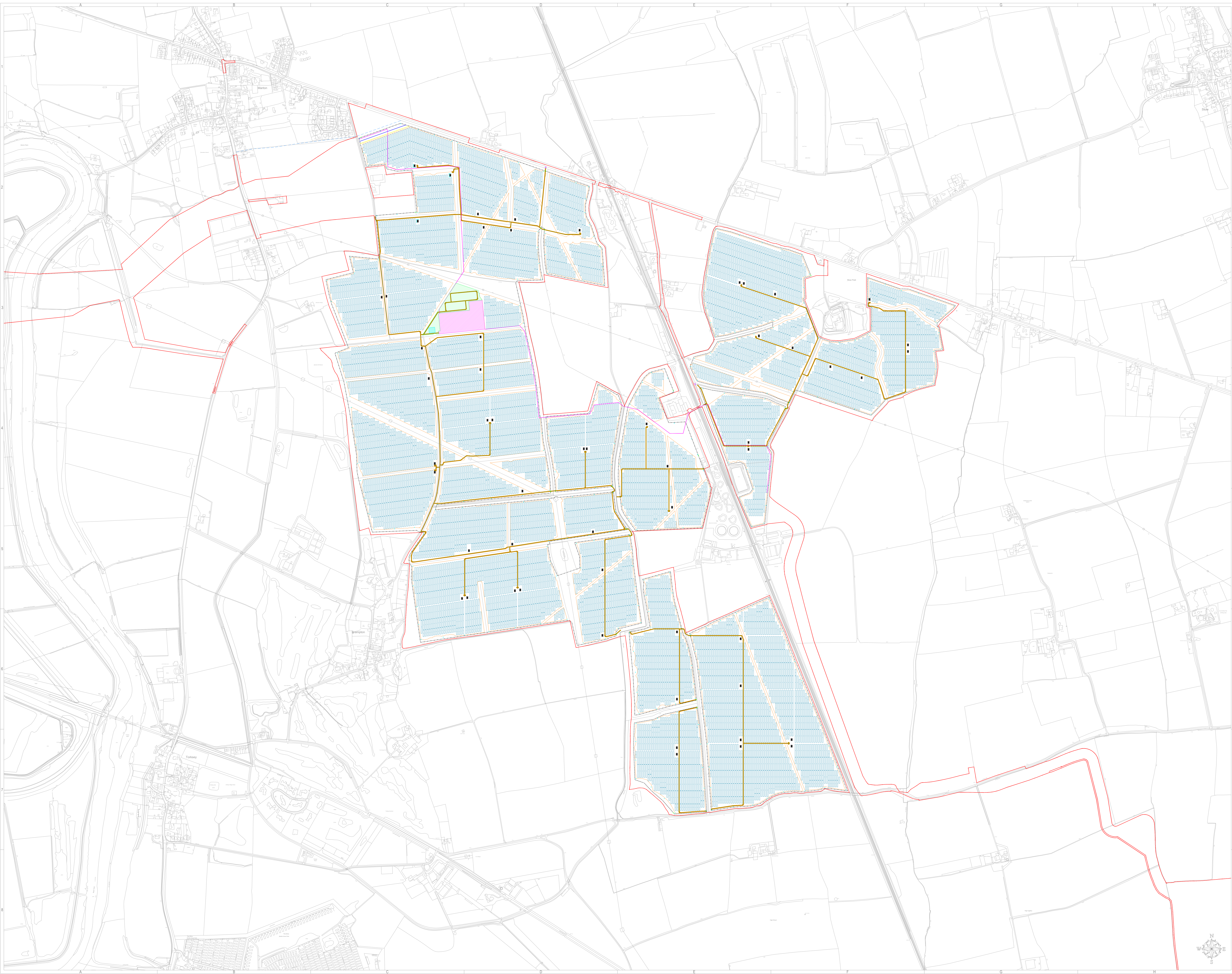




General Legend:	
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	Fence
	Potential Development Area
	Mounting Structures and Solar PV Modules
	Conversion Units
	Electrical Substation
	High Voltage Electricity Cable
	Maintenance Tracks
	Nature Project Area
	Gates
	Site Access
	CCTV

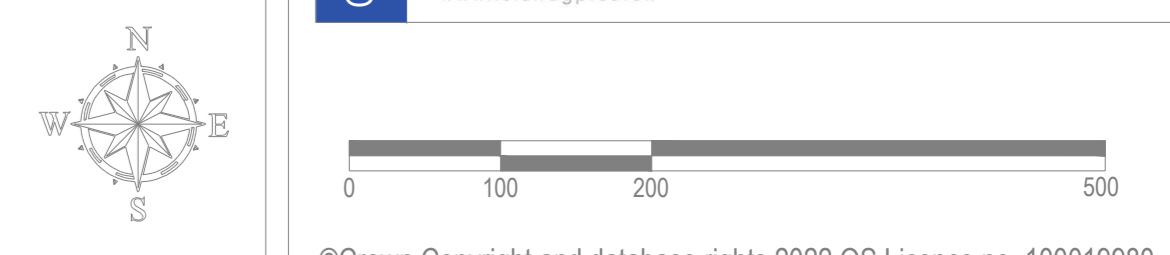
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Project Location:	Birch Holt Farm, Burton, Lincolnshire, LN1 2RD, England																								
Ownership:	West Burton Solar Project Limited																								
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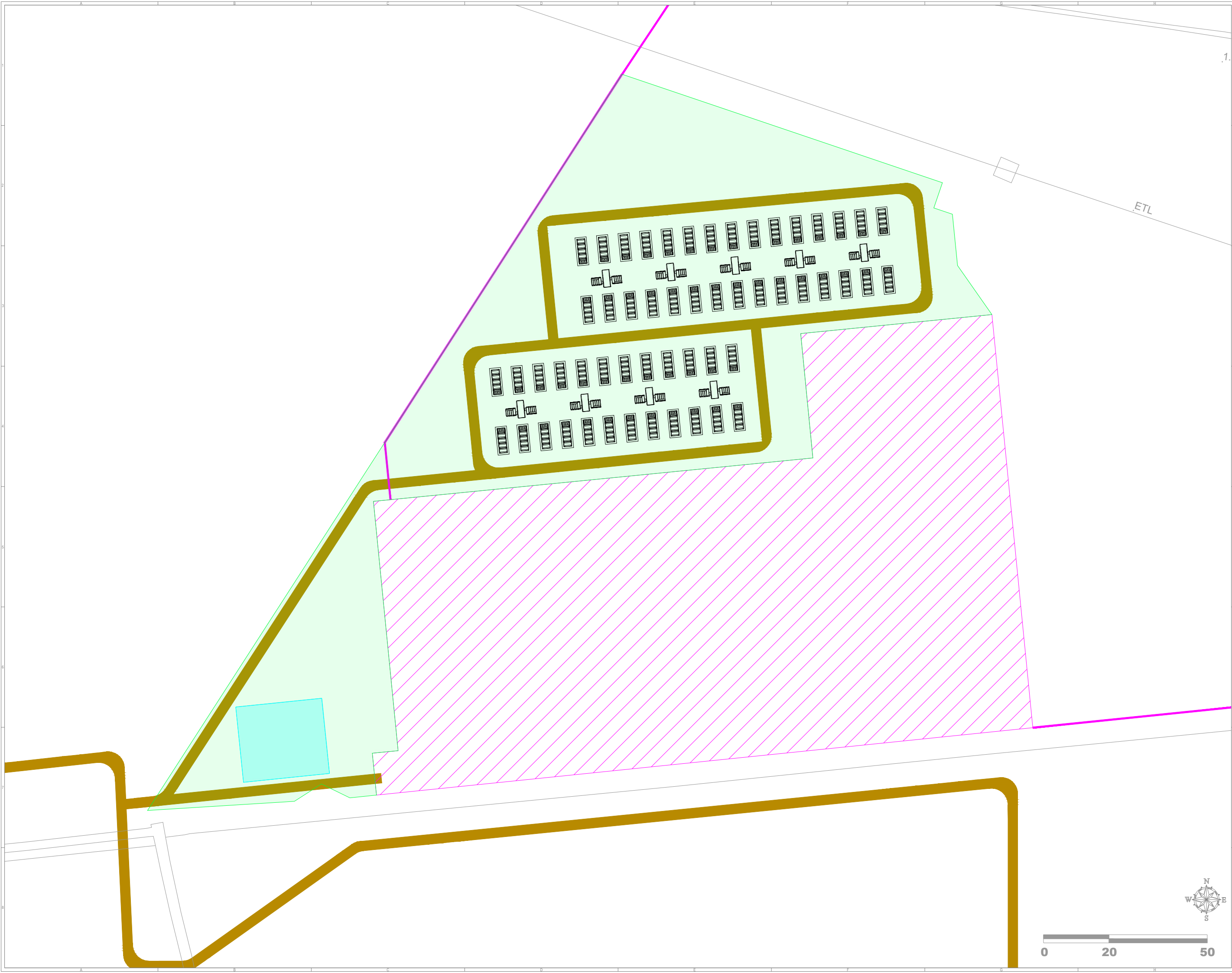
Island Green Power UK Limited
 Unit 20.2, Coda Studios
 189 Munster Road, London SW6 6AW



General Legend:	
	Order Limits
	Fence
	Potential Development Area
	Mounting Structure and Solar PV Modules
	Conversion Units
	Maintenance Tracks
	Electrical Substation
	Energy Storage Area
	Firefighting Water Supply
	West Burton High Voltage Cable
	Other Scheme's High Voltage Cable
	PRoW Footpath
	Gates
	Site Access
	Acoustic Barrier
	CCTV

Project:	West Burton 3 Solar Project																								
Project Location:	Land at Bellwood Grange farm, Brampton, LN1 2EG																								
Ownership:	West Burton Solar Project Limited																								
Document Title:	Figure 4.3 Illustrative Layout Plan (WB3) Document Ref: APP/WB6.4.4.3 APPP Regulation: 5(2)(a)																								
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1.

ETL

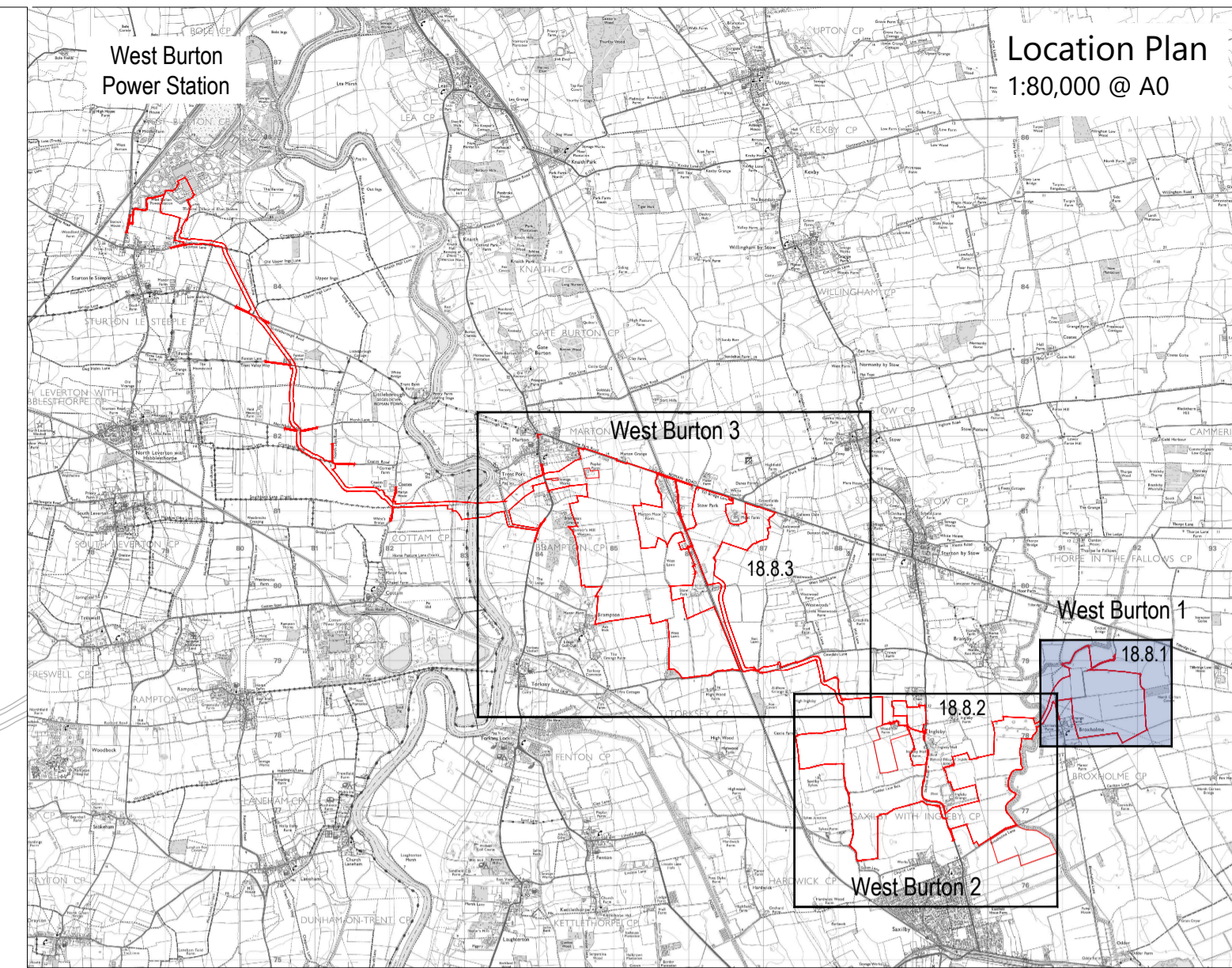
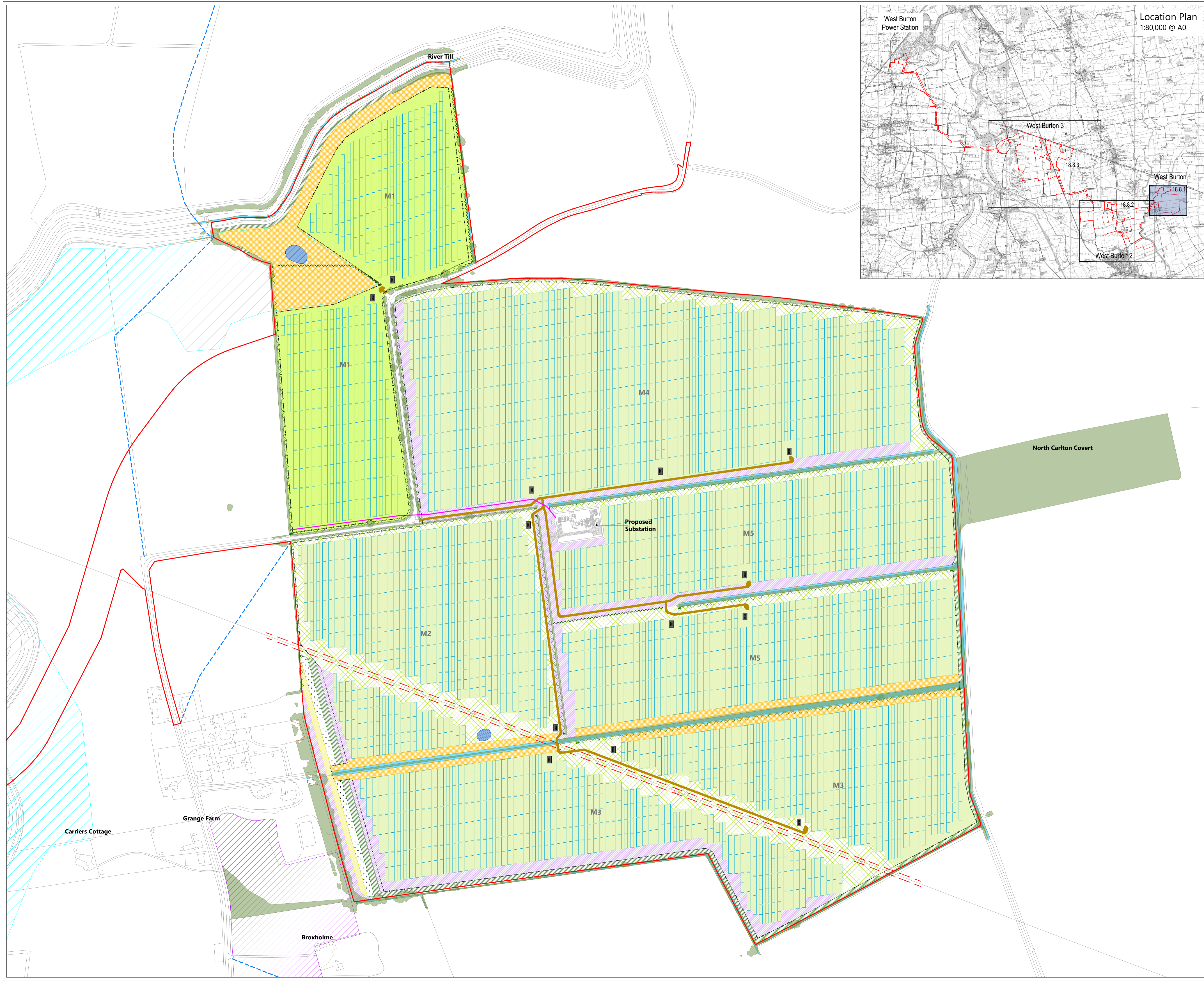
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	Battery Energy Storage Area
	Battery Energy Storage Unit
	Conversion Unit
	Electrical Substation
	Maintenance Track
	High Voltage Electrically Cable
	Firefighting Water Supply

Project:	West Burton Solar Project		
Project Location:	Land at Bellwood Grange Farm, Brampton Lincolnshire, LN1 2EG, England		
Ownership:	West Burton Solar Project Limited		
Document Title:	Figure 4.4 West Burton Energy Storage, Illustrative Layout Plan Document Ref: APP\WB6.4.4.4 APP Regulation: 5(2)(a)		
Sheet format:	A3 "420 x 297"	Scale:	1:1000
Document amendments:	v.1	02/02/2023	A.A
Comments:	Layout for Submission		
Company:	Island Green Power UK Limited Unit 20.2, Coda Studios 189 Munster Road, London SW6 6AW		



Figures 4.2a-c

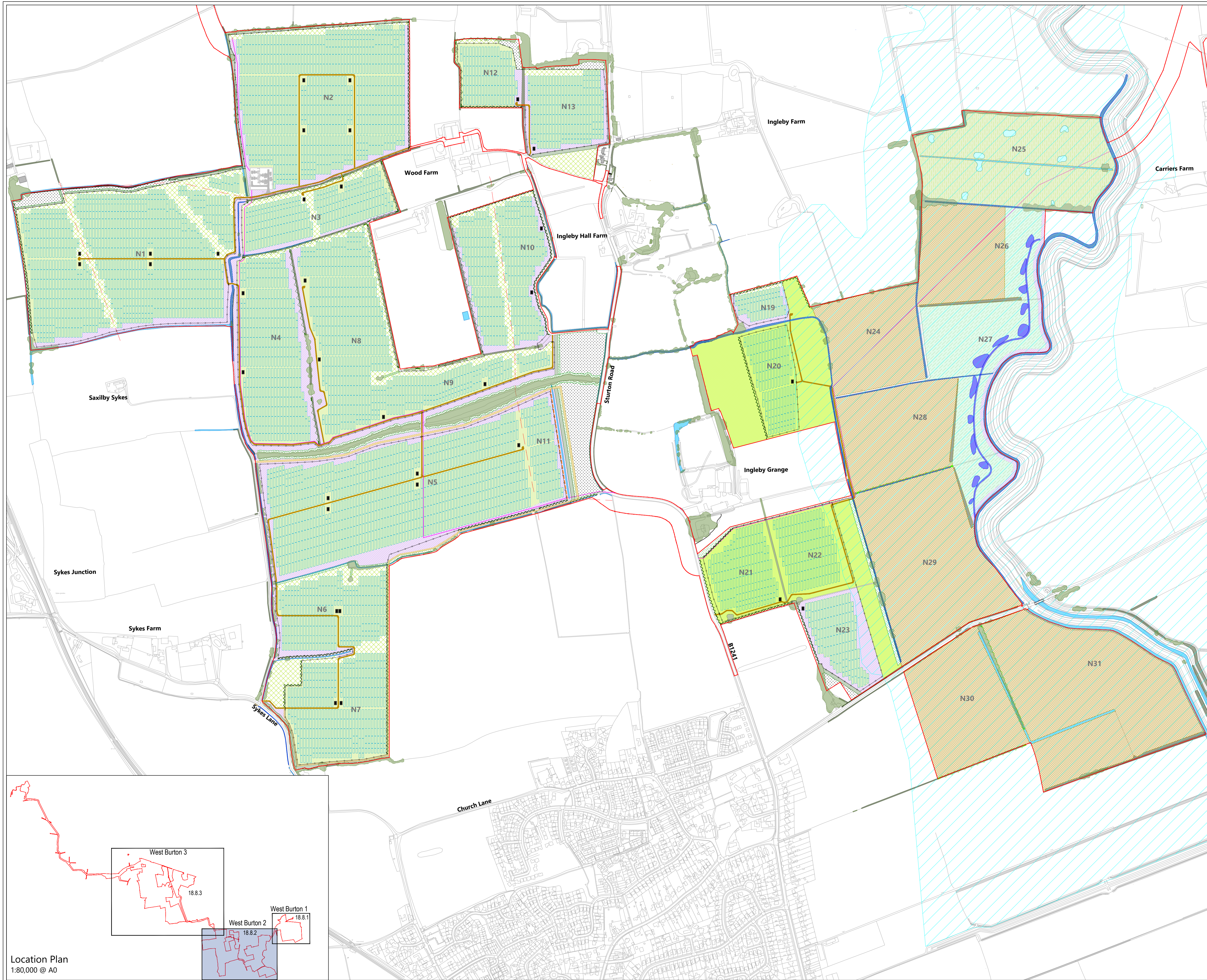
Landscape Layouts and Mitigation Strategy




































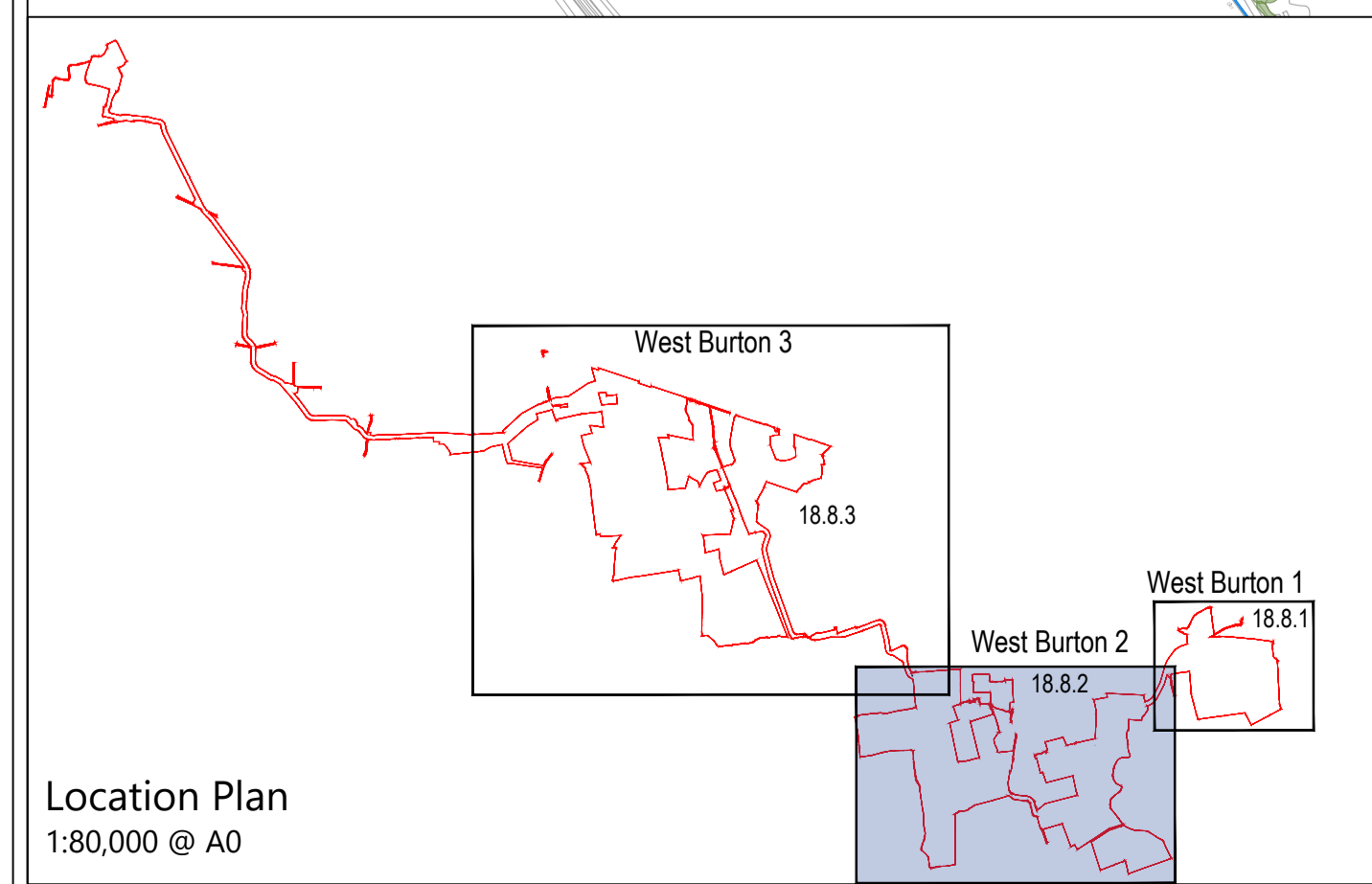
- Key**
- Site Boundary
 - Soft Landscape**
 -  Existing tree canopy
 -  Existing hedge to be retained
 -  Existing hedge to be removed
 -  Existing hedge reinforced with irregularly spaced native tree planting
 -  Proposed native hedge with irregularly spaced hedgerow trees
 -  Proposed native shelter belt / woodland planting
 -  Proposed native scattered trees
 -  Proposed diverse meadow mix (in reference to biodiversity opportunity mapping)
 -  Proposed long term meadow creation
 -  Proposed flower rich pollinator mix
 -  Proposed tall herb mix
 -  Proposed tussock mix
 -  Proposed successional scrub
 -  Proposed Miscanthus
 -  Existing ditches (Not IDB)
 -  Existing IDB ditch
 -  Existing water body
 -  Proposed Wildlife pond
 - Infrastructure**
 -  Existing overhead power lines
 -  Existing underground services
 -  Proposed cable route
 -  Proposed internal access tracks
 -  Proposed solar panels
 -  Proposed inverter
 -  Proposed post and wire fencing
(For details of proposed infrastructure please refer to Site Layout Plan)
 - Landscape Designations and Constraints**
 -  Public Right of Way
 -  Scheduled Monument
 -  Flood Storage Area

1:2,500 @A1

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- Key**
-  Site Boundary
 - Soft Landscape**
 -  Existing tree canopy
 -  Existing hedge to be retained
 -  Existing hedge to be removed
 -  Existing hedge reinforced with irregularly spaced native tree planting
 -  Proposed native hedge with irregularly spaced hedgerow trees
 -  Proposed native shrub planting
 -  Proposed native shelter belt / woodland planting
 -  Proposed native scattered trees
 -  Proposed diverse meadow mix (In reference to biodiversity opportunity mapping)
 -  Proposed long term meadow creation
 -  Proposed flower rich pollinator mix
 -  Proposed tussock mix
 -  Proposed successional scrub
 -  Existing ditches (Not IDB)
 -  Existing IDB ditch
 -  Existing water body
 -  Proposed Wildlife pond
 -  Proposed feeder ditch and shallow, grassy bank and linear cluster of scrapes
 -  Existing Grassland managed as ground nesting bird habitat - 2 cuts per year
 -  New areas of permanent grassland - sown with diverse mix and managed through grazing or cutting
 -  Spring-sown cereal crop (with skylark plots) and fallow nesting habitat on rotation (3 parcels)
 -  Existing Hedgerow managed at low height
 - Infrastructure**
 -  Existing overhead power lines
 -  Existing underground services
 -  Proposed cable route
 -  Proposed internal access tracks
 -  Proposed permissive footpath
 -  Proposed solar panels
 -  Proposed inverter
 -  Proposed post and wire fencing
 -  Proposed opaque fence (required for fixed tables only in accordance with the Glint and Glare chapter [EN010133/APP/C6.2.16])
 - Landscape Designations and Constraints**
 -  Flood Storage Area



1:5,000 @A1

WEST BURTON SOLAR PROJECT
 Figure 8.18.2
 West Burton 2
 Landscape and Ecology Mitigation & Enhancement Plan
 [EN010133/APP/WB6.4.8.18.2]

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