

Green Hill Solar Farm

EN010170

Environmental Statement

Non-Technical Summary

(Part 1 of 2)

Prepared by: Lanpro

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Issue Sheet

Report Prepared for: Green Hill Solar Farm
DCO Submission

Environmental Statement Non-Technical Summary

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1 Introduction

1.1 Background

- 1.1.1 This document has been prepared on behalf of Green Hill Solar Farm Limited and provides a non-technical summary of the Environmental Statement for the Green Hill Solar Farm.
- 1.1.2 As the Scheme will generate over 50 megawatts of electricity it is defined as a Nationally Significant Infrastructure Project under sections 14(1)(a) and 15(2) of the Planning Act 2008 and will therefore require a Development Consent Order. The Application is submitted to the Planning Inspectorate, with the decision whether to grant the Development Consent Order being made by the Secretary of State for the Department of Energy Security and Net Zero.
- 1.1.3 The Scheme comprises the construction, operation (including maintenance), and decommissioning of nine sites (described as Green Hill A to G and Green Hill BESS), along with grid connection infrastructure, battery energy storage systems (referred to as BESS) and a Cable Route Corridor. The grid connection point will be at the National Grid substation at Grendon, Northamptonshire.
- 1.1.4 The Scheme comprises the two main parts:
- The nine sites (referred to collectively as the Sites where the solar arrays, battery energy storage systems and other associated development (other than those parts of the grid connection cable to be located in the Cable Route Corridor) would be located. Associated development includes energy storage, grid connection infrastructure and any other infrastructure as well as works integral to the construction, operation, maintenance and decommissioning of the Scheme; and
 - The Cable Route Corridor within which the underground cables connecting the nine sites and the point of connection at Grendon Substation will be located.
- 1.1.5 The operational phase of the Scheme is anticipated to be 60 years in total. Once the Scheme ceases to operate, the Scheme and its components will be decommissioned and the land will be restored to existing use.
- 1.1.6 The extent of land for which the Development Consent Order is being sought is referred to as the Order Limits and covers approximately 1,441.4 hectares (ha) in total.
- 1.1.7 The Order Limits are located within the administrative areas of North Northamptonshire Council, West Northamptonshire Council and Milton Keynes City Council. Green Hill G is located adjacent to Bedford Borough Council administrative boundary.
- 1.1.8 **Figure 1.1** appended to this report, shows the Order Limits for the Scheme.
- The Applicant**
- 1.1.9 The Scheme is being developed by Green Hill Solar Farm Limited (the Applicant), part of Island Green Power Limited (IGP), who is a leading developer of renewable energy projects, established in 2013.



- 1.1.10 IGP has successfully delivered 36 solar projects worldwide totalling more than 2.5 gigawatts of capacity. This includes 20 solar projects in the United Kingdom and the Republic of Ireland. Their projects include the recently consented Cottam Solar Project, currently the UK's largest consented solar farm, which will generate 600 megawatts (MW) of clean, renewable and secure electricity including 600MW of battery storage.



2 EIA Process and Methodology

2.1 Introduction

- 2.1.1 The Environmental Statement Chapter 2: EIA Process and Methodology [EN010170/APP/GH6.2.2] describes the approach that has been taken to assessing the impacts associated with the Scheme, including the significance criteria against which effects have been assessed.

2.2 Overview

- 2.2.1 The Scheme is required to be subject of a statutory environmental impact assessment (EIA) as it falls within the definition of projects as defined by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations).
- 2.2.2 The environmental impact assessment process has considered impacts resulting from the construction, operation (including maintenance and replacement) and decommissioning phases of the Scheme, and considers mitigation measures to avoid, reduce or offset any likely significant adverse effects on the environment and where possible, enhance the environment.
- 2.2.3 Environmental impact assessment is a process undertaken to identify and evaluate the likely significant effects of a proposed development on the environment and to identify measures to avoid, reduce, mitigate or offset any significant adverse effects. As good practice, the environmental impact assessment should be informed by consultation with statutory consultees, other interested bodies and members of the public.
- 2.2.4 The environmental impact assessment compares the conditions before the Scheme commences against the predicted environmental conditions during the construction, operational and decommissioning phases of the Scheme.
- 2.2.5 Effects can be categorised as neutral, negligible, minor, moderate, or major. Typically, moderate or major effects are deemed significant, however, this can vary depending on the topic specific technical guidelines followed.
- 2.2.6 The environmental impact assessment also identifies mitigation measures to be incorporated into the design of the Scheme that will avoid, reduce or mitigate environmental effects, and where possible also enhance the environmental outcomes of the Scheme.
- 2.2.7 Where applicable, the Environmental Statement also identifies residual effects, defined as effects remaining following the inclusion or adoption of mitigation measures. The purpose of identifying significant effects is to provide decision makers with information to make an informed judgement on the environmental impacts of a proposed development.
- 2.2.8 The findings of the environmental impact assessment are presented in the Environmental Statement which is submitted with the Development Consent Order Application and is summarised in this Non-Technical Summary.

2.3 EIA Scoping

- 2.3.1 An EIA Scoping Report, identifying environmental issues to be assessed, was submitted to the Planning Inspectorate in July 2024.



- 2.3.2 The aim of the scoping process is to identify expected key environmental issues at an early stage, to determine which elements of the Scheme are likely to result in likely significant effects on the environment and to establish the extent of survey and assessment requirements for the environmental impact assessment.
- 2.3.3 The Scoping Opinion was received on 30 August 2024 and presents the formal response from the Planning Inspectorate (on behalf of the Secretary of State) and statutory consultees. The Scoping Opinion confirmed which topics were scoped in and out of the EIA. The Environmental Statement is based on the Scoping Opinion, with the matters raised having been reviewed and taken into consideration in the relevant technical assessments.
- 2.3.4 Key issues raised in the Scoping Opinion are summarised at the start of each of the technical chapters (7 to 24) of the Environmental Statement **[EN010170/APP/GH6.2]**.

2.4 Preliminary Environmental Information Report (November 2024)

- 2.4.1 A Preliminary Environmental Information Report (PEIR) was prepared and published in November 2024 as part of the statutory consultation exercise undertaken by the Applicant. The purpose of the Preliminary Environmental Information Report was to “*enable the local community to understand the environmental effects of the proposed development so as to inform their responses regarding the proposed development*”. It was also prepared to meet the requirements of Regulation 12(2) of the EIA Regulations.

The Preliminary Environmental Information Report outlined the preliminary findings of the environmental assessments undertaken by the Applicant at that time in the Scheme design development. Upon completion of the Preliminary Environmental Information Report, the various assessments were at differing stages of completion due to ongoing design work and continued collection of baseline information.

2.5 Consultation

- 2.5.1 The Planning Act (2008) requires applicants for Development Consent Orders to carry out formal (statutory) pre-application consultation on their proposals.
- 2.5.2 A three-stage approach to pre-application consultation was undertaken by the Applicant:
- Non-statutory consultation was carried out during March to May 2024;
 - Statutory consultation was undertaken from November to December 2024; and
 - Meetings with a range of statutory and non-statutory consultees were carried out throughout the project and during the design process.
- 2.5.3 The Consultation Report **[EN010170/APP/GH5.1]** includes an overview of the pre-application and statutory consultation undertaken by the Applicant.
- 2.5.4 A project website was set up at the start of the non-statutory consultation in March 2024.



- 2.5.5 Following the statutory consultation set out above, and in light of the feedback received and further work identifying the environmental impacts of the proposals, the Applicant refined the design of the Scheme. A number of minor changes to the Order Limits were made, to include areas of highway land that had not been included in the statutory consultation. The Applicant carried out a targeted consultation across March to April 2025 to notify consultees of the changes and invite comments for a 28-day period.



3 The Scheme Location and Sensitivities

3.1 Introduction

- 3.1.1 The Environmental Statement Chapter 3: The Development Site [EN010170/APP/GH6.2.3] describes the location Order Limits and the surrounding area.

3.2 The Order Limits

- 3.2.1 The land required to construct and operate the Scheme comprises nine sites for built development, a Cable Route Corridor and site accesses located to the west and south of Wellingborough and north and southeast of Northampton, within a 20 kilometres (km) radius of the grid connection point at Grendon Substation.
- 3.2.2 The Sites and Cable Route Corridor cover a combined area of approximately 1,441.4ha. These are from north to south: Green Hill A, Green Hill A.2, Green Hill B, Green Hill C, Green Hill D, Green Hill E, Green Hill BESS, Green Hill F and Green Hill G.
- 3.2.3 The total length for the Cable Route Corridor is approximately 31km and the area within the Order Limits associated with the Cable Route Corridor is approximately 168ha.
- 3.2.4 **Figure 1.1** illustrates the Scheme Order limits, which is the maximum area of land required for the construction, operation and maintenance, and decommissioning of the Scheme. It includes the infrastructure and any land set aside for landscaping, ecological and biodiversity mitigation, enhancements, recreational connectivity and access.

3.3 The Sites

- 3.3.1 The nine sites are largely characterised by agricultural fields, hedgerows and scattered trees and occasional areas of woodland. The Sites are located across several parishes within North Northamptonshire, West Northamptonshire and Milton Keynes.
- Green Hill A is situated in the parishes of Old and Walgrave in West Northamptonshire. Green Hill A is located approximately 300m east of Old and 600m north of Walgrave.
 - Green Hill A.2 is situated in the parishes of Old and Walgrave in West Northamptonshire. Green Hill A.2 is located approximately 900m east of Walgrave.
 - Green Hill B is located within the parish of Holcot in West Northamptonshire, approximately 850m south of Holcot and 1.2km north-east of Moulton.
 - Green Hill C is located within parishes of Sywell and Mears Ashby in North Northamptonshire, approximately 1km northeast of Sywell.
 - Green Hill D is located within the parish of Mears Ashby in North Northamptonshire, immediately to the north of the village of Mears Ashby.
 - Green Hill E is located within the parish of Mears Ashby in North Northamptonshire, approximately 500m north of Earls Barton.



- Green Hill F is located within the parishes of Easton Maudit and Bozeat in North Northamptonshire, close to the village of Easton Maudit and approximately 300m west of the village of Bozeat.
- Green Hill G is located within the parishes of Warrington and Lavendon in Milton Keynes, approximately 500m northwest of Lavendon.
- Green Hill BESS is located within the parish of Grendon, North Northamptonshire, approximately 600m northwest of Grendon. Green Hill BESS is adjacent to the existing National Grid Substation at Grendon.

3.4 Environmental Sensitivities

- 3.4.1 The Scheme and its near surroundings host a network of public rights of ways and permissive paths, which form local recreational walking and cycling routes between villages in the immediate vicinity. The local network of public rights of ways is shown on the Public Rights of Way Plan **[EN010170/APP/GH2.6]**. 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.
- 3.4.2 There are several airstrips and aerodromes within 5km of the Sites, the closest being the Sywell Aerodrome which is located adjacent to Green Hill C.
- 3.4.3 There are no designated heritage assets within any of the nine sites. In total, there are 37 conservation areas, 34 scheduled monuments and seven registered park and gardens within a 2km distance from the Sites.
- 3.4.4 Within a 2km distance from the Sites are 413 listed buildings, with clusters of buildings in Old Walgrave, Holcot, Wilby, Whiston, Strixton, Bozeat and Lavendon Grange.
- 3.4.5 Within a 5 km radius of the Sites, there are ten Sites of Special Scientific Interest (SSSIs). The closest of these is the Upper Nene Valley Gravel Pits, which is also designated as a Ramsar site and Special Protection Area (SPA). Located adjacent to Green Hill BESS, the Upper Nene Valley Gravel Pits SPA comprises a network of former sand and gravel pits extending across approximately 35 km of the River Nene floodplain. This site is of international importance, supporting overwintering bird assemblages of over 20,000 wildfowl and wading birds. Six Local Nature Reserves are located within 5km of the Sites.
- 3.4.6 Green Hill A, Green Hill A.2, Green Hill B and Green Hill C are located within Flood Zone 1 and have a low risk of flooding. Green Hill D, Green Hill E, Green Hill F and Green Hill G are all located within Flood Zone 1 with limited areas located within Flood Zone 3 (high risk of flooding). The southern field of Green Hill BESS is mostly situated in Flood Zone 1, with some areas in the eastern extents falling within Flood Zones 2 and 3.



4 The Scheme Description

4.1 Introduction

- 4.1.1 Environmental Statement Chapter 4: Scheme Description [EN010170/APP/GH6.2.4] describes the scheme components and key activities that would be undertaken during construction, operation (including maintenance) and decommissioning.

4.2 Overview

- 4.2.1 The Scheme consists of solar arrays across Green Hill A, Green Hill A.2, Green Hill B, Green Hill C, Green Hill D, Green Hill E, Green Hill F and Green Hill G.
- 4.2.2 Battery energy storage systems (BESS) will be accommodated at either Green Hill C and/or at Green Hill BESS. 400 kilovolt (kV) substations and a number of 132kV and 33kV substations will also be accommodated within the Scheme.
- 4.2.3 Illustrative layouts of the Scheme are outlined in **Appendix 3** of this report.
- 4.2.4 The solar arrays will convert the solar energy into electricity which will be exported to the National Grid via underground cables to the existing Grendon Substation.

Scheme Design and Flexibility

- 4.2.5 A number of elements of detailed design for the Scheme cannot be confirmed until the tendering process for the design and construction of the Scheme has been completed, post consent. For example, due to the rapid pace of technological development in the solar photovoltaic and energy storage industry, the Scheme could utilise technology which does not currently exist and therefore sufficient flexibility needs to be incorporated into the Development Consent Order application.
- 4.2.6 The National Policy Statement EN-1 acknowledges the need for flexibility in design, layout, and technology, as some elements of a development may not be finalised. To accommodate this flexibility, the 'Rochdale Envelope' approach is used, as outlined in the Planning Inspectorate Advice Note 9 guidance. This approach involves assessing the maximum (and, where relevant, the minimum) parameters for the Scheme to retain flexibility while ensuring all potentially significant effects (positive or adverse) are considered. The principles and justification for this approach are detailed in the Environmental Statement Chapter 2: EIA Process and Methodology [EN010170/APP/GH6.2.2].
- 4.2.7 To ensure that the likely significant environmental effects of the Scheme are no worse than those assessed in the environmental impact assessment, the Development Consent Order includes a Requirement (in Schedule 2) for the Scheme to be built and operated within the maximum design scenarios which have been set out in the Concept Design Parameters and Principles document [EN010170/APP/GH7.17].
- 4.2.8 Further details on the scheme components and design parameters are presented in Environmental Statement Chapter 4: Scheme Description [EN010170/APP/GH6.2.4] as well as summarised below.
- 4.2.9 The Order Limits consists of the nine sites and the Cable Route Corridor, within which the solar arrays, battery energy storage systems, on-site substations,



works at Grendon Substation, and ancillary infrastructure will all be located. The location of the Scheme components within the Order Limits is restricted to specific areas and are shown on the Works Plan **[EN010170/APP/GH2.4]**.

4.3 Components of the Scheme

Solar Panels

- 4.3.1 The solar photovoltaic panels will convert sunlight and daylight into electrical current. The panels are made up of a series of photovoltaic cells beneath a layer of toughened glass. The Scheme will use bifacial panels, which can generate electricity from both sides of the panel.
- 4.3.2 There are two types of solar panels being considered in the application: tracking panels that follow the sun and fixed panels that stay in one position. The final placement of these panels will be confirmed at the detailed design stage at the post consent stage.
- 4.3.3 The panels will be mounted on metal frames secured to the ground with posts. Tracking panels can be up to 4.5 meters high, while fixed panels can be up to 3.5 meters high. Rows of panels will be at least 2.5 meters apart.

Image 4.1: Option A – Tracking Panels





Image 4.2: Option B – Fixed Panels



Conversion units/inverters

- 4.3.4 Conversion units contain the inverters, transformers and associated equipment to convert the electricity produced by the solar panel into the electricity required for export on to the National Grid.
- 4.3.5 These would either be standalone equipment or they would be housed ('integrated') together within a container. The Concept Design Parameters and Principles [EN010170/APP/GH7.17] detail both options and the maximum height for a conversion unit will be 3.5m.

Substations

- 4.3.6 There will be different types of substations required across the Scheme to support the electrical design.

400kV Substation

- 4.3.7 There will be two 400kV substations, located within Green Hill BESS and Green Hill C. The Green Hill C 400kV substation will be air insulated switchgear, whereas Green Hill BESS will either be air insulated switchgear or gas insulated switchgear. The maximum height of the substation will be up to 12.5m.
- 4.3.8 The 400kV substations will include equipment such as transformers, switchgear, and metering equipment. Both 400kV substations will be connected to each other and to the 33kV and 132kV substations by underground cables. The 400kV substations will increase the voltage from 33kV and 132kV to 400kV to send it to the National Grid Grendon Substation.



- 4.3.9 The 400kV substations will also decrease the voltage from 400kV to 132kV and 33kV. This will allow electricity from the grid and the Sites to be stored in the BESS.

132 kV Substation

- 4.3.10 At Green Hill A, Green Hill B, Green Hill F and Green Hill G, there will be the need for a 132kV substation on each of the Sites the maximum height of the substation will be up to 6.8m. On Green Hill E there will either be a 132kV or 33kV substations, the electrical design will be determined at the detailed design phase.

33kV substation

- 4.3.11 There will be a requirement for 33kV substations at Green Hill A.2 and Green Hill D. The maximum height of the substation will be 3.5m.

Battery Energy Storage System

- 4.3.12 The BESS is designed to provide peak generation and grid balancing services to the electricity grid. It will primarily allow excess electricity generated from the solar panels to be stored in the batteries and exported to the grid when required. Excess energy from the grid could also be imported to the batteries. The energy storage facility will therefore provide flexibility and enhance grid reliability.
- 4.3.13 The batteries will be housed within containers. The footprint of each BESS container would be a maximum of 24m in length, 3m in width and 3.5m in height.

Image 4.3: Typical Battery Energy Storage System Units



Cable Route Corridor

- 4.3.14 The nine sites will be linked to Grendon Substation via underground cables within the Cable Route Corridor. The underground cables will also transfer electricity from the National Grid to the BESS. The exact location of the cable route within the Cable Route Corridor will be determined at the detailed design stage, post consent.
- 4.3.15 The cables will be laid into trenches which will range in widths between 0.4m to 3.5m. The width and the spacing of the cable trenches may vary depending on



the environmental constraints and engineering requirements, or where the locations may cross third party apparatus such as utilities. The likely temporary working area for the cable corridor is anticipated to be 30m wide.

- 4.3.16 It is anticipated that works will be carried out via a combination of open cut trenching and trenchless solutions such as the horizontal directional drilling technique, with the latter used if needed to avoid and reduce adverse environmental effects, such as when crossing watercourses or cabling under protected hedgerows.

Landscaping

- 4.3.17 A landscaping strategy has been developed comprising planting, ecological enhancements, and sustainable drainage features.
- 4.3.18 Areas under the solar photovoltaic panels and around the perimeter of the Sites will be planted with native grassland mix, and hedgerows will be planted or augmented to provide visual screening (see **Appendix 4** of this report).
- 4.3.19 The Scheme has adopted the following landscape enhancements and mitigation typically used on solar projects:
- The creation of new woodland blocks and belts;
 - Planting new hedgerows;
 - Reinforcing existing boundary hedgerows; and
 - New tree planting.
- 4.3.20 An Outline Landscape and Ecological Management Plan **[EN010170/APP/GH7.4]** has been prepared to accompany the Development Consent Order application. This document sets out the principles for how the land will be managed throughout the operational phase, following the completion of construction.

Permissive paths

- 4.3.21 The Scheme includes several permissive paths, as detailed in the Work Plans **[EN010170/APP/GH2.4]**. These paths will enhance the network of public rights of ways and improve public access to the countryside. Their design and implementation are outlined in the Landscape and Ecology Mitigation Plans **[EN010170/APP/GH6.4.4.10] to [EN010170/APP/GH6.4.4.20]** and are secured by a Requirement in Schedule 2 of the draft DCO **[EN010170/APP/GH3.1]**.
- 4.3.22 The Outline Public Rights of Way and Permissive Paths Management Plan **[EN010170/APP/GH7.10]** provides guidelines for managing public rights of ways within the Order Limits.

Associated infrastructure

- 4.3.23 In addition to the above the following components will be part of the Scheme:
- Fencing, lighting and security;
 - Accesses and internal tracks; and
 - Sustainable drainage systems.



- 4.3.24 During the construction and decommissioning phases, temporary compounds will be required as well as temporary access points and tracks.

4.4 Construction, Operation and Decommissioning Phases

Construction Phase

- 4.4.1 The Scheme currently has a grid connection date of 2029. The construction of the Scheme is proposed to be phased over a two-year period and will start in 2027.

Construction Activities

- 4.4.2 The types of construction activities that are likely to be required as part of the Scheme include:

- Site preparation.
 - Import of construction materials, plant and machinery to the Sites;
 - Creation of temporary construction compounds;
 - Upgrading of existing access points and tracks and creation of new and temporary accesses; and
 - Delivery of scheme components to the Sites.
- Erection of the solar array mounting structures and solar arrays.
- Installation of electrical cabling associated with the solar arrays.
- Installation of the energy storage.
- Fencing, security and lighting.
- Laying of underground cables.
- Installation of substations.
- Stripping of topsoil in sections.
- Testing and commissioning.
- Site reinstatement and habitat creation.

- 4.4.3 Commissioning of the Scheme will include testing and commissioning of the equipment. Commissioning of the photovoltaic infrastructure will involve inspection, electrical and equipment testing, and commencement of electricity supply into the grid.

Cable Construction

- 4.4.4 Generally on-site cables will be laid underground in excavated trenches adjacent to on-site tracks where possible and between the rows of solar panels. They will be laid at a suitable depth and positioned at a distance far enough away from the solar panels structures to allow future repair or maintenance. Some sections of cable may be installed in ducting if required to provide additional protection or where other infrastructure such as roads and hardstanding will be built over the top.



- 4.4.5 Cables will be laid in trenches established using open cut methods or horizontal directional drilling where open cut methods are not appropriate (i.e., under watercourses, sensitive ecological habitats or archaeology).
- 4.4.6 Where horizontal directional drilling will take place, launch and reception pits will be excavated using a suitable excavator, with any required shoring or battering installed. Plant and spoil will be placed a safe distance away from the edge of the excavation so as to minimise the risk of the trench sides collapsing. Once the launch pit has been excavated, work will then commence on the initial drill (the 'pilot bore'). An area of up to 25m by 25m will be required at the launch pit and the reception pit. The area of hardstanding will be removed and the area reinstated following construction.

Construction Workers and Hours of Working

- 4.4.7 Based on the Applicant's experience of other similar sized solar projects, it is currently estimated that the Scheme would generate 455 full time equivalent (FTE) employees per annum, on-site per day during the construction phase, assuming the approximate two-year construction timeline.
- 4.4.8 Construction hours are likely to be Monday to Friday between 07:00 to 18:00 and between 08:00 and 13:30 on Saturdays. However, some construction activities may be required outside of these times (such as the delivery of abnormal loads, cable construction works in public highways or horizontal direction drilling activities). Where possible, construction deliveries will be coordinated to avoid heavy goods vehicle movements during the traditional morning (AM) peak hour (08:00 to 09:00) and afternoon (PM) peak hour (17:00 to 18:00).

Site Access

- 4.4.9 Existing access points are proposed to be used wherever practicable, with upgrades to improve visibility splays where required. Additional access points will be provided where existing access points are not available or are unsuitable.
- 4.4.10 The access locations are outlined in detail in the **Figures 4.1 to Figure 4.5**.
- 4.4.11 Some of the accesses, particularly those to the Sites will be retained for use by maintenance vehicles, once the Scheme is operational. The remainder will be returned to their original condition but may be retained with the agreement of the landowner should they provide a more suitable longer-term solution for their current use.
- 4.4.12 The Cable Route Corridor accesses, whilst generally utilising existing access points, are temporary insofar as they are only required for the construction of the cable connection.
- 4.4.13 There will be a number of abnormal load movements associated with the construction of the Scheme. Abnormal load specialist consultants have prepared a report detailing the required movements. This is included in Appendix E of the Transport Assessment **[EN010170/APP/GH6.3.13.1]**.
- 4.4.14 The abnormal load movements will be co-ordinated with the local highway authorities and police prior to being undertaken. However, they will be managed



and take place during quieter periods on the local highway network. The effect on the local highway network will be temporary.

- 4.4.15 Traffic management will be required at various locations for all abnormal load movements destined for the Sites. The exact nature of the traffic management will be agreed with the local highway authorities and police prior to the movement taking place.

Construction Transport

- 4.4.16 An assessment of Transport and Access is presented in Environmental Statement Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**.
- 4.4.17 Throughout the construction period, deliveries are expected to have a relatively flat profile, but peak heavy goods vehicles activity has been identified for solar panel module deliveries. The forecasted peak heavy goods vehicles movements for each site are higher than the average daily profile, allowing for peaks during construction.
- 4.4.18 An average of 24 movements heavy goods vehicles deliveries per day is estimated across the construction phase. At the peak, the number of heavy goods vehicles daily movements (two-way) is predicted to be 141 movements.
- 4.4.19 The Transport Assessment **[EN010170/APP/GH6.3.13.1]** indicates that up to approximately 787 construction workers could arrive by car and shuttle bus at Green Hill on a busy day, with arrivals in the morning and departures in the afternoon/evening. Shift patterns will be coordinated to avoid peak network hours (08:00 to 09:00 and 17:00 to 18:00).
- 4.4.20 Temporary car parks will be provided for construction workers within the main construction laydown areas. An Outline Construction Traffic Management Plan has been developed to guide the delivery of materials and staff during the construction phase.

Construction Controls

- 4.4.21 The construction phase will be subject to management documents which will limit and control activities. The outline documentation has been prepared as part of the Development Consent Order Application:
- Outline Construction Environmental Management Plan **[EN010170/APP/GH7.1]**;
 - Outline Soil Management Plan **[EN010170/APP/GH7.6]**;
 - Outline Public Rights of Way and Permissive Paths Management Plan **[EN010170/APP/GH7.10]**;
 - Outline Skills Supply Chain and Employment Plan **[EN010170/APP/GH7.8]**; and
 - Outline Construction Traffic Management Plan **[EN010170/APP/GH7.9]**.
- 4.4.22 Prior to the commencement of construction works detailed versions of these management plans will be submitted to and approved by the relevant planning authority, and this will be secured by Requirements in the Development Consent



Order. The detailed versions will be in accordance with the Outline documents which have been submitted as part of the Development Consent Order application. This will ensure the potential construction impacts are minimised and mitigated.

Operational Phase

4.4.23 During the operational phase two scenarios have been considered within the environmental impact assessment:

- Ordinary operational maintenance activities; and
- Programme of widescale equipment replacement.

General Maintenance Activities

4.4.24 During the operational phase, on-site activity within the Scheme will be restricted to general maintenance activities, monitoring and inspections, and vegetation management. Activity along the Cable Route Corridor will be limited to routine inspections and periodic maintenance activities.

4.4.25 No on-site staff will be required to operate the Scheme but there will be limited staff facilities located in the control rooms associated with the substations. Some permanent equipment for monitoring the Scheme will be located on site within the control rooms within the substations. Whilst this would typically be accessed remotely, it would be available for occasional physical access during routine maintenance visits.

4.4.26 The Outline Operational Environmental Management Plan (OOEMP) [EN010170/APP/GH7.1] sets out the environmental management and monitoring actions to prevent pollution and avoid, minimise and reduce adverse environmental effects.

Replacement of Solar Panels and Batteries

4.4.27 Across the 60-year lifetime of the Scheme, it is expected that alongside the regular maintenance of equipment, infrastructure such as panels and batteries will require replacement. As scheme components approach the end of their design life, an evaluation will be conducted to determine if they require maintenance or replacement across the Scheme.

4.4.28 It is not expected that an extensive replacement of all components will be required across the entirety of the Scheme during one period; instead, the programme for replacement of equipment across the Scheme is anticipated be staged to maintain the electrical export to the National Grid.

4.4.29 The Environmental Statement has considered the potential environmental impacts based on the following assumptions to ensure a worst case has been assessed:

- Solar photovoltaic panels typically have a lifespan of up to 40 years or more, and it has been assumed that solar photovoltaic panels will be replaced once during the lifetime of the Scheme. The solar photovoltaic panels are anticipated to be replaced over a maximum 24 month period.



- The battery energy storage systems could be replaced up to five times during the operational phase.
- No intrusive ground works will be required to replace solar photovoltaic panels or battery energy storage systems.

4.4.30 If any abnormal loads are required for the replacement of equipment, consultation will be carried out and approvals will be sought from the relevant local planning and highways authorities.

4.4.31 The environmental effects from the replacement of solar panels and batteries have been assessed and reported within the technical chapters of the Environmental Statement.

Decommissioning Phase

4.4.32 The decommissioning of the scheme is expected to take between 12 and 24 months and is anticipated to be undertaken in phases. An Outline Decommissioning Statement [EN010170/APP/GH7.3] is included with the Development Consent Order Application. A Decommissioning Statement will be prepared and will be submitted to and approved by the relevant planning authority prior to decommissioning, and this will be secured by a requirement in the Development Consent Order. The solar panels, related built infrastructure, ancillary infrastructure, substations and the battery energy storage systems will be removed and either recycled or disposed of in accordance with good practice at that time.

4.4.33 The underground ducting within the Cable Route Corridor will be decommissioned in accordance with the latest regulations and good practice at that time. Currently, the most environmentally acceptable option is to leave the cables in-situ to avoid unnecessary intrusion. It may be possible, however, to remove the cable itself by extracting it at the joint bays from within the ducting, so that the cable can be recycled without opening up the length of the cable route.

4.4.34 The land within the nine Sites will be returned to its original use as part of the decommissioning of the Scheme.

Timeline of the Construction, Operational and Decommissioning Phases

4.4.35 The three phases of the Scheme are set out below.

- Construction Phase: 2027 to 2029. The Scheme is anticipated to be constructed across 24 months with overlapping construction works on the different sites;
- Operational phase: Opening year of 2029. It has been assumed for that the Scheme will be operational by 2029;
- Decommissioning phase 2089. This would be the year when decommissioning of the Scheme would commence and has been based on a typical 60-year operational lifetime for solar projects. It has therefore been assumed for the purposes of the environmental impact assessment that the Scheme will be decommissioned no earlier than 2089. Decommissioning is expected to take between 12 and 24 months.



5 Alternatives and Design Evolution

5.1 Introduction

- 5.1.1 Environmental Statement Chapter 5: Alternatives and Design Evolution [EN010170/APP/GH6.2.5] provides an overview of the site selection process that the Applicant has gone through, how the design has evolved and the alternatives that have been considered.

5.2 Scale of project

- 5.2.1 The Applicant has entered into a connection agreement with National Grid for the export and import of 500MW of electricity at Grendon Substation. The Scheme aims to fully utilise the capacity allocated in the connection agreement to reduce further need for additional projects to reach 500MW of renewable energy generation and storage capacity. A smaller scheme would not deliver the same 500MW generation capacity or energy security and climate change benefits as the Scheme, and as such would not represent a reasonable alternative.

5.3 Site Search

- 5.3.1 The nine sites which make up the Scheme have been identified through a site search exercise undertaken by the Applicant. The Applicant had no restrictions on where developments should be located in relation to irradiation (sunlight) levels.
- 5.3.2 The selection of the Scheme's location has followed a five-stage process, which is a systematic step-by-step process. In addition, a sequential planning test – a process used in development planning to help ensure development is located in areas with the lowest risk of flooding - has been carried out and is set out within Appendix C Flood Risk Assessment - Sequential Test and Exception Test of the Planning Statement [EN010170/APP/GH7.15].

Stage One

- 5.3.3 Stage one focused on the identification of the search area, a viable grid connection is an essential material consideration for proceeding with a development and is instrumental in defining the search area. To meet the 500MW grid connection offer, around 1,000 ha was needed. The Applicant aimed for a site about 10% larger to allow for additional mitigation measures and constraints identified during design development. The initial search area was within a 5km radius of Grendon Substation. This was gradually expanded to 20km to find sufficient land for the Scheme. This distance is considered viable for a solar farm of this scale.

Stage Two

- 5.3.4 Stage two of the assessment focused on a range of technical, environmental and economic factors have to be considered when assessing the suitability of an NSIP scale solar project which include (in no particular order):
- Topography and site orientation;
 - Agricultural Land Classification and land type;
 - Designated international and national ecological and geological sites;



- Nationally designated landscapes; and
- Proximity to sensitive human receptors.

Stages Three and Four

- 5.3.5 Stage three and four involved the identification of potential development areas and the assessment of the areas for suitability. The assessment considered a series of planning, environmental and other operational assessment indicators which were derived from national and local planning and environmental policy objectives and the operational requirements of the Scheme.
- 5.3.6 Once a landowner had indicated they would be willing for their land to be included within the Scheme, the Applicant and relevant environmental consultants undertook site visits and further desktop assessments to continue to assess site suitability.
- 5.3.7 Stage three of the assessment looked at applying key criteria for large-scale solar developments, such as site size, land assembly, and site topography, to refine areas identified in stage two. No single site of approximately 1,100ha near the national grid point of connection at Grendon Substation was found and a series of smaller sites were considered. The minimum viable size for a single site is 40ha. Brownfield land and commercial rooftops were considered but were considered to be unsuitable due to size and proximity constraints.
- 5.3.8 Stage four was to assess the suitability of any potential development areas identified in stage three. Each potential development area was assessed against a series of planning, environmental, and operational considerations based on national and local policies and the Scheme's requirements. These indicators included site designations, biodiversity, landscape and visual amenity, cultural heritage, flood risk, land use, construction access, and connection feasibility to Grendon Substation. Further details are in ES Appendix 5.1 **[EN010170/APP/GH6.3.5.1]**.
- 5.3.9 Stage three of the assessment did not find any potential development areas, primarily due to large amounts of best and most versatile agricultural land within the search area, with the remaining areas constrained by woodland. With no suitable sites, the next stage looked to consider areas of best and most versatile land as outlined in stage five.

Stage Five

- 5.3.10 Stage five widened the search to consider best and most versatile agricultural land, following the decisions that the potential development areas identified at stage three were unsuitable for the Scheme.
- 5.3.11 The majority of the land within the 20km search area is Grade 2 or 3, with some urban and non-agricultural land. Due to the amount of Grades 2 and 3 land, land agents were contacted for willing landowners.
- 5.3.12 Whilst planning policies and environmental constraints are significant factors in site selection, a willing landowner is also a key consideration. In parallel with the process of undertaking an initial review of land within the search area, enquiries were made with landowners and their agents on sites which had been identified as being suitable for solar panels from a technical and constraints perspective.



- 5.3.13 This resulted in the identification of three potential development areas (A14 to Wellingborough, Irthingborough, and A428 to Moulton) in addition to the Green Hill draft site area. Similarly to the stage 2 and 3 assessment, geographical information systems mapping was used to assess environmental and planning constraints and apply operational considerations. This resulted in the selection of the nine Sites included within the Scheme, which was subsequently refined into the Order Limits to address stakeholder consultation comments, and further technical assessment work including detailed agricultural land classification assessment.
- 5.3.14 It is considered that there are no obviously more suitable locations within the area of search than the proposed nine Sites for the Scheme. The Scheme's location is therefore assessed to be suitable for the scale of solar development proposed.
- 5.3.15 The Applicant also assessed any alternatives that were presented to them through the non-statutory and statutory consultation, and these have been embedded where feasible.

5.4 Alternative Generation Technology

- 5.4.1 Other forms of electricity generation were not considered suitable for the area. Tidal power, offshore wind, and hydroelectric storage were not considered viable due to the location of Grendon Substation, which is far from the coast and lacks local hydroelectric sources.
- 5.4.2 Nuclear power was also excluded due to its high cost and long development time (around 20 years). The Scheme has the ability to start generating electricity much sooner, with a grid connection in 2029.
- 5.4.3 Onshore wind is a potential alternative generation technology but was considered to be unsuitable for the site due to likely visual and noise impacts from turbine height and proximity to residential areas.
- 5.4.4 The Scheme includes battery energy storage systems, which adds a level of resilience and stability which wind turbines cannot offer. Battery energy storage is crucial for grid resilience, ensuring reliable electricity supply during peak demand or outages. Therefore, solar photovoltaic with battery storage is the preferred renewable energy solution for the Scheme.

5.5 Design evolution

- 5.5.1 Alternative layouts for the solar panel areas, substation locations and cable routes have all been considered from the early scoping stages of the project through to submission of the Development Consent Order application. Matters raised by stakeholders in relation to alternatives at the environmental impact assessment scoping and statutory consultation stages have helped to shape the development of the Scheme. This iterative design process has resulted in the Scheme delivering good design and meeting the requirements of the National Policy Statements (NPS) in the context of efficiently delivering large scale renewable energy infrastructure. It also provides a new network of environmental features which deliver a range of ecosystem services, incorporating biodiversity, heritage, landscape and access. Some key changes include:



- Removing solar panels from areas within sites to avoid significant archaeological, ecological or glint and glare effects;
- Changing the location of solar panels within the sites to minimise views from local properties and mitigate visual impacts; and
- Removing solar panel arrays and other built infrastructure from fields of higher ecological value.



6 Energy Need, Legislative Context and Energy Policy

6.1 Introduction

- 6.1.1 Environmental Statement Chapter 6: Energy Need, Legislative Context and Energy Policy **[EN010170/APP/GH6.2.6]** provides an overview of the legislative and policy framework for the Scheme.

6.2 Energy Need

- 6.2.1 The UK Government has made it a legal requirement to reduce carbon emissions to zero by 2050. This includes a plan to make the energy sector carbon-free by 2035. The Climate Change Act of 2008 sets a target for the UK to achieve Net Zero emissions by 2050, with specific limits on greenhouse gas emissions every five years.
- 6.2.2 A recent report by the United Nations Intergovernmental Panel on Climate Change suggests that the world could face severe warming unless countries quickly reduce their reliance on fossil fuels. To meet these goals, the UK needs to decarbonise not just the power sector, but also transport, industry, agriculture, and homes, which will significantly increase the demand for electricity, which is expected to double by 2050.
- 6.2.3 In 2024, wind power became the largest source of electricity in the UK, with renewables generating over 50% of the country's electricity for the first time. The UK Government's Clean Power 2030 Action Plan aims to further increase renewable energy, particularly solar power, to enhance energy security and reduce dependence on fossil fuels. The plan highlights the need for renewable energy projects to meet future electricity demand.
- 6.2.4 Solar generation is a critical element of the plan to decarbonise the UK electricity sector with urgency and is already a leading low-cost generation technology in the UK.
- 6.2.5 The Statement of Need **[EN010170/APP/GH7.12]** provides further detail on the necessity of the Scheme.

6.3 Legislation and Policy

- 6.3.1 The Planning Act 2008 sets out the process for the consenting of nationally significant infrastructure projects through a Development Consent Order. The Scheme constitutes a nationally significant infrastructure project.
- 6.3.2 Consent for a Development Consent Order can include 'Associated Development' which is development that is not a nationally significant infrastructure project in its own right but which supports the construction, operation and maintenance or decommissioning of the nationally significant infrastructure projects; or which helps to address the impacts of the nationally significant infrastructure project.
- 6.3.3 When deciding whether to grant a Development Consent Order, the Secretary of State must have regard to any relevant National Policy Statement.
- 6.3.4 National Policy Statements set out the policy basis for nationally significant infrastructure projects.



- 6.3.5 National Policy Statement (NPS) EN-1 confirms there is a critical national priority for low carbon and renewable energy infrastructure, including large-scale solar development. Solar projects are essential in the UK's energy landscape, particularly in achieving renewable energy targets set by key Government policies such as the NPSs.
- 6.3.6 NPS EN-3 includes specific policy on solar photovoltaic generation, addressing a number of detailed matters.
- 6.3.7 Other national and local planning policy documents that are also relevant include the National Planning Policy Framework (NPPF) and the National Planning Practice Guidance.
- 6.3.8 Each of the host authorities (North Northamptonshire, West Northamptonshire and Milton Keynes) has adopted local plans, and some have created other relevant policies such as supplementary planning documents (SPDs). Some areas have also adopted relevant neighbourhood plans.



7 Assessing Environmental Effects

7.1 Topics Assessed

7.1.1 The following technical chapters have been prepared within the Environmental Statement **[EN010170/APP/GH6]**.

- Chapter 7: Climate Change;
- Chapter 8: Landscape and Visual Impact Assessment;
- Chapter 9: Ecology and Biodiversity;
- Chapter 10: Hydrology, Flood Risk and Drainage;
- Chapter 11: Minerals;
- Chapter 12: Cultural Heritage;
- Chapter 13: Transport and Access;
- Chapter 14: Noise and Vibration;
- Chapter 15: Glint and Glare;
- Chapter 16: Air Quality;
- Chapter 17: Socio-Economics Tourism and Recreation;
- Chapter 18: Human Health;
- Chapter 19: Arboriculture;
- Chapter 20: Agricultural Circumstances;
- Chapter 21: Electromagnetic Fields;
- Chapter 22: Ground Conditions and Contamination;
- Chapter 23: Major Accidents and Disasters; and
- Chapter 24: Other Environmental Matters.

Terminology Used in the Environmental Statement

7.1.2 To enable comparison between technical topics and to aid understanding of the Environmental Statement, standard terms are used wherever possible to describe the relative significance of environmental effects (for example major, moderate, minor and negligible). The effects are also described as being adverse or beneficial. Where the quality standards for each technical discipline result in deviations in the standard assessment methodology, these are described in the relevant chapters as applicable within the Environmental Statement.

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

7.1.4 Typically, effects that are considered to be negligible or minor are judged to be not significant, whereas those that are moderate or major are significant. Where



the EIA predicts a significant adverse effect on one or more receptors, we have considered whether there are further mitigation measures which could avoid or reduce the effect, or to reduce the likelihood of it happening. The use of any such mitigation will be secured through the Development Consent Order, should it be granted, and this is made clear in the Environmental Statement.



8 Climate Change

8.1 Introduction

- 8.1.1 Environmental Statement Chapter 7: Climate Change **[EN010170/APP/GH6.2.7]** has considered the assessment of impacts and effects in respect to greenhouse gas emissions, climate change risk, and in-combination climate change impacts.

8.2 Methodology

- 8.2.1 The study area for the greenhouse gas assessment is the global climate, while the climate change risk assessment focuses on the Scheme itself.
- 8.2.2 Greenhouse gas emissions were quantified across the Scheme's lifecycle stages using industry guidance, and the significance was assessed in the context of UK carbon budgets.
- 8.2.3 Risks to the Scheme from the effects of climate change were identified and their likelihood and consequences evaluated to determine significance.

8.3 Baseline

- 8.3.1 The current baseline includes existing agricultural activities and associated greenhouse gas emissions on the site. The future baseline considers grid decarbonization and climate change projections from UKCP18 data.

8.4 Mitigation Measures

- 8.4.1 Embedded mitigation measures include construction phase waste reduction, use of low-carbon materials, and transport emission controls.
- 8.4.2 Operational phase measures focus on climate resilience, such as flood risk management. For either fixed and tracker panels, all sensitive and electrical equipment on the solar panel will be elevated by the legs (including the solar panel face itself) so that it is no less than 0.6m above the surrounding peak flood level accounting for the effects of climate change.

8.5 Assessment of Impacts and Effects

- 8.5.1 Construction phase greenhouse gas emissions are estimated to be 352,947 tonnes of carbon dioxide equivalent (tCO₂e), with the majority of emissions arising from embodied carbon in solar photovoltaic panels and battery storage system. During operational phase, greenhouse gas emissions are estimated to be 1,276,383 tCO₂e, again with the majority of emissions arising from the embodied carbon in solar photovoltaic panels and batteries that need to be replaced over the 60-year lifespan of the Scheme. However, the Scheme's operational carbon intensity is estimated to be around 34.39 to 37.16 gCO₂e/kWh which is significantly lower than the current grid average, which was 207.05 gCO₂e/kWh in 2024.
- 8.5.2 The climate change risk assessment did not identify any significant climate change risks to the Scheme due to the embedded resilience measures incorporated into the design.



- 8.5.3 Overall, the Scheme is assessed to have a beneficial and significant effect by offsetting higher-emission grid electricity and supporting the UK's transition to net zero emissions.

Construction Phase

- 8.5.4 The key sources of greenhouse gas emissions during the construction phase include:

- Embodied carbon in the solar photovoltaic panels, batteries, transformers, cables, and other materials;
- Emissions from the transportation of materials and construction workers;
- Emissions from energy and water consumption; and
- Emissions from waste generation.

- 8.5.5 The total construction phase emissions are estimated to be 352,947tCO₂e, with the majority coming from the embodied carbon in the solar photovoltaic panels and battery storage systems.

Operational Phase

- 8.5.6 During the operational phase, the main sources of greenhouse gas emissions include:

- Embodied carbon in replacement solar photovoltaic panels and batteries over the 60-year lifetime;
- Emissions from the transportation of materials;
- Emissions from operational maintenance activities and worker transportation; and
- Emissions from energy and water consumption; and
- Emissions from waste generation.

- 8.5.7 The total operational phase emissions are estimated to be 1,276,382tCO₂e, again dominated by the embodied carbon in the replacement solar photovoltaic panels and batteries. However, as the operational carbon intensity of the Scheme is 34.39 to 37.16 gCO₂e/kWh, significantly lower than the current grid average, the Scheme will have a **significant beneficial effect** on climate change through the avoidance of greenhouse gas emissions.

Decommissioning Phase

- 8.5.8 The greenhouse gas emissions associated with the future decommissioning phase are more uncertain, as the assessment is limited by the long timeframe and unknown future technologies. However, it is expected that the decommissioning phase emissions will be minor compared to the beneficial effects of the Scheme over its 60-year operational lifetime.



9 Landscape and Visual

9.1 Introduction

9.1.1 This chapter presents the findings of the potential landscape and visual impacts of the Scheme during the construction, operation and maintenance, and decommissioning phases.

9.2 Methodology

9.2.1 The methodology for the landscape and visual impact assessment is based on the general recommendations set out in *Guidelines for Landscape and Visual Impact Assessment, 3rd Edition, LI IEMA, 2013*. The guidelines are not prescriptive and set out a general approach that should be tailored to specific circumstances of the project that is being assessed. The methodology adopted for this assessment is set out in Appendix 8.1 [EN010170/APP/GH6.3.8.1]. The assessment process comprises broadly of three stages: baseline appraisal (including fieldwork), production of visualisations and assessment of effects, including cumulative and in-combination effects.

9.2.2 Landscape effects and visual effects are considered separately in this assessment. Landscape effects relate to both direct physical effects of the Scheme (for example loss of existing trees) and effects on wider landscape character, including perceptual effects. Visual effects relate to the effect on views and visual amenity experienced by various receptors including residents, users of public rights of ways, road users and recreational users.

9.2.3 Effects are identified as being either reversible or irreversible and the duration of effects is also considered. Effects are described as being either beneficial, neutral or adverse depending on whether they are considered to have a positive or negative effect on the landscape or within views.

9.2.4 Impact assessment of any proposed development is an iterative process, with the overall aim being to avoid adverse environmental impacts or, where impacts cannot be avoided completely, reducing identified impacts to acceptable levels. Based on the findings of this assessment, landscape and visual mitigation measures are designed to help integrate the Scheme into its landscape setting and mitigate any specific visual or physical effects that are identified. The landscape and visual impact assessment considers the effects of mitigation measures being in place and identified residual impacts.

9.2.5 The following study areas have been defined based on the Order Limits, physical characteristics and key parameters of the Scheme.

- The 0.5km study area for the Cable Route Corridor (the Cable Route Corridor Study Area);
- The 1km study area (the local 1km study area);
- The 2km study area (the wider 2km study area); and
- The 5km study area (the outer 5km study area).

9.2.6 The guidelines for landscape and visual impact assessment states that the study area must be reasonable and proportionate and must ensure that the focus when



defining the appropriate study area is on where likely significant effects upon landscape and visual receptors may occur, together with likely significant cumulative effects.

A future year of 2044 (15 years after the first year of operation of the Scheme) is considered for the landscape and visual impact assessment and supporting appendices. 15 years after commissioning is considered a typical period for the maturation of landscape planting.

9.3 Mitigation Measures

9.3.1 Embedded mitigation measures have been included within the design of the Scheme to protect the landscape fabric of the site. This includes various buffers to offset the development from existing landscape features onsite to ensure their protection and permanence. The Outline Construction and Environmental Management Plan (OCEMP) **[EN010170/APP/GH7.1]** sets out how these embedded mitigation measures are to be secured. Details of species and density for each planting typology is described within the Outline Landscape and Ecology Management Plan (OLEMP) **[EN010170/APP/GH7.4]**. The OLEMP **[EN010170/APP/GH7.4]** prescribes how the mitigation measures are to be implemented and managed to ensure the effectiveness and certainty in achieving the objectives of the mitigation strategy.

9.3.2 The Scheme will consist the following:

- 14.45 hectares ha of green corridor and woodland planting;
- 12.81 hectares enhanced riparian native planting;
- 43.14 km of hedgerow reinforcement and reinforced roadside vegetation;
- 15.60km of proposed hedgerows;
- Six proposed ponds and wader scrapes; and
- 1,079.53 hectares of groundcover.

9.4 Assessment of Impacts and Effects

9.4.1 Following the implementation of the appropriate site-specific mitigation measures identified during the construction, operation and decommissioning phases, the residual effects on the following receptors are determined to be significant. Identified significant residual effects are set out within **Table 9.1** and **Table 9.2** below:

Table 9.1 Significant Residual Landscape Effects

Landscape Receptor	Construction	Operation Year 1	Operation Year 15	Decommissioning
Landscape Fabric	Moderate / Minor Neutral	Moderate / Minor Neutral	Moderate Beneficial (Significant)	Moderate Beneficial (Significant)



- 9.4.2 Appendix 8.3 LVIA Assessment Sheets [EN010170/APP/GH6.3.8.3] sets out the details of the landscape assessment.

Table 9.2 Significant Residual Visual Effects

Visual Receptor	Nearest Green Hill site	Construction	Operation Year 1	Operation Year 15	Decommissioning
NN TU 3 TP091	Green Hill E	Moderate Adverse Significant	Moderate Adverse Significant	Moderate Adverse Significant	Moderate Adverse Significant
NN TA 4#1 TP181	Green Hill F	Moderate Adverse Significant	Moderate Adverse Significant	Moderate Adverse Significant	Minor Adverse
NN TD 2 TP184	Green Hill F	Major/ Moderate Adverse Significant	Major/ Moderate Adverse Significant	Major/ Moderate Adverse Significant	Major/ Moderate Adverse Significant

- 9.4.3 Appendix 8.3 LVIA Assessment Sheets [EN010170/APP/GH6.3.8.3] sets out the details on the visual assessment.



10 Ecology and Biodiversity

10.1 Introduction

- 10.1.1 Environmental Statement Chapter 9: Ecology and Biodiversity [EN010170/APP/GH6.2.9] has considered the assessment of impacts and effects in respect to wildlife (habitats and species). This also encompasses protected sites which have been designated on the basis of supporting notable habitats or species.

10.2 Methodology

- 10.2.1 To understand the existing ecology and biodiversity of the area, a combination of desk-based studies and field surveys were carried out between 2023 and 2025. The desk study reviewed existing records of protected wildlife, habitats, and designated nature conservation sites using national and local data sources. This included checking maps and records from Natural England, Local Environmental Records Centres, and the Environment Agency, with search areas extending up to 30km from the scheme boundary for certain protected sites that support birds and bats.
- 10.2.2 Field surveys were then undertaken across the proposed development areas, including Green Hill A to G and Green Hill BESS, as well as the Cable Route Corridor. These involved habitat mapping, assessments to establish the condition of the current habitats, and targeted surveys for species including bats, birds, badgers, water voles, and otters. Survey methods were based on industry guidance, and tailored to the Sites' habitats, proximity to designated sites, and the potential impacts of the Scheme. Some survey work is ongoing and will continue into Spring 2025, with final survey results being presented in an updated version of this Chapter.
- 10.2.3 For the Cable Route Corridor, due to the temporary and minimal nature of the cable installation works, surveys focused on habitat suitability and species most at risk from impacts during cable installation. Additional seasonally constrained habitat surveys are planned in Spring 2025 to complete the ecological baseline.

10.3 Baseline

Designated Sites

- 10.3.1 The local landscape contains several designated sites, which range in importance, from Local Wildlife Sites to internationally important statutory designated sites. Most of the land within the Scheme falls within the 10km consultation zone of the Upper Nene Valley Gravel Pits SPA, which is of international importance due to it supporting large numbers of overwintering birds. Numerous Sites of Special Scientific Interest, Local Wildlife Sites, Local Nature Reserves, and other locally important sites such as Protected Wildflower Verges and County Wildlife Sites were also recorded.

Habitats

- 10.3.2 The land within the Sites is mostly dominated by arable fields and modified grassland, with smaller areas of woodland, scrub, ponds, hedgerows, and watercourses. Some habitat types are considered to be ecologically important,



particularly where they meet the criteria for Habitats of Principal Importance (such as hedgerows, ponds, and woodland). The most ecologically valuable areas included field margins and small pockets of species-rich grassland; hedgerows, woodland and scattered mature trees, many of which likely provide suitable habitat for protected species.

Protected and Notable Species

10.3.3 Field surveys and data records have confirmed the presence of a number of protected and notable species across the nine sites:

- **Badgers** are widespread, with over 90 setts recorded. These are concentrated particularly in hedgerows, woodland edges, and margins of arable fields.
- **Bats** were found to be using the Sites extensively, including rarer species such as barbastelle. A range of bat species were recorded foraging and moving through the landscape, and several trees and buildings within the Sites are suitable to support roosting bats.
- **Otters and water voles** were found to use various watercourses, with otter signs confirmed at multiple sites. Water vole evidence was more limited, but their presence is assumed in some watercourses.
- **Other mammals**, including hedgehog, brown hare, harvest mouse and polecat, are considered likely to be present. These species make use of the field margins, scrub, and hedgerows across the Sites.
- **Reptiles and amphibians** are expected to occur in low numbers in suitable habitats, such as rough grassland and field margins. Great crested newts are assumed to be present within a number of ponds within the Sites.
- **Birds:** The Sites support a diverse range of breeding and overwintering birds. Particularly important are ground-nesting farmland species like skylark, lapwing, and yellow wagtail. A significant number of notable and protected bird species were recorded, including Schedule 1 birds such as barn owl and hobby. In addition, golden plover and lapwing (which may be associated with the Upper Nene Valley Gravel Pits Special Protection Area), and other notable wintering bird species, have been recorded across the Sites.
- **Invertebrates and plants:** While dedicated invertebrate surveys were not conducted due to the general low diversity of the habitats, habitats such as hedgerows, grassland, and ponds are expected to support a range of typical species. A number of notable plant species associated with arable farmland were also recorded.

10.3.4 The habitats and species present are broadly representative of an agricultural landscape, with pockets of habitats of higher ecological value. This baseline information was used to guide the assessment of potential ecological impacts, as well as the design of mitigation and enhancement measures as part of the Scheme.



10.4 Mitigation Measures

Construction Phase Mitigation Measures

10.4.1 A range of measures are built into the design of the project to protect wildlife and habitats during the construction phase. These include:

- **Protective buffer zones** around watercourses, woodland, hedgerows and other important habitats, as well as around particular features used by protected species, such as badger setts;
- **Avoidance techniques**, such as using existing hedgerow gaps for site accesses to avoid unnecessary hedgerow losses, or using specialist construction methods (such as horizontal directional drilling) to avoid damaging highly valuable habitats, as well as adjustments to the cable route to avoid valuable trees and other habitats;
- **Ecological supervision** on-site to guide and supervise sensitive construction works;
- **Phased vegetation clearance** and seasonal timing of works to avoid harming breeding birds, bats, or amphibians;
- **Additional surveys prior to construction** for species like badgers, otters, and water voles;
- **Compensatory planting** for hedgerows and trees where unavoidable loss occurs.

10.4.2 The above measures ensure that risks to biodiversity during construction are minimised, with most potential effects reduced to neutral and non-significant levels.

Operational Phase Mitigation Measures

10.4.3 Long-term ecological management of the habitats within the Sites will be guided by a Landscape and Ecological Management Plan (OLEMP), which includes measures such as:

- **Extensive habitat creation and enhancement**, including new grasslands, hedgerows, trees, and ponds;
- **Sensitive habitat management** through rotational cutting, late-season mowing, and/or grazing to benefit biodiversity;
- **Exclusion zones and other sensitive design measures**, such as the avoidance of artificial lighting near bat roosts or other sensitive habitats;
- **Ecological monitoring** during the operational phase by suitably qualified ecologists to ensure that habitats are being managed appropriately, and that any remedial work (such as re-seeding or additional planting) required can be identified and delivered.



10.5 Assessment of Impacts and Effects

Construction Phase

- 10.5.1 During construction, the main risks to ecology and biodiversity include habitat loss, potential pollution events, and disturbance to wildlife. Although a wide range of habitats and protected species are present across the Sites and Cable Route Corridor, most impacts can be effectively managed through built-in safeguards. These include buffers around sensitive areas, careful construction practices, and retaining key habitats wherever possible.
- 10.5.2 Some short-term impacts may occur, such as temporary disturbance to birds and small-scale habitat loss. Impacts on key species such as badgers, bats, otters, amphibians, and overwintering birds have been carefully considered. In general, with the embedded mitigation (measures designed into the Scheme or adopted as standard) in place, most construction-related effects are predicted to be neutral and not significant. Where adverse effects were identified, such as to breeding and wintering birds, additional mitigation measures were identified to reduce these further.
- 10.5.3 After considering the above mitigation measures, as well as a range of additional mitigation measures specifically designed for particular habitats and species, significant adverse residual impacts are anticipated on some breeding and overwintering birds, primarily due to the loss of suitable habitat during the construction phase.

Operational Phase

- 10.5.4 Once the Scheme has been constructed, the shift from intensive arable farming to permanent grassland (for the lifetime of the Scheme) and the creation of a range of other habitats within the Sites is expected to provide lasting ecological benefits. In general, no significant long-term adverse effects are anticipated, and the creation and enhancement of habitats such as hedgerows, grassland, and ponds are predicted to result in benefits for many species, including birds, bats, amphibians and invertebrates, among others.

Decommissioning Phase

- 10.5.5 When the Scheme reaches the end of its operational life (up to 60 years), the removal of infrastructure such as solar panels, cabling, substations, and access tracks will involve activities similar to the construction phase, with no greater ecological impacts expected. These works will be managed according to a Decommissioning Statement to ensure that the work is carried out sensitively.
- 10.5.6 While restoring the land to farmland could benefit certain species, such as some farmland birds and arable plants, the valuable habitats created during the operational phase may be lost. The return to farming may require soil improvements and the reintroduction of fertilisers and pesticides, depending on the landowner's plans and the soil health at the time of decommissioning.
- 10.5.7 Before decommissioning starts, an ecologist will survey the site to identify any protected species or habitats that could be affected. Additional ecological surveys and mitigation measures may be required, particularly for species like badgers, otters, great crested newts, reptiles, and nesting birds.



- 10.5.8 Some wildlife-rich areas might be retained if they have developed high ecological value, and any final plans will consider up-to-date conservation priorities, including those influenced by climate change, as well as up-to-date legislation.



11 Hydrology, Flood Risk and Drainage

11.1 Introduction

- 11.1.1 Environmental Statement Chapter 10: Hydrology, Flood Risk and Drainage [EN010170/APP/GH6.2.10] has considered the assessment of impacts and effects in respect flood risk, surface water drainage and water resources.

11.2 Methodology

- 11.2.1 The assessment follows national and local planning policies and guidance related to flood risk and drainage. It uses flood maps published by the Environment Agency, detailed ground level surveys of the site, and specialist flood modelling where appropriate. Individual flood risk assessments and drainage strategies have been prepared for each of the nine sites.

11.3 Baseline

- 11.3.1 The zone of influence for the assessment of hydrology, flood risk and drainage is limited to the Order Limits of the Scheme. This includes Green Hill A to G and Green Hill BESS and the Cable Route Corridor. The assessment does not allow for any increase in flood risk within or downstream of the Sites and assumes there will be no negative impact on water quality.
- 11.3.2 The baseline assessment identifies that the Sites included within the Scheme are mostly located in Flood Zone 1, which represents areas with a low probability of flooding, according to the Environment Agency's Flood Map for Planning. However, some areas that bisect or border the Sites are located within Flood Zone 2 and Flood Zone 3, which represent medium and high probability flood zones. Following further assessment, the Scheme is found to be largely at negligible to low risk of flooding from rivers. Where a higher risk has been identified, such as at Green Hill BESS, flood modelling has confirmed that the areas identified for development are either located outside of the floodplain or are predicted to experience shallow flood depths of less than 0.3 metres.
- 11.3.3 The baseline assessment has also considered the risk of surface water flooding across the site. In most cases, this type of flooding is linked to land drains and watercourses that are present within or near the Sites and is therefore considered to form part of the wider fluvial flood risk.
- 11.3.4 All other potential sources of flood risk, including groundwater, artificial drainage infrastructure, canals and reservoirs, have been assessed separately through Site-specific Flood Risk Assessments and Drainage Strategies for each site.

11.4 Mitigation Measures

- 11.4.1 Outline embedded and additional mitigation measures. A range of embedded and additional mitigation measures have been incorporated into the design of the Scheme to manage flood risk and water quality during construction, operation and decommissioning.



Embedded Mitigation Measures

- 11.4.2 Locating key infrastructure, such as substations and battery energy storage units, outside flood risk areas where possible. Where this is not achievable, units will be raised above ground level to reduce flood risk.
- 11.4.3 Elevating all solar panels on frames, allowing water to flow freely beneath them during flood events and avoiding displacement of floodplain storage.
- 11.4.4 A minimum 8 metre buffer has been maintained from all main rivers and ordinary watercourses in accordance with Environment Agency guidance. This buffer has been increased to 9 metres where required by local policy, including for ordinary watercourses within the jurisdiction of North Northamptonshire Council and Milton Keynes City Council.
- 11.4.5 Retaining existing access tracks where possible and designing new access to avoid unnecessary crossings of drainage ditches or watercourses.
- 11.4.6 Ensuring surface water runoff is managed on site to match natural (greenfield) conditions.
- 11.4.7 Additional mitigation measures include a range of sustainable drainage options to manage surface water across the sites. Permeable gravel surfacing will be used in key areas to allow rainwater to drain through, while lined sub-base layers beneath this surface will provide temporary storage and containment. In locations such as Green Hill BESS and Green Hill C where battery energy storage is proposed, an impermeable liner will prevent pollutants or firewater from entering the ground. Above-ground features such as swales, ponds, or detention basins may also be considered during detailed design to help slow the flow of water and provide additional attenuation or emergency storage. Other options, such as filter drains, bioretention systems (rain gardens), or underground tanks and pipes, may be used where appropriate to support local drainage. Where required, these features will be lined and located in low-lying parts of the site. All drainage features will be maintained by a management company throughout the life of the project.
- 11.4.8 At the two BESS sites (Green Hill C and BESS), further measures will be in place to contain firewater runoff in the event of an incident. These include impermeable surfacing beneath the gravel layer and automatically closing valves at drainage outfalls. These valves will isolate the drainage system if triggered by fire detection systems, allowing firewater to be safely contained for later disposal or treatment. Dedicated firewater tanks will also be provided.
- 11.4.9 Construction-related runoff will be managed using temporary drainage channels, silt fencing, straw bales and careful site layout. A Construction Environmental Management Plan will be implemented to control spill risks, manage fuel and material storage, and reduce pollution during works.
- 11.4.10 Following implementation of these measures, the development is not expected to increase flood risk on or off site, and surface water will be managed in line with national best practice. Further detail on battery energy storage safety can be found in the Outline Battery Storage Safety Management Plan **[EN010170/APP/GH7.7]**.



11.5 Assessment of Impacts and Effects

- 11.5.1 Potential risks include temporary increases in surface water runoff, pollution from construction materials, and a small loss of floodplain storage in certain areas. However, with all proposed mitigation measures in place, none of these effects are expected to be significant.

Construction Phase

- 11.5.2 During construction, there is potential for mud and debris to enter local drainage systems, especially during periods of rainfall. The use of temporary hardstanding and movement of construction vehicles may cause surface water to flow more quickly across the site and increase the risk of local flooding. There is also a risk that silty water or accidental spills of oil, fuel or chemicals could pollute nearby watercourses or soak into the ground.
- 11.5.3 Without mitigation, these effects could be moderate to major in scale and would be considered significant. However, a range of control measures will be in place. These include silt fencing, bunds, temporary drainage systems, safe storage of fuels and materials, and the use of sealed tanks for all welfare facilities. These measures will reduce the potential for pollution and control surface water runoff. After mitigation is applied, no significant effects are expected.

Operational Phase

- 11.5.4 Once operational, the Scheme will include permanent drainage systems that will manage rainwater from solar panels and infrastructure areas. Runoff will be controlled to match natural greenfield rates using a combination of gravel surfacing, lined storage layers, and flow control devices. Although small areas of hard surfacing will be introduced at battery storage and substation locations, they will be managed effectively within the drainage system.
- 11.5.5 Where development takes place within the floodplain, the amount of floodwater displaced has been assessed and found to be extremely small. The increase in flood depth is less than one millimetre and will not affect flood risk elsewhere. Firewater and other surface water pollution risks will be managed through the use of impermeable liners, containment systems and isolation valves that close automatically in the event of a fire. With these measures in place, all potential effects on flood risk and water quality are considered to be not significant.

Decommissioning Phase

- 11.5.6 When the development is removed, the Sites will be restored to their former condition. During this phase, there may be similar temporary risks to those identified for the construction phase, including increased runoff and the potential for silt or spills to reach watercourses. These will be managed using the same good practice measures, and no significant effects are expected.



12 Minerals

12.1 Introduction

- 12.1.1 Environmental Statement Chapter 11: Minerals **[EN010170/APP/GH6.2.11]** has considered the assessment of impacts and effects in respect to minerals resources.
- 12.1.2 The minerals assessment describes the existing geology, minerals planning policies, methodology, and the potential impact on identified mineral resources as a result of the development of the Scheme. This assessment is based on known and published information about the geology underlying the Scheme and the surrounding area.

12.2 Methodology

- 12.2.1 The assessment considers the national policy mineral considerations. In summary, these identify minerals as being important national resources, adequate and steady supplies of which are vital for development and sustaining the economy and society. Minerals are a finite natural resource that can only be worked where they are found. A key aspect of sustainable development is the conservation and safeguarding of non-renewable resources for future generations. As such it is important that other development does not needlessly prevent the future extraction of mineral resources.
- 12.2.2 The assessment also considers the local minerals policy considerations as set out in the Northamptonshire Minerals and Waste Local Plan and the Milton Keynes Minerals Local Plan. These plans make provision for mineral supply in their respective areas by making allocations for future mineral extraction. These plans also make provision for safeguarding mineral resources that are of potential economic importance by identifying and mapping them as mineral safeguarding areas. Mineral safeguarding areas does not necessarily preclude other forms of development being permitted nor confer any presumption that the mineral will be worked.
- 12.2.3 The policies contained in the local planning authorities' Local Plans require applications for non-mineral development located within minerals safeguarding areas to demonstrate that mineral resources will not be needlessly sterilised because of the development and that the development would not pose a serious hindrance to future extraction in the vicinity or that there is a clear and demonstrable need for the non-minerals development. The local planning authorities' Local Plans also make provision for safeguarding specific mineral allocations by protecting them against development that would unnecessarily sterilise the sites or prejudice their use by creating incompatible land uses nearby.
- 12.2.4 The mineral resources that have been assessed have been identified by the British Geological Survey and through allocations, areas of search and minerals safeguarding areas contained in Northamptonshire Minerals and Waste Local Plan and the Milton Keynes Minerals Local Plan. Assessment of the impacts of the Scheme on the mineral interests have considered a number of parameters including extent, magnitude, duration and reversibility of the Scheme as well as the extent, likely quality and situation of any affected mineral reserve.



12.3 Baseline

- 12.3.1 The bedrock underlying the Scheme is a series of sedimentary formations dating from the Jurassic period. The oldest occurring bedrock is ironstone but this is overlain in places by outliers of younger sandstones, siltstones and limestones. The strata is generally progressively younger moving from west to east across the site. The ironstone deposit was historically worked in large scale opencast quarries in Northamptonshire, to supply the former Corby Iron and Steel Plant which closed in 1980. Since then, technological, and economic changes mean this deposit is no longer considered as a mineral resource. Jurassic clay deposits which occur in the southern part of the Scheme have previously been identified as a brick clay mineral resource. These clays were worked to provide the raw materials for brick manufacture at several locations including near Bletchley. Following the closure of the Bletchley Brickworks in 1990 this deposit is no longer exploited and thus these resources are no longer safeguarded. Limestone deposits outcropping in southern part of the Scheme, within Milton Keynes are safeguarded as a mineral resource with potential for crushed rock production for aggregate uses although this deposit is not being actively worked within Milton Keynes.
- 12.3.2 The bedrock is overlain in places by younger superficial deposits of alluvium, clays, silts, sand and gravels principally of fluvial or glacial origin. Within the Scheme these include sedimentary sand and gravels deposits which are potential aggregate mineral resources which are safeguarded in the Northamptonshire Minerals and Waste Local Plan and the Milton Keynes Minerals Local Plan.

12.4 Mitigation Measures

- 12.4.1 The following embedded mitigation measures have been incorporated into the Scheme's design:
- Within mineral safeguarding areas, the Cable Route Corridor has been designed so that wherever possible it follows the edge of significant landscape features or existing infrastructure corridors rather than directly crossing open fields. Such an approach avoids creating a further obstruction to the future exploitation of mineral resources;
 - The existing vehicular access between the mineral extraction allocation north west of Bozeat and the A509 will be maintained for the life of the Scheme to allow future mineral extraction to take place;
 - Adequate distance buffers and standoffs are incorporated into the Scheme's design to avoid conflict between the Scheme and future mineral extraction to the northwest of Bozeat;
 - The Cable Route Corridor, south of Earls Barton, incorporates the flexibility to allow cables to be installed in areas which have already been subject to mineral extraction or routed to avoid mineral reserves with planning permission to be extracted; and
 - The decommissioning and removal of plant and structures at the end of the life of the Scheme to restore the baseline condition for the identified mineral resources.



12.5 Assessment of Impacts and Effects

- 12.5.1 Within Northamptonshire, the Scheme affects sand and gravel mineral resources to the north of Northampton, particularly to the north and east of Walgrave (Green Hill A, Green Hill A.2 and Green Hill B); between Wellingborough and Northampton associated with the River Nene (Green Hill BESS and connecting Cable Route Corridor); and to the south of Wellingborough and west of Bozeat (Green Hill F).
- 12.5.2 In terms of Green Hill A, Green Hill A.2 and Green Hill B together with associated Cable Route Corridor, these sites all affect sand and gravel mineral safeguarding areas and the Scheme would prevent exploitation of these mineral resources for the life of the Scheme. There is no evidence to suggest there has been any significant sand and gravel extraction within or in the vicinity of these sites nor the relevant section of the Cable Route Corridor. None are allocated for future mineral extraction in the Northamptonshire Minerals and Waste Local Plan. All of these sites contain glacial sand and gravel deposits which are generally of less economic interest than sand and gravel deposits found elsewhere. These are not deposits that form part of the area of focus for future mineral extraction and the temporary sterilisation of these deposits would not have an impact on mineral supply within Northamptonshire.
- 12.5.3 The magnitude of impact of Green Hill A, Green Hill A.2 and Green Hill B plus the connecting Cable Route Corridor linking Green Hill A, Green Hill A.2 and Green Hill B is considered not significant for the purposes of the assessment.
- 12.5.4 South of Earls Barton, the Cable Route Corridor linking Green Hill E to Green Hill BESS crosses the River Nene it extends into a large mineral safeguarding area protecting sand and gravel resources. This is an important area for aggregate supply in Northamptonshire and the Cable Route Corridor potentially affects two separate permitted areas of mineral extraction. The provision of a cable route crossing any permitted sand and gravel site would inhibit the working of those deposits. One of these quarries is approaching the end of its life and is anticipated to be worked out before any cables are required to be installed. Although the Cable Route Corridor has the potential to sterilise permitted reserves in the other permitted quarry area there is sufficient flexibility within the Cable Route Corridor to route the cables around any permitted mineral reserves that have not been worked. With this additional mitigation the significance of effect would be minor effect (not significant for the purposes of the assessment).
- 12.5.5 Although the Green Hill BESS lies within the mineral safeguarding area associated with the Nene Valley sand and gravel deposits, it is not allocated for future mineral extraction. Parts of the site have been subject to past mineral extraction; the remainder of the site is constrained by the proximity of existing built development including Grendon Substation and thus the area of workable mineral deposits affected by the Scheme is relatively limited. The mineral reserves within Green Hill BESS would effectively be temporarily sterilised for the life of the Scheme, however this is not considered to represent a significant impact on mineral resources. The significance of effect is considered to be minor effect (not significant for the purposes of the assessment).



- 12.5.6 The northern part of Green Hill F lies within a sand and gravel mineral safeguarding area. This is an area of proven economic sand and gravel deposits, with a former quarry area lying adjacent Green Hill F and the Northamptonshire Minerals and Waste Local Plan allocating an area for future sand and gravel extraction immediately north. Working this area relies on the existing vehicular access connecting it to the existing A509 junction which lies within Green Hill F.
- 12.5.7 The design of the Scheme retains an adequate buffer between the sand and gravel allocation and nearest solar panels, this includes retention and enhancement of boundary tree and hedge planting to ensure that the Scheme does not impose additional constraints on future mineral extraction. The Scheme also retains the existing vehicular access across Green Hill F to allow future access for mineral related traffic. With this embedded mitigation the development of Green Hill F would not significantly impact the exploitation of allocated sand and gravel reserves.
- 12.5.8 In terms of other safeguarded sand and gravel reserves within Green Hill F, the development of the Scheme would make these reserves unavailable during the life of the Scheme thus restricting the potential sources of supply of sand and gravel over that period. The significance of this impact is difficult to fully quantify given the future demand for sand and gravel is unknown, the quantity and quality of the sand and gravel deposit within the mineral safeguarding area is unknown and the fact there are other potential sources of supply within Northamptonshire. The glacial sand and gravel deposits found within and around Green Hill F are generally of less economic interest than fluvial deposits found elsewhere within Northamptonshire.
- 12.5.9 The magnitude of the impact of Green Hill F on mineral resources is considered to be low taking account of the embedded mitigation and the significance of effect is considered to be minor effect (not significant for the purposes of the assessment).
- 12.5.10 Within Milton Keynes, the Scheme and immediate surroundings are not currently subject to mineral working and there is no apparent evidence to suggest there has been any mineral working in the recent past. The Milton Keynes Minerals Local Plan does not make any allocations for future mineral extraction in the vicinity of the Scheme. The Scheme does affect areas of safeguarded mineral reserves within the Scheme Boundary but these are relatively small areas of deposits which extend over a much larger area and are fragmented by surface development in vicinity of the Scheme. It is very unlikely that these areas would be required for mineral extraction during the life of the Scheme. The impact on mineral reserves in Milton Keynes is considered to be not significant.
- 12.5.11 The Scheme will be decommissioned at the end of its operational life, all above ground structures will be removed and the Sites restored. The Scheme does not require deep excavations or foundations and thus disturbance is limited to the surface layers rather than underlying deposits thus any underlying mineral deposit would not be permanently sterilised and would be available to exploit if required at a future date.



13 Cultural Heritage

13.1 Introduction

- 13.1.1 Environmental Statement Chapter 12: Cultural Heritage [EN010170/APP/GH6.2.12] has assessed the potential impacts and effects of the Scheme on the settings of designated and non-designated heritage assets, archaeological assets and the historic landscape character during the construction, operation and decommissioning phases of the Scheme.

13.2 Methodology

- 13.2.1 The assessment methodology has been derived using relevant planning policy and appropriate industry guidance to ensure the assessment is proportionate and sufficient to understand the likely significant effects of the Scheme on cultural heritage.

13.3 Baseline

- 13.3.1 Baseline information has been collated from a Heritage Statement (Appendix 12.1), Desk-Based Assessments (Appendix 12.2) archaeological evaluation and survey (Appendix 12.3 to 12.5) and historic landscape character assessment (Appendix 12.7).

13.4 Mitigation Measures

- 13.4.1 For potential setting impacts and impacts to the historic landscape character embedded mitigation measures have been identified including having no development areas, offsets, panel free buffer zones, and landscape mitigation measures aimed at screening heritage assets from the Scheme using hedgerow enhancements, planting of shelter belts and trees.
- 13.4.2 Where direct impacts have been identified as a result of vibration impacts from construction traffic, a condition survey has been agreed as appropriate additional mitigation.
- 13.4.3 An Archaeological Mitigation Strategy (Appendix 12.6) details the mitigation measures to safeguard or record archaeological sites that could be impacted by the Scheme. Embedded mitigation is aimed at preserving archaeological assets in situ in the form of no development area and concrete feet. Additional mitigation measures will preserve archaeological assets by record in the form of strip, map and sample excavation and archaeological monitoring. The use of concrete feet will be confirmed following the identification of the final scheme design, and any areas identified as no longer being suitable for concrete feet will be subject to strip, map and sample prior to development or identified as areas of 'no solar development'
- 13.4.4 Construction, operation and decommissioning phase management plans will be used to ensure any identified impacts to heritage or archaeological assets will be safeguarded during the construction and operational phases.



13.5 Assessment of Impacts and Effects

Construction Phase

- 13.5.1 There may be the potential for direct impacts to heritage assets due to swipes and strikes or through vibration as a result of heavy good vehicle movements and construction traffic. If such impacts were to occur, they have the potential to be long term and irreversible. These impacts will be avoided through measures included in a construction traffic management plan. **[ENV10170/APP/GH7.9]**.
- 13.5.2 There may be potential for the Scheme to indirectly impact heritage assets beyond the boundary of the Order Limits during the construction phase (i.e. affect elements of their setting that contribute to their significance). Any such effects relating to the Construction Phase would be reversible following decommissioning of the Scheme. While potential indirect impacts to the significance of heritage assets (i.e. through changes to their setting) would be most evident during the operational phase, they would commence during the construction phase.
- 13.5.3 The cable route is proposed to be buried underground. As such any construction phase impacts to the setting of heritage assets as a result of the installation of the cable route would be temporary.
- 13.5.4 The assessment indicates that most of the identified impacts to heritage assets would be not significant, with effects mostly ranging between neutral and minor/moderate adverse.
- 13.5.5 There are two Conservation Areas where there is the potential for moderate adverse effects to occur as a result of impacts to elements of their setting that contribute to their significance as a result of solar photovoltaic panels and associated infrastructure being placed in Green Hill E and F:
- Mears Asby Conservation Area; and
 - Easton Maudit Conservation Area.
- 13.5.6 There are two Listed Buildings where there is the potential for moderate adverse effects to occur as a result of potential vibration impacts caused by construction traffic, following the application of additional mitigation measures, such as a condition survey before and after the construction phase, the residual effect would be reduced to minor adverse, which is not significant:
- Grade II Listed Station Lodge (NHLE 1294156); and
 - Grade II Listed Low Farmhouse (NHLE 1371681).
- 13.5.7 There are two Listed Buildings where there is the potential for moderate adverse effects to occur as a result of impacts to their setting:
- Grade I Listed Church of St Peter and St Paul (NHLE 1189610); and
 - Grade II* Listed 22 High Street (NHLE 1040784).
- 13.5.8 Construction groundworks for the Scheme have the potential to directly affect archaeological remains within the boundary of the Order Limits. Where impacts do occur, they have the potential to be long term and irreversible.



- 13.5.9 There are five archaeological assets where there is the potential for significant effects (i.e., moderate adverse or higher) to occur as a result of impacts caused by the Scheme, with scores ranging from moderate to moderate to major adverse. These include asset ID CF9-01 (Probable Late Iron Age Settlement, South East of Sywell Wood), asset ID CR1b.17-01 (Prehistoric Settlement), asset ID CR7.15-01 (IA/Roman Features), asset ID CR1a.7-01 (Possible IA/RB Feature) and asset ID CR6.21-01 (Possible IA/RB Feature).
- 13.5.10 No significant effects were identified to historic landscape character parcels during the construction phase.
- 13.5.11 Following the implementation of the additional mitigation outlined in the Archaeological Mitigation Strategy (Appendix 12.6) residual effects to these assets would be reduced to negligible adverse, which is not significant. Where archaeological mitigation in the form of a programme of excavation and recording will occur, it should be noted that physical impact will still occur to archaeological assets identified. However, the archaeological mitigation works proposed are considered sufficient to preserve the asset by record, and as such compensate for their loss.
- 13.5.12 There is a potential for changes to the landscape during the construction phase that could impact elements that contribute to the historic landscape character. Any adverse impacts (such as the removal of sections of hedgerows) are likely to be reversible. Positive effects may occur where hedgerow is proposed to be enhanced, or a new hedgerow is proposed that would reinstate the hedgerow recorded on historical maps. No significant effects were identified to the historic landscape character during the construction phase.
- Operational Phase**
- 13.5.13 Where above ground infrastructure has been identified as causing an impact to the settings of heritage assets, this impact would begin at the construction phase and continue for the duration of the operation phase. Once the Scheme has been decommissioned, land would revert to baseline conditions (or as close to a reasonably possible), and any temporary impacts to setting would be reversed.
- 13.5.14 There are two Conservation Areas where there is the potential for moderate adverse effects to occur as a result of impacts to their setting:
- Mears Asby Conservation Area; and
 - Easton Maudit Conservation Area.
- 13.5.15 There are two Listed Buildings with where there is the potential for moderate adverse effects to occur as a result of impacts to their setting:
- Grade I Listed Church of St Peter and St Paul (identification: NHLE 1189610)
 - Grade II* Listed 22 High Street (NHLE 1040784)
- 13.5.16 Once operational, the Scheme will not cause further direct adverse effects on buried archaeological remains. The operational phase of the Scheme will see the replacement of solar photovoltaic panels, substation, and battery energy storage



infrastructure, without additional piling or ground disturbance beyond that undertaken during the construction phase. If works are required during the operational phase that cause additional impacts to buried remains, an assessment will determine impacts and necessary mitigation, as set out in the Outline Operational Environmental Management Plan [EN010170/APP/GH7.2].

- 13.5.17 Where embedded mitigation has been used, the impacts to buried archaeological features during the operational phase would be likely to be of a largely beneficial nature, due to these remains being taken out of intensive agricultural activity (i.e. ploughing), which causes an adverse effect on archaeological assets.
- 13.5.18 No significant effects were identified to historic landscape character parcels during the operation phase.

Decommissioning Phase

- 13.5.19 There may be potential for the Scheme to have effects upon the settings of heritage assets within the surrounding area during the decommissioning phase. It is considered that such impacts will be of the same magnitude as those that occurred during the construction phase and would be temporary in nature. Following the decommissioning of the Scheme, it is anticipated that any impacts to the setting to heritage assets as a result of the construction, operation or decommissioning phases would be reversed.
- 13.5.20 It is not envisaged that any proposed groundworks and/or plant movement during the decommissioning phase will cause further impacts to buried archaeological remains beyond those from the construction and operation phases. If works are required during the decommissioning phase that have the potential to cause additional impacts, an assessment would be required to ascertain the extent of impact and appropriate mitigation in line with the Outline Decommissioning Statement.
- 13.5.21 No significant effects have been identified at the decommissioning phase for archaeological assets or the historic landscape character.
- 13.5.22 There are two Listed Building where there is the potential for moderate adverse effects to occur as a result of potential vibration impacts caused by construction vehicles during the decommissioning phase, following the application of additional mitigation measures, such as a condition survey before and after the construction phase, the residual effect would be reduced to minor adverse, which is not significant:
- Grade II Listed Station Lodge (NHLE 1294156); and
 - Grade II Listed Low Farmhouse (NHLE 1371681).
- 13.5.23 There are two Listed Buildings where there is the potential for moderate adverse effects to occur as a result of impacts to their setting:
- Grade I Listed Church of St Peter and St Paul (NHLE 1189610); and
 - Grade II* Listed 22 High Street (NHLE 1040784).



14 Transport and Access

14.1 Introduction

- 14.1.1 Environmental Statement Chapter 13 Transport and Access [EN010170/APP/GH6.2.13] has considered the assessment of likely significant effects in respect of traffic effects during the construction, operation and decommissioning phases of the Scheme.

14.2 Methodology

- 14.2.1 The Scheme has been considered in the context key policy documents such as National Policy Statements EN-1, EN-3 and EN-5, the National Planning Policy Framework and Local Plans associated with local planning authorities.
- 14.2.2 Solar farm developments do not generate significant traffic flows once operational. Typically, there will be only a handful of trips per month by van or 4x4 vehicle for maintenance purposes. Therefore, all operational transport and access effects will be negligible in significance.
- 14.2.3 A comparison of the forecast construction traffic against those that might occur during the replacement of equipment has been made. Where construction elements such as laying of tracks and landscaping are not required, and where sites can be replaced sequentially and across an extended period, traffic movements are not expected to be greater than those associated with the construction phase. Therefore, the focus of the chapter is on the construction phase effects.
- 14.2.4 It is not anticipated that the effects associated with decommissioning will be worse than during the construction phase.
- 14.2.5 The Sites and Cable Route Corridor locations were grouped across common access routes to ensure vehicle movements and their effects were assessed. On a peak construction day, there could be up to 5 to 9 arrivals by heavy goods vehicles per site spread across the Scheme. In addition, the transport and access assessment is based on there being 1,099 construction workers at any one time across the Scheme¹. A large proportion of construction workers will arrive by shuttle bus, or will share vehicles in order to reduce the number of vehicle trips on the highway network. There will also be a small number of heavy goods vehicles and construction worker movements associated with the Cable Route Corridor.
- 14.2.6 A cumulative assessment was also undertaken, to consider other committed or potential schemes in the area.

14.3 Baseline

- 14.3.1 A transport study area was identified which covers the local roads which provide access to the Sites and associated routes towards the major and strategic road networks. The strategic road network and major road network will form the

¹ Note, this figure is higher than the estimate used for Chapter 17 Socio-economics, Tourism and Recreation to allow for added flexibility.



primary routes for all vehicle movements until the local routes need to be used to reach each of the Sites. This is the area whereby transport and access effects could occur.

- 14.3.2 Automatic traffic count surveys have been undertaken and Department for Transport data has also been used in order to establish the baseline traffic conditions for the study area. The study area also encompasses a number of public rights of ways.

14.4 Mitigation Measures

- 14.4.1 Embedded mitigation measures will be implemented during the construction period. An Outline Construction Traffic Management Plan [EN010170/APP/GH7.9] and Outline Operational Traffic Management Plan [EN010170/APP/GH7.25] has been prepared. The document provides a framework for the management of construction vehicle movements to and from the Scheme, to ensure that the effects of the temporary construction phase on the highway network are minimised.
- 14.4.2 The construction period will include the use of heavy goods vehicles to deliver equipment and materials. This will be strictly managed to ensure that vehicle movement is controlled, uses specific identified routes, occurs outside of peak highway periods and movements are kept to a minimum.
- 14.4.3 On a day-to-day basis, the largest vehicle that will be used to deliver equipment to the Site will be a 16.5m articulated vehicle, although a significant proportion of heavy goods vehicles movements will be by smaller vehicles. There will also be a small number of abnormal load movements to transport transformers and routes have been assessed for these movements.
- 14.4.4 An Outline Public Rights of Way and Permissive Paths Management Plan [EN010170/APP/GH7.10] has been prepared. This will manage movements during the construction, operational and decommissioning phases across the Cable Route Corridor during periods where vehicles must pass. Whilst the design of the Sites seeks to avoid cross public rights of ways wherever possible, Green Hill F and Green Hill G contain several public rights of ways where management will be required. The document covers permissive paths that are proposed and identifies the longer-term management across the operational phase.

14.5 Assessment of Impacts and Effects

- 14.5.1 The likely effects of vehicle movements have been assessed. The following criteria has been considered in this assessment:
- Severance of communities;
 - Non-motorised user delay;
 - Non-motorised user amenity;
 - Fear and intimidation on and by road users;
 - Road vehicle driver and passenger delay;
 - Road user and pedestrian safety; and



- Hazardous or large loads (including abnormal loads).

Construction Phase

- 14.5.2 During the construction phase, the assessment concludes that the likely effects of the Scheme on the above criteria will either be negligible or minor adverse in nature and not significant. The construction phase would not have a significant adverse effect on any of part of the study area.

Operational Phase

- 14.5.3 During the operational phase, traffic associated with the operation and maintenance phase (including replacement of equipment) is considered to be lower than that associated with the construction phase. The effects of the Scheme during the operation and maintenance phase will be lower or no worse than the construction phase.

Decommissioning Phase

- 14.5.4 Traffic associated with the decommissioning phase is considered to be lower than that associated with the construction phase. The effects of the Scheme during the decommissioning phase will be lower or no worse than the construction phase.



15 Noise and Vibration

15.1 Introduction

- 15.1.1 Environmental Statement Chapter 14: Noise and Vibration [EN010170/APP/GH6.2.14] has considered the assessment of likely significant effects in respect to noise and vibration of the construction, operation, and decommissioning phases of the Scheme.

15.2 Methodology

- 15.2.1 The assessment is supported by a baseline noise survey of the Sites, which characterises the existing noise environment at and in the vicinity of the Scheme and nearby existing sensitive receptors. Noise predictions and subsequent assessments of impacts have been carried in accordance with current policy and guidance, and the methodology discussed and agreed with all relevant statutory bodies.

15.3 Baseline

- 15.3.1 The existing noise environment at, and in the vicinity of, the Sites has been established by a noise survey. The survey consisted of unattended monitoring locations considered to be representative of all identified sensitive receptors. All noise surveys undertaken included noise from weekdays and weekends.
- 15.3.2 During attendance, the dominant noise sources found in the area include road traffic noise from the A43, Walgrave Road, Kettering Road, Moulton Road, Sywell Road, Wellingborough Road, Highfield Road, Wilby Road, Mears Ashby Road, Main Road, Station Road, and noise from the National Grid site. Other contributions to the ambient noise environment consist of birdsong and trees rustling in the wind.

15.4 Mitigation Measures

- 15.4.1 The Construction Environmental Management Plan (CEMP) includes best practicable means and good practice measures for management of noise, to be used during the construction phase of the Scheme such as maintenance of equipment and controls on construction traffic. This will be written in accordance with the outline Construction Environmental Management Plan (oCEMP) secured by the requirements of the Development Consent Order.
- 15.4.2 Decommissioning mitigation measures will be the same as construction mitigation measures with similar good practices measures outlined in the Decommissioning Statement.
- 15.4.3 An Operational Environmental Management Plan (OEMP) will be used during the operational stage of the Scheme such as selection of quieter equipment, appropriate training, and Best Practicable Means (BPMs), where possible. This will be written in accordance with the outline Operational Environmental Management Plan (oOEMP) secured by the requirements of the Development Consent Order.



15.5 Assessment of Impacts and Effects

Construction Phase

- 15.5.1 The assessment has taken into account the following primary noise-generating activities, which are deemed to be the most significant sources of noise during the construction phase:
- Site preparation, which will likely include the use of excavators and dozers;
 - Installation of solar photovoltaic panels, which will likely include the use of push press piling rigs and excavators; and
 - Trenching and installation of the cable route, which will likely include the use of excavators and dozers.
- 15.5.2 Construction noise levels at surrounding receptors will vary depending on the locations and types of works taking place. Due to the variation in construction works activities and locations across the Scheme, it is considered that any periods of regular high construction noise levels experienced at a receptor would be of a limited short-term duration (i.e. less than one month).
- 15.5.3 Based on the distances between the Sites and surrounding receptors to locations where heavy ground works (excavation, push piling) may take place, it is considered that vibration from construction works experienced at most sensitive receptors will be equivalent to an effect which is not significant, whilst those receptors within a very short distance (e.g. within 10m) to the works may experience a significant effect for a short period of time.
- 15.5.4 Based on the distances between the Sites and surrounding receptors to locations where construction traffic may take place, it is considered that vibration from construction works experienced at sensitive receptors will be equivalent to an effect which is not significant.
- 15.5.5 Following the application of mitigation within the Outline Construction Environmental Management Plan, all noise and vibration effects during construction activities were assessed as not significant.

Construction Traffic

- 15.5.6 The predicted increase in traffic for all vehicles and heavy goods vehicles, between a scenario with and without the Scheme, has been compared. The percentage increase in traffic between these scenarios was used to determine the increase in road traffic noise levels at all nearby noise sensitive receptors.
- 15.5.7 The construction traffic noise levels were assessed as not significant for all sensitive receptors.

Operational Phase

- 15.5.8 The assessment results predict that noise levels from the Scheme are predicted to be no higher than the representative background noise levels at the closest sensitive receptors during the daytime and night-time. This is an indication of a moderate/minor effect and not significant.



- 15.5.9 In addition, as measured existing background noise levels are below 35 dB at some monitoring locations, the rating levels at these receptors are defined as low in accordance with current guidance. It is therefore considered appropriate and best practice that absolute noise levels should also be considered as appropriate for assessment of noise at these locations. An assessment of internal noise levels at the receptors results in a negligible impact and therefore supports the conclusion that the effects of the Scheme are not significant.

Replacement of Batteries and Panels

- 15.5.10 The assessment also predicts noise from replacement activities (of batteries and panels) to be not significant.

Decommissioning Phase

- 15.5.11 It is assumed that the noise and vibration effects during decommissioning will be similar to the construction phase. Therefore, the standard mitigation measures included in the Outline Decommissioning Statement to mitigate noise and vibration impacts will be appropriate for the decommissioning phase and the effects are anticipated to be not significant.
- 15.5.12 Typical decommissioning noise levels across the overall duration of the decommissioning programme will likely be limited to a low magnitude impact. For receptors of high sensitivity this equates to a moderate adverse effect which is not significant.



16 Glint and Glare

16.1 Introduction

16.1.1 Environmental Statement Chapter 15: Glint and Glare [EN010170/APP/GH6.2.15] has considered the assessment of impacts and effects in respect to glint and glare towards nearby light-sensitive receptors. Specifically, this chapter has considered the effects upon road users, occupants of nearby residential dwellings, aviation activity at nearby airfields.

16.1.2 Reflectivity refers to light that is reflected off surfaces (e.g. glazed surfaces or areas of metal cladding). The potential effects of reflectivity are glint and glare. The Federal Aviation Administration's (FAA) 'Technical Guidance for Evaluating Selected Solar Technologies on Airports' provides the following definitions:

- Glint - "*a momentary flash of bright light*"
- Glare - "*a continuous source of bright light*"

16.1.3 It should be noted that there are no waterways large enough for vessels within 1km of the Sites on which solar panels will be located. As such, navigable waterways are not considered further within the assessment.

16.1.4 Due to the 'Low' sensitivity of public rights of ways and horse facilities, the maximum significance of impact is considered 'minor'. Which means the receptor is tolerant to change without detrimental effect and is of low or local importance. As such, public rights of ways and horse facilities are not considered further within the assessment.

16.2 Methodology

16.2.1 The following methodology for glint and glare assessments is derived from good practice considerations whilst incorporating relevant guidance, and has been applied when assessing glint and glare impacts from the Scheme:

- Light-sensitive receptors have been identified in the area surrounding the Scheme following the below screening distances:
 - Rail infrastructure within 500m has been identified;
 - Road infrastructure, residential dwellings, public rights of way, and community facilities within 1km have been identified; and
 - Aviation infrastructure within 10km has been identified.
- Glint and glare from proposed solar panels within the Scheme towards the identified receptors has been considered by undertaking geometric modelling calculations.
- The visibility of the solar photovoltaic panels from the identified receptors has been considered. If the panels are not visibly from the receptors, then no glint or glare can occur.
- Where glint or glare is predicted, factors such as duration, time of day, and, for aviation receptors, the glare intensity has been considered to determine the magnitude of impact.



- Mitigating factors have also been considered for example the expected cloud cover in the area.
- Determination has been made of the significance of the effect and whether this is considered significant.
- If any significant effects are identified, additional mitigation will be considered to reduce the effect on receptors.

16.3 Baseline

- 16.3.1 A receptor review was undertaken to identify receptors to be included within the glint and glare assessment for the Scheme.
- 16.3.2 No rail infrastructure was identified within the 500m screening distance of the Scheme. As such, rail infrastructure was not considered further within the assessment.
- 16.3.3 Residential dwellings were identified within the 1km screening distance of the Scheme. Only residential dwellings closest to the proposed arrays were considered for the modelling assessment. This is because it is anticipated that these dwellings, along with the intervening vegetation and terrain, will block the line of sight from the dwellings situated behind them.
- 16.3.4 Major roads (such as A, B, or motorways) were identified within the 1km screening distance of the Scheme. Where the receptor review indicated that there was a potential line of sight between road users and the proposed arrays, road receptors have been included within the modelling assessment.
- 16.3.5 The Acorn Centre, a riding school and therapy centre, that specialises in working with children and young people was identified within close proximity to the Scheme and therefore has been included within the modelling assessment.
- 16.3.6 Aviation infrastructure within the 10km screening distance has been identified, and aviation infrastructure within 5km of the Scheme has been identified for the modelling assessment. Aviation receptors along the approach paths towards aerodromes and Air Traffic Control Tower personnel (where applicable) have been considered within the modelling assessment.

16.4 Mitigation Measures

- 16.4.1 Embedded mitigation measures that have been included within the Scheme to reduce glint and glare impacts are:
- Instant screening in the form of vegetation to reduce impacts towards ground-based receptors.
 - Removal of panels from areas within the Scheme to reduce impacts towards ground-based and aviation receptors.

16.5 Assessment of Impacts and Effects

- 16.5.1 Solar panels may generate glint and glare effects at the Sites.



- 16.5.2 The operational phase represents the worse-case scenario for all development phases of the Scheme. On this basis, this assessment has therefore only considered operational effects.

Operational Phase

- 16.5.3 Glint and glare was predicted towards modelled residential dwellings nearby to the Scheme. Upon a review of mitigating factors and embedded mitigation, a low impact has been predicted. As such, the effect from glint and glare is predicted towards residential dwellings nearby to the Scheme is not significant.
- 16.5.4 Glint and glare was predicted towards modelled road receptors nearby to the Scheme. Upon a review of mitigating factors and embedded mitigation, a low impact has been predicted. As such, the effect from glint and glare is predicted towards road receptors nearby to the Scheme is not significant.
- 16.5.5 Glint and glare was predicted towards modelled aviation receptors at six nearby aerodromes. Upon a review of mitigating factors and embedded mitigation, a low impact that is not significant was identified in relation to four aerodromes. In respect of the remaining two aerodromes where the modelling review indicated there may be significant effects, an aviation expert was consulted in order to understand whether additional mitigation would be required. Following consultation with the aviation expert, and a review of empirical evidence of the effects from existing solar farms near to aerodromes, the residual effects towards all modelled aerodromes was found to be not significant.



17 Air Quality

17.1 Introduction

- 17.1.1 Environmental Statement Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]** has considered the assessment of impacts and effects in respect to air quality. The chapter considers emissions from fugitive dust, construction equipment, traffic and the effects that these would have on people (human receptors) and habitats (ecological receptors) during the construction and decommissioning of the Scheme. The assessment also considers emissions from vehicles and from a battery fire during the operation and maintenance of the Scheme.

17.2 Methodology

- 17.2.1 During the construction phase, there is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined in the Institute of Air Quality Management construction dust guidance. There is also the potential for fugitive dust emissions during the decommissioning phase. The potential effects on air quality associated with the decommissioning phase are considered to be similar to those risks identified during the construction phase, therefore the assessment undertaken for construction dust and its outcome are considered applicable in relation to decommissioning.
- 17.2.2 The assessment of the effects of vehicle emissions from traffic related to the Scheme during the construction, operational and decommissioning phases is based on the Institute of Air Quality Management and Environmental Protection UK development control guidance. The guidance provides screening criteria indicating the thresholds above which an assessment may be necessary. Where the criteria are met, further assessment is generally considered necessary to determine the concentrations of pollutants at air quality receptors adjacent to the roads that meet the criteria. Should the criteria not be met, vehicle emissions are considered to be not significant, and no further assessment is usually required.
- 17.2.3 The assessment of construction phase construction equipment emissions is based on the Institute of Air Quality Management and Environmental Protection UK development control guidance, the Department, the Department for Environment, Food and Rural Affairs air quality technical guidance and professional judgement. The assessment has considered the construction programme, construction equipment required, proximity of air quality sensitive receptors and baseline air quality concentrations. There is also the potential for construction equipment emissions during the decommissioning phase. Details regarding decommissioning phase activities are limited. However, the potential effects on air quality associated with the decommissioning phase are considered to be similar to those risks identified during the construction phase. As such, the assessment undertaken for construction phase construction equipment emissions and its outcome are considered applicable in relation to decommissioning.
- 17.2.4 Associated infrastructure for the Scheme such as batteries have the potential to cause air quality effects in the rare result of a fire incident. Concentrations of



pollutants most likely to be emitted by a battery fire have been determined using an air quality model. There is limited guidance and data are available for modelling of battery fire emissions, therefore the assessment has been undertaken using professional judgement.

17.3 Baseline

- 17.3.1 There are a number of human and ecological receptors surrounding the Scheme. Existing air quality data shows no exceedances of air quality mean objectives in recent years based on the local authority monitoring records.

17.4 Mitigation Measures

- 17.4.1 Embedded mitigation measures have been applied to reduce, and where possible avoid, air quality effects of the Scheme. Measures that have been incorporated include sensitive routing and siting of infrastructure and temporary works. Additional measures are included in the Outline Construction Environmental Management Plan [EN010170/APP/GH7.1], the Outline Construction Traffic Management Plan [EN010170/APP/GH7.9], the Outline Battery Storage Management Plan [EN010170/APP/GH7.7], and the Outline Decommissioning Statement [EN010170/APP/GH7.3].

17.5 Assessment of Impacts and Effects

Construction Phase

- 17.5.1 The construction dust risk assessment identified high sensitivity human receptors within the study area, including residential properties and ecological sites. With the implementation of relevant mitigation, the effect of construction dust emissions is predicted to be not significant.
- 17.5.2 Construction vehicle numbers are predicted to be below the screening criteria outlined in the Institute of Air Quality Management and Environmental Protection UK development control guidance. The effects from construction vehicle emissions from the Scheme are therefore predicted to be not significant.
- 17.5.3 There are a human and ecological receptors within 200m of the Scheme. However, due to the temporary nature of construction equipment operation, low baseline air quality concentrations and implementation of control measures, the effect of emissions from construction equipment would be not significant.

Operational Phase

- 17.5.4 During the operational and maintenance phase, the Scheme will be staffed by a limited number of operatives, with additional and infrequent maintenance trips. As such air quality effects from vehicles during the operation of the Scheme are considered to be not significant.
- 17.5.5 Beyond repairs and replacements of equipment carried out as part of general maintenance activities, there will be a requirement to replace the equipment as it reaches the end of its lifespan. Vehicle numbers as a result of equipment replacement are predicted to be less than for the construction phase and therefore below the screening criteria outlined in the Institute of Air Quality Management and Environmental Protection UK development control guidance.



The effects from vehicle emissions during equipment replacement are therefore predicted to be not significant.

- 17.5.6 Predicted air quality concentrations as a result of a battery fire are below the concentrations at which irreversible or long-lasting health effects could occur. With the proposed measures in place, the effect of battery fire emissions during the operational phase is therefore predicted to be not significant.

Decommissioning Phase

- 17.5.7 There is the potential for emissions from fugitive dust, vehicles and equipment during the decommissioning phase of the Scheme. However, the potential effects on air quality during decommissioning are considered to be the same, or less than, the construction phase. The effects on air quality during decommissioning would therefore be not significant.



18 Socio Economics, Tourism and Recreation

18.1 Introduction

18.1.1 Environmental Statement Chapter 17: Socio-Economics, Tourism and Recreation [EN010170/APP/GH6.2.17] has considered the assessment of impacts and effects in respect to socio-economics, tourism and recreation. This includes:

- Population demography;
- Population skill and qualification attainment;
- Indices of deprivation;
- Economic activity and performance;
- Business profiles, sector shares and classification;
- Tourism as an economic sector;
- Agriculture as an economic sector; and
- Accessibility to and desirability of tourism and recreational facilities.

18.2 Methodology

18.2.1 The study area for socio-economic effects has been defined as the authority areas of Bedford Borough Council, Milton Keynes City Council, North Northamptonshire Council, and West Northamptonshire Council, due to the geographic expanse and scale of the Scheme. Within that study area, tourism and recreation matters have been assessed across and within a focussed 5km zone of influence from the scheme boundary for regionally important tourism and recreation venues. A smaller 2km zone of influence from the scheme boundary is used to identify and assess locally important tourism and recreation venues.

18.2.2 The assessment of socio-economic, tourism and recreation effects has been undertaken in accordance with the legislative requirements set out in The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations), and as directed by the National Policy Statements for energy developments. The methodology of this assessment is consistent with professional guidance published by the Institute of Environmental Management & Assessment.

18.2.3 The gathering of baseline data has relied on the most up-to-date publicly available data sources (as of 31 March 2025) accessed online, or by request to the host local authorities. Site visits and surveys of views, public rights of way, heritage, and traffic impacts have been undertaken by the Applicant team for producing Environmental Statement Chapter 8: Landscape and Visual Impact [EN010170/APP/GH6.2.8], ES Chapter 12: Cultural Heritage [EN010170/APP/GH6.2.8] and ES Chapter 13: Transport and Access [EN010170/APP/GH6.2.13]. The socio-economics, tourism and recreation chapter has used these survey results and photography from site visits in tandem with aerial photography and Ordnance Survey mapping to understand the visual and spatial relationships between Scheme and tourism and recreation assets.



18.3 Baseline

Socio-Demographic

- 18.3.1 The study area for socio-economic effects, which comprises North Northamptonshire, Milton Keynes, West Northamptonshire, and Bedford, had a combined population of 1,257,500 in 2021. Office for National Statistics 2018-based population projections indicate that from 2021 up to the year 2027 (the earliest year for the Scheme's construction), the population in the study area is anticipated to grow by approximately 3.9%.
- 18.3.2 As of 2021, the study area has an age profile that has a greater proportion of children, and working age people than the national population age profile of the UK. The largest five-year age bands are all from age 30 up to 59, together comprising 35.2% of the population in the study area. However, this is not consistent across the study area, with North Northamptonshire having a greater proportion of its population aged between 50 and 79, whilst Milton Keynes has a much greater proportion of children (5-14 years old) and young to middle age working aged people (25-49 years old).
- 18.3.3 The Scheme has an estimated operational life of up to 60 years, and for the purposes of the EIA, the Scheme is anticipated to be decommissioned no later than 2089, at which point, the national population of the UK is projected to grow by approximately 20.6% between 2021 and 2089. National population projections indicate that by the end of the Scheme's operational lifetime, estimated for this EIA as being 2089, the age profile of the UK is likely to be weighted towards increasingly older demographics within the population.
- 18.3.4 The population of the study area is more likely than the overall population of England to be deprived of access to suitable education and skills attainment, with this being of greatest concern in the former districts of Corby, Wellingborough, and Northampton. Barriers to accessing suitable housing and services are prevalent in many of the district areas, with Milton Keynes performing poorest of the areas in the study area. Some parts of the study area are also at risk of being more deprived than the national average for England in relation to health and crime, particularly within more urban areas such as in Corby and Northampton. The Scheme itself however is located in areas that are within the least deprived 40% of neighbourhoods in England.
- 18.3.5 The construction workforce associated with the Scheme is likely to consist of a large number of workers who live outside the study area. Whilst some of these workers may commute in, it is considered reasonable to assess the likelihood that these workers would require temporary accommodation in the study area during the construction period. These are most likely to be accommodated in private rental accommodation, of which there are an estimated 5,100 vacant private rental properties in the study area.

Economic Profile

- 18.3.6 Economic activity has been higher in the study area for socio-economic effects than the national rates for England and the UK at all surveyed points between 2014 and 2024. National trends from 2014-2024 show unemployment has fallen



from 6.7% in 2014 to a low of 3.6% in 2022, with an interim rise to 5.1% in 2021, likely as a result of economic impacts from the COVID-19 pandemic. Largely, the unemployment rate in the study area has been lower than national rates for England and the UK. The 2023 Business Register and Employment Survey (BRES) documents a working population in the study area in 2023 of approximately 658,000.

18.3.7 The size of the local economy can be measured using Gross Value Added (GVA), which measures the value of goods and services in a given area. The most recent data for GVA available in the UK is from 2022, which recorded that the study area had a GVA of £42.6 billion (approximately 2.2% of England's GVA).

18.3.8 The study area falls across the area covered by three tourism and visitor strategy and data areas: Northamptonshire, Bedford, and Milton Keynes. Each of the three areas has its own official tourism and visitors' information website. Together the 2023 International Passenger Survey and 2023 Great Britain Tourism Survey and Great Britain Day Visits Survey determine the value of tourism and visitor spending in the study area is £1.06 billion per year.

Tourism and Recreation

18.3.9 The Scheme is located near to a number of regional and local tourism attractions and recreation sites, principally historic buildings and conservation areas, and country parks. The near surroundings host a substantial network of public rights of ways and permissive footpaths, which form important local recreational walking and cycling routes between villages in the immediate vicinity. The area is also host to a number of long-distance recreational routes of regional or national importance, open for a range of users, making use of the substantial public rights of way network.

18.3.10 The Scheme is also located close to a number of recreational waterways and waterbodies (including the River Nene and Pitsford Reservoir), regional and local scale sports and recreation facilities, and a number of recreational aviation centres (including Sywell Aerodrome). There are a small number of recreational play and informal sport areas in local villages and settlements, while the surrounding countryside and village peripheries host a range of open and private equestrian centres. The Scheme is predominantly set within agricultural land.

18.4 Mitigation Measures

18.4.1 Embedded mitigation measures incorporated into the Scheme are set out in detail in the following documents, which control socio-economic, tourism and recreation impacts throughout the construction, operational and decommissioning phases of the Scheme:

- Outline Construction Environmental Management Plan (OCEMP) [EN010170/APP/GH7.1];
- Outline Skills, Supply Chain and Employment Plan (OSSCEP) [EN010170/APP/GH7.8];
- Outline Construction Traffic Management Plan (OCTMP) [EN010170/APP/GH7.9];



- Outline Public Rights of Way and Permissive Paths Management Plan (OPRoWMP) [EN010170/APP/GH7.10];
- Outline Landscape and Ecological Management Plan (OLEMP) [EN010170/APP/GH7.4];
- Outline Operational Environmental Management Plan (OOEMP) [EN010170/APP/GH7.2]; and
- Outline Decommissioning Statement (ODS) [EN010170/APP/GH7.3].

18.4.2 Each of these control documents are secured by requirement in the Development Consent Order [EN010170/APP/GH3.1] which requires detailed versions of these documents to be submitted that are substantially in accordance with their outline versions.

18.5 Embedded Mitigation Measures

Construction

- 18.5.1 Construction is anticipated to take place across a two-year period. Flexibility for construction phasing and staggering is included in the OCEMP [EN010170/APP/GH7.1] to be used to reduce the peak number of construction workers and movements or alter when this peak occurs in the construction period, to reduce demand on temporary accommodation for construction workers. The OCEMP furthermore requires the construction contractor to provide support for construction workers to find suitable accommodation in locations where adverse impacts can be minimised.
- 18.5.2 The Scheme's design provides embedded offsets and planting buffers from roads, public rights of ways, neighbouring buildings, and other tourism destinations to onsite infrastructure such as solar panels, substations, and BESS, to reduce visual impacts during construction. Measures to mitigate visual impacts from construction operations, lighting, and the location of construction equipment and construction compounds, are set out in the OCEMP [EN010170/APP/GH7.1] and OLEMP [EN010170/APP/GH7.4].
- 18.5.3 The OCTMP [EN010170/APP/GH7.9] and OPRoWMP [EN010170/APP/GH7.10] together will help to control construction traffic movements and protect public rights of way users. These measures include controlling the routing and number of heavy goods vehicles movements to minimise impacts on tourism destinations and recreational road users. Public rights of ways within the Order Limits will be kept open during construction where practicable, with any crossing or traffic conflict points overseen by spotters or banksmen for heavy goods vehicles. Where closures are necessary, these will be prioritised for overnight work, will be temporary in nature and supported by appropriate amount of notice and suitable diversions provided. Any diversions to public rights of ways will be temporary with the original routing restored as soon as works on the original route are completed.
- 18.5.4 The OCEMP [EN010170/APP/GH7.1] includes monitoring requirements relating to the use, condition, and quality of the environment along public rights of ways



during the construction of the Scheme. This will include regular inspections of public rights of ways within the Order Limits.

Operation

- 18.5.5 During its up to 60-year operational lifetime, the Scheme allows for continued income for eligible landowners by way of ground rent in place of the loss of income from agricultural use of the Sites.
- 18.5.6 The measures set out in the OOEMP **[EN010170/APP/GH7.2]** are used to control visual, accessibility, and operational and maintenance traffic impacts from the Scheme. Visual impacts from the Scheme are mitigated against in co-ordination with the embedded Scheme design and measures set out in the OLEMP **[EN010170/APP/GH7.4]**. These mitigation measures, such as noise attenuation, glint and glare mitigation, and additional landscape screening to residential and other sensitive receptors such as recreational routes in the proximity of the Scheme. Proposed landscaping planting is likely to mature over the lifetime of the Scheme, which will mitigate effects of the Scheme on the surrounding landscape and amenity for residents and tourists.
- 18.5.7 The routing of public rights of ways is retained by the Scheme design to ensure the use and connectivity of public rights of ways is maintained throughout the operational lifetime of the Scheme. Any diversions to public rights of ways and other recreational routes, if required during solar panel replacement events, will be temporary with original routing restored as soon as practicable.
- 18.5.8 Peaks in operational and maintenance activity are anticipated to take place for the replacement of solar photovoltaic panels and battery energy storage infrastructure. In these instances, embedded mitigation and best practice measures set out for construction will be reintroduced and implemented for these periods of peak activity on the Scheme.

Decommissioning

- 18.5.9 The decommissioning of the Scheme is likely to impact upon socio-economic, tourism and recreation receptors in a similar manner to during construction, and so embedded mitigation measures set out for construction are also applicable to decommissioning. These measures are set out in the ODS **[EN010170/APP/GH7.3]**, secured by requirement in the draft Development Consent Order **[EN010170/APP/GH3.1]**.

Project Lifetime (Construction to Decommissioning)

- 18.5.10 A community contact role, either as part of the operational workforce during the Scheme's operational lifetime, or as a dedicated Community Liaison Manager during construction, peak replacement, and decommissioning activities, will serve the purpose of receiving and responding to any concerns or issues with public rights of ways throughout the rest of the Scheme's lifetime.
- 18.5.11 The Scheme features embedded security and crime mitigation measures primarily to prevent trespass, vandalism and theft of onsite infrastructure and equipment during the lifetime of the Scheme, and are secured by requirement in the draft DCO **[EN010170/APP/GH3.1]** in reference to the OCEMP



[EN010170/APP/GH7.1], OOEMP [EN010170/APP/GH7.2], and ODS [EN010170/APP/GH7.3] for the respective construction, operation and decommissioning phases of the Scheme.

18.6 Additional Mitigation and Enhancement Measures

Construction

- 18.6.1 To reduce the level of significant effect on public rights of ways, permissive routes, long distance recreational routes, and the recreational use of the local highway network, the OCTMP [EN010170/APP/GH7.9] and OPRoWMP [EN010170/APP/GH7.10] include further measures to target managing driver behaviours by enforcing heavy goods vehicles routes. Additional warning signs and banksmen will be deployed at shared site entrances or where public rights of ways are also being used as heavy goods vehicles access points.
- 18.6.2 Enhancement to local education, through promoting apprenticeships and training schemes to uplift skills and qualifications, is set out in the OSSCEP [EN010170/APP/GH7.8]. Practicable opportunities to promote local recruitment and procurement for construction, manufacturing, and the energy industry are also set out in the OSSCEP. Focus on local recruitment and procurement during construction will help to employment and economic benefits within the study area for socio-economic effects. Furthermore, support for agricultural workers in moving to diversified agricultural practices that can be continued alongside the operation of the Scheme will be explored through the OSSCEP.

Operation

- 18.6.3 In addition to embedded mitigation measures for the Scheme's operation and maintenance set out in the OOEMP [EN010170/APP/GH7.2] and OLEMP [EN010170/APP/GH7.4], additional measures may be required during peak operational and maintenance periods: namely the replacement of solar and BESS infrastructure. This may include the reintroduction of traffic management including banksmen at sensitive points on the highway network or at public rights of ways crossing points.
- 18.6.4 The OSSCEP [EN010170/APP/GH7.8] sets out efforts to find opportunities for local recruitment and procurement, and supporting local education and skills uplifting during the Scheme's operation to enhance the Scheme's employment and economic benefit, and supporting local education and skills. Efforts should focus on opportunities for re-skilling of employees into new industries, including the energy sector, and supporting the local agricultural industry.
- 18.6.5 The Scheme also features provision for enhancement to existing public rights of ways on the Sites, through repairing, upgrading and replacing existing public rights of way furniture, such as signs, gates, and re-establishing hedgerows gaps. In addition, the Scheme provides for a set of new non-vehicular permissive access routes for pedestrians horse riders to improve accessibility to the countryside and improved connectivity to the wider public rights of ways network.



Decommissioning

- 18.6.6 Decommissioning will see the return of effects to socio-economic, tourism and recreation receptors in a similar level of significance to those experienced during construction. Additional mitigatory measures are set out in the ODS **[EN010170/APP/GH7.3]** including providing banksmen at sensitive points on the highway network or at public rights of way crossing points on the Sites.
- 18.6.7 Additional enhancement measures during decommissioning can be implemented in a similar respect to during construction, including promotion of local skills and training opportunities, and focus on promoting local labour, supply chains, and delivery of transferable skills and employment.

18.7 Assessment of Impacts and Effects

- 18.7.1 The socio-economic, tourism and recreation ES chapter assesses the impacts on the following receptors for the construction, operation, and peak replacement scenario of the Scheme:
- Resident population;
 - Population demography;
 - Access to accommodation;
 - Skills and qualifications;
 - Economic activity and employment (also assessed for decommissioning);
 - Local economy and economic prosperity (also assessed for decommissioning);
 - Regional tourist attractions;
 - Local tourist attractions;
 - Public rights of ways and permissive routes;
 - Long distance recreational routes;
 - Recreational use of the local highway network;
 - Recreational use of waterways and waterbodies;
 - Formal recreational facilities for organised sports;
 - Recreational aviation;
 - Recreational youth sports and children's play areas; and
 - Equestrian facilities.

Construction Phase

Socio-Economic Effects

- 18.7.2 The construction of the Scheme is anticipated to generate the equivalent to a gross 464 full time equivalent employees per annum, with the estimated on-site



construction workforce expected to peak at approximately 876 employees² in the middle of the construction period.

- 18.7.3 Of the peak workforce, an estimated 701 temporary employees are likely to temporarily relocate to the study area for socio-economic effects from elsewhere in the UK. This will bring a temporary uplift of 0.054% to the projected residential population of the study area in 2027. This is unlikely to have any predominant positive or negative bias to the projected population trend in the study area. Resultantly, this is an overall neutral effect, and is therefore not a significant effect.
- 18.7.4 Changes to the age, health, and sex demographic profile of the study area associated with the Scheme's construction peak are expected to have a predominantly positive bias as a result of an increase in working-age people, and those who are likely to be in generally good physical health. As a result, there is a likely short-term temporary minor beneficial effect to the population demography in the study area. This is not a significant effect.
- 18.7.5 The proposed peak 701 inbound employees may be temporarily accommodated in private rental accommodation. An estimated total of 5,100 vacant private rental properties in the study area have been identified. This demonstrates that temporary workers can be accommodated in 13.7% of vacant rental stock without substantially increasing competition for private rental properties. This is therefore no more than a short- to medium-term temporary minor adverse effect, and is therefore not a significant effect.
- 18.7.6 The Scheme is likely to produce a modest number of skills and education opportunities, such as through construction apprenticeships. With additional enhancement measures, the likely effect on skills and qualification attainment in the study area is up to a medium-term temporary moderate-minor beneficial effect. This is not a significant effect.
- 18.7.7 The construction of the Scheme is anticipated to create a net direct total of 66 full time equivalent construction industry jobs, worth a total of £10.1 million in Gross Value Added (GVA) per annum within the study area. Further indirect and induced employment from supply chains and spending within the study area is estimated to generate 87 full time equivalent jobs worth £5.78 million GVA per annum. The Scheme may however result in the reduction in up to 12 full time equivalent jobs in the agricultural sector, worth £493,000 GVA per annum. Further negative impacts on tourism spending in the study area may result in a worst-case reduction of employment in tourism-dependent sectors by 29 FTE per

² Note, the assumptions made for peak activity construction workers in the Transport Assessment differs to the Socio-economics, Tourism and Recreation assessment. The Transport Assessment has assessed on the peak number of construction workers at the all the Sites happening simultaneously. Whilst this is unlikely to occur, it does represent the worst case scenario with regards to construction vehicle trip generation. The Socio-Economics, Tourism and Recreation assessment has assumed a peak number of 876 construction workers based on the estimated construction programme. These are considered appropriate to Socio-Economics, Tourism and Recreation assessment to ensure benefits to the local economy are not over-estimated.



annum. This therefore is equivalent to a loss of up to £1.66 million in visitor spending per annum. The accommodation sector, has potential to benefit from construction workers requiring temporary accommodation (where used instead of private rental spaces), creating an uplift of 11 full time equivalent jobs and an additional £635,000 GVA per annum to the economy.

- 18.7.8 The resultant changes to employment and GVA in the study area is therefore estimated to be an uplift of 123 full time equivalent jobs per annum, generating £14.4 million GVA per annum in the study area during the Scheme's construction. This is therefore an overall medium-term temporary minor beneficial effect on the labour force in the study area, and medium-term temporary minor beneficial effects to the local economy, as well as on local prosperity (including resident and workplace population salary). Neither of these are significant effects.
- 18.7.9 Outside the study area, employment and economic benefits felt across the rest of Great Britain as a result of "leakage" are likely to be up to an additional 388 full time equivalent jobs, generating £35.8 million GVA per annum. Overall, the Scheme is likely to generate a total GVA of £50.2 million per annum across Great Britain during its construction period.

Tourism and Recreation Effects

- 18.7.10 The construction of the Scheme is anticipated to have a degree of impact on the landscape setting of tourism attractions, whilst construction traffic associated with the Scheme is anticipated to be present on access routes in the locality. These impacts are not however anticipated to impact upon the use and importance of visitor attractions. Regionally important tourism attractions are anticipated to experience an overall medium-term temporary minor adverse effect across the 5km zone of influence, with the Sywell Aviation Museum and Sywell Country Park anticipated to experience a specific medium-term temporary moderate-minor adverse effect. Local tourism attractions within the 2km zone of influence are expected to experience a medium-term temporary negligible adverse effect overall, with only Overstone Grange Farm experiencing up to a medium-term temporary moderate-minor adverse effect. None of these are significant effects, as a result of embedded and additional mitigation measures being applied.
- 18.7.11 Subject to embedded and additional mitigation measures to limit direct adverse impacts occurring from site and cable construction activities, and the use of the public rights of way to facilitate heavy goods vehicles access to onsite works, the public rights of way network (made of 70 individually assessed public rights of way routes in the 2km zone of influence) is anticipated to experience an overall medium-term temporary minor adverse effect. Up to 27 of these routes may experience up to medium-term temporary moderate-minor adverse effects. These are not significant effects.
- 18.7.12 Due to their higher sensitivity, similar impacts on long-distance routes generate a greater significance of effect, even when additional mitigation is implemented. As such, the Scheme is likely to generate medium-term temporary moderate adverse effects on 8 of the 10 long-distance routes assessed. These therefore constitute a significant effect.



- 18.7.13 The local highway network as a recreational facility may be subject to construction heavy goods vehicles impacting upon accidents and safety, severance, pedestrian and driver delay and transporting of hazardous loads. The effect on recreational users has been determined as up to a medium-term temporary minor adverse effect, and therefore is not a significant effect.
- 18.7.14 Locally and regionally important waterways and bodies of water used for recreation are likely to experience indirect impacts as a result of views of the Scheme's construction, cable laying works, and as a result of heavy goods vehicle traffic on access routes. With additional mitigation measures, a peak medium-term temporary moderate-minor adverse effect is anticipated only at White Mills Marina, with the overall effect within the 2km and 5km zones of influence being a medium-term temporary minor adverse effect. This is therefore not significant.
- 18.7.15 Formal recreational facilities for organised sports have been identified and assessed as likely to experience up to a peak medium-term temporary moderate-minor adverse effect to 3 of the 11 identified sports facilities likely to be affected by the Scheme, resulting in an overall medium-term temporary minor adverse effect. This is therefore not a significant effect.
- 18.7.16 Similarly, recreational aviation facilities affected by the Scheme are likely to experience an overall medium-term temporary minor adverse effect. Sywell Aerodrome alone is likely to experience a medium-term temporary moderate-minor adverse effect on its operations as a result of its proximity to the Scheme, mitigated glint and glare effects, and its regional importance. This is however not a significant effect and no additional mitigation is proposed.
- 18.7.17 A total of 11 recreational youth sports and children's play areas have been identified as likely to be impacted by the Scheme's construction, as a result of increased traffic movements reducing accessibility to these facilities for children and young people. Subject to additional mitigation measures to control heavy goods vehicle movements, the effect on these receptors is anticipated to be no more than a medium-term temporary minor adverse effect to individual receptors and a medium-term temporary negligible adverse effect overall in the 2km zone of influence. These are therefore not significant residual effects.
- 18.7.18 The final group of assessed recreational facilities are equestrian facilities within the 2km zone of influence. The Scheme is likely to impact on equestrian facilities by way of views impacting the desirability of the facilities for users, the potential for disruption and noise from construction to facility users and horses in paddocks, and the potential for heavy goods vehicles and construction traffic on local roads to impact on recreational use and access to the public rights of ways network for hacking. This is anticipated to have a peak of medium-term temporary moderate-minor adverse effects to 7 of the 17 assessed locations. When considering the overall effect in the 2km zone of influence, the level of significance is a medium-term minor adverse effect. This is not a significant effect.



Operational Phase

Socio-Economic Effects

- 18.7.19 During its operational lifetime, the Scheme is anticipated to require a gross 15 full time equivalent employees per annum, of whom a representative 4 full time equivalent employees are anticipated to be sourced from within the study area for socio-economic effects. The short-term workforce required to deliver the peak replacement scenario of all solar photovoltaic panels and battery energy storage infrastructure is assessed as requiring a full-time workforce of 182 full time equivalent employees, with a peak month requiring up to 412 gross on-site workers.
- 18.7.20 Due to the low operational staffing requirement, there is a long-term neutral effect on resident population, and a neutral effect overall with regard to the resident demographic profile. A peak of 281 short-term temporary employees is likely to temporarily relocate to the study area from elsewhere in the UK during the peak replacement scenario. As during construction, this is unlikely to have any predominant positive or negative bias to the projected population trend in the study area. Resultantly, this is an overall neutral effect, and is therefore not a significant effect. Changes to the age, health, and sex demographic profile of the study area associated with the Scheme's peak replacement scenario are expected to have short-term temporary minor beneficial effect to the population demography. This is not a significant effect.
- 18.7.21 As the long-term operational workforce is not located onsite, there is no need for worker accommodation during the operational lifetime. This therefore results in a long-term neutral effect on housing and accommodation. The proposed peak 281 inbound employees are likely to require temporary accommodation in private rental properties. This is 5.5% of the estimated total of 5,100 vacant private rental properties in the study area, and thus will not substantially impact on demand for private rental properties. This is therefore no more than a short- to medium-term temporary minor adverse effect, and is therefore not a significant effect.
- 18.7.22 Due to the limited number of long-term jobs, and the short-term nature of the peak replacement event, the Scheme is anticipated to produce no more than a long-term minor beneficial effect on skills and education opportunities (such as apprenticeships) during its operational lifetime. This is not a significant effect.
- 18.7.23 During its operational lifetime, the Scheme is anticipated to create a net direct total of 3 full time equivalent energy sector jobs, worth a total of £520,000 GVA per annum within the study area. Further indirect and induced employment from supply chains and spending within the study area is estimated to generate 5 full time equivalent jobs worth £336,000 GVA per annum. The Scheme will continue to result in the long-term loss of up to 12 full time equivalent jobs in the agricultural sector, worth £493,000 GVA per annum. Impacts on tourism spending in the study area may result in a long-term loss of 10 full time equivalent jobs in tourism-dependent sectors. This is equivalent to a loss of up to £571,000 in visitor spending per annum. The accommodation sector is unlikely to see any substantial benefits during the Scheme's operational lifetime.



- 18.7.24 The resultant changes to employment and GVA in the study area is therefore estimated to be a long-term reduction of 13 full time equivalent jobs. This is a long-term minor adverse effect on the labour force in the study area. The Scheme is however likely to generate an uplift of £2.22 million GVA per annum in the study area during its operational lifetime. This is therefore a long-term minor beneficial effect on the local economy and prosperity. Neither of these are significant effects.
- 18.7.25 In the peak replacement scenario, the Scheme is anticipated to create a net direct total of 66 full time equivalent construction and energy industry jobs, worth a total of £10.1 million GVA per annum within the study area. Additional indirect and induced employment estimated to generate 87 FTE jobs worth £5.78 million GVA per annum. Tourism spending in the study area may experience a reduction of employment in tourism-dependent sectors by up to 13 full time equivalent per annum, or £764,000 in visitor spending per annum. The accommodation sector, has potential to benefit in the short-term from workers requiring temporary accommodation (where used instead of private rental spaces), creating an uplift of 2 full time equivalent jobs and an additional £97,000 GVA per annum to the economy.
- 18.7.26 The resultant changes to employment and GVA in the study area during the peak replacement event is therefore estimated to be an uplift of 130 full time equivalent jobs per annum, generating £17.1 million GVA per annum in the study area. This is therefore an overall short- to medium-term temporary minor beneficial effect on the labour force in the study area, and short- to medium-term temporary minor beneficial effects to the local economy and local prosperity. Neither of these are significant effects.

Tourism and Recreation Effects

- 18.7.27 Operational effects on tourism and recreation assets are largely defined by visual effects, which will be gradually mitigated through landscape planting and screening as it matures, while additional traffic and amenity impacts may arise during the peak replacement scenario.
- 18.7.28 During the Scheme's operational lifetime, regionally important tourism attractions are anticipated to experience an overall long-term minor adverse effect with only Sywell Aviation Museum likely to experience a long-term moderate-minor adverse effect. These effects are of the same significance during the peak replacement scenario. These are therefore not significant residual effects.
- 18.7.29 Local tourism attractions are expected to experience up to a long-term minor adverse effect (at 7 of 19 assessed receptors) and a long-term negligible adverse effect overall within the 2km zone of influence. These effects are also the same significance during the peak replacement scenario. These are therefore not significant.
- 18.7.30 The public rights of way network within the 2km zone of influence is anticipated to experience an overall long-term negligible adverse effect. Up to 3 of the 70 routes assessed may experience up to long-term moderate-minor adverse effects. These are not significant effects. During the replacement of onsite



infrastructure, the assessed public rights of way network is likely to experience a short-term temporary minor adverse effect overall with 12 of the assessed routes experiencing short-term temporary moderate-minor adverse effects. These are also not significant residual effects.

- 18.7.31 Subject to full implantation of additional mitigation measures, including the provision of new permissive paths to improve network connectivity, long-distance routes are anticipated to experience a long-term minor adverse effect overall in the 5km zone of influence, with 6 of the 10 routes experiencing long-term moderate-minor adverse effects. These are not significant effects during the Scheme's operational lifetime. During the peak replacement event, the overall effect on long-distance recreational routes is likely to uplift to a short-term moderate-minor adverse effect. This is not a significant residual effect. However, it is anticipated that the Northamptonshire Round long-distance route may experience a short-term temporary moderate adverse effect during peak replacement works. This is therefore a significant residual effect on this receptor.
- 18.7.32 The local highway network as a recreational facility has been determined as likely to experience up to a long-term minor adverse effect, with no additional level of significance during the peak replacement event. This is therefore not a significant effect.
- 18.7.33 Locally and regionally important waterways and bodies of water used for recreation are likely to experience indirect impacts as a result of views of the Scheme. During operation, this is likely to be long-term minor adverse effects to 3 of the 6 assessed features, with the overall effect to receptors in the 2km and 5km zones of influence being a long-term negligible adverse effect. During the peak replacement event, the overall effect is likely to be up to a short-term temporary minor adverse effect. These are therefore not significant.
- 18.7.34 Operational impacts to formal recreational facilities for organised sports have been identified and assessed as likely to be up to a long-term minor adverse effect to MK Heli Club, and an overall long-term negligible adverse effect to assessed organised sports facilities in the 2km and 5km zones of influence. The significance of these effects is not changed during the peak replacement scenario, although Wellingborough Old Grammarians Sports Club may also experience a short-term temporary minor adverse effect. These are therefore not significant residual effects.
- 18.7.35 Recreational aviation facilities affected by the Scheme are likely to experience an overall long-term minor adverse effect, with Sywell Aerodrome alone likely to experience a long-term moderate-minor adverse effect. This is the same significance during the peak replacement scenario. This is however not a significant effect.
- 18.7.36 Recreational youth sports and children's play areas are not anticipated to experience any adverse effects during operation. Subject to additional mitigation measures to control heavy goods vehicles movements, the effect on these receptors during the peak replacement event is anticipated to be no more than a short-term temporary minor adverse effect to any individual receptor, and a short-



term temporary negligible adverse effect overall within the 2km zone of influence. These are therefore not significant residual effects.

- 18.7.37 The Scheme's operation is likely to impact on equestrian facilities by way of views from within the paddocks and along public rights of ways impacting their desirability. This is anticipated to have a long-term moderate-minor adverse effect to 2 of the 17 assessed receptors. When considering the overall impact to equestrian facilities in the 2km zone of influence, the level of significance is a long-term negligible adverse effect. This is anticipated to be different during the peak replacement event, as heavy goods vehicles traffic on public roads and onsite works near public rights of ways may cause additional amenity impacts for equestrian users, resulting in an overall short-term temporary minor adverse to equestrian facilities in the 2km zone of influence. These are not however significant effects.

Decommissioning Phase

Socio-Economic Effects

- 18.7.38 The decommissioning of the Scheme is anticipated to generate an estimated 75-80% of the level of employment of the construction phase. As such, a gross 372 full time equivalent employees per annum is estimated, with the estimated on-site decommissioning workforce expected to peak at approximately 701 employees.
- 18.7.39 Socio-demographic impacts from the Scheme's decommissioning are anticipated to be similar to, or no greater than those arising from the Scheme's construction phase.
- 18.7.40 The decommissioning of the Scheme is anticipated to create a net direct total of 66 full time equivalent energy industry jobs, worth a total of £10.1 million in Gross Value Added (GVA) per annum within the study area for socio-economic effects. Further indirect and induced employment from supply chains, waste handling and spending within the study area is estimated to generate a further 87 full time equivalent jobs worth £5.78 million GVA per annum. Following Site restoration after decommissioning, the approximate 12 full time equivalent agricultural jobs displaced by the Scheme are likely to be able to be reemployed on the land. Adverse impacts on tourism spending in the study area may result in a worst-case reduction of employment in tourism-dependent sectors by 23 FTE per annum. This therefore is equivalent to a loss of up to £1.33 million in visitor spending per annum. The accommodation sector, has potential to benefit from inbound decommissioning workers requiring temporary accommodation, creating an uplift of 8 full time equivalent jobs and an additional £458,000 GVA per annum to the economy.
- 18.7.41 The resultant changes to employment and GVA in the study area is therefore estimated to be an uplift of 126 full time equivalent jobs per annum, generating £14.5 million GVA per annum in the study area during the Scheme's decommissioning. This is therefore an overall medium-term temporary minor beneficial effect on the labour force in the study area, and medium-term temporary minor beneficial effects to the local economy, as well as on local



prosperity (including resident and workplace population salary). Neither of these are significant effects.

Tourism and Recreation Effects

- 18.7.42 The scale of works required for decommissioning is likely to be no greater than that of the Scheme's construction phase, and as such, impacts on tourism and recreation receptors during decommissioning are of a reduced or no greater than equitable level of significance to those during the construction phase.



19 Human Health

19.1 introduction

19.1.1 Environmental Statement Chapter 18: Human Health **[EN010170/APP/GH6.2.18]** has considered the assessment of impacts and effects in respect to human health and wellbeing as a result of the construction, operation, and decommissioning of the Scheme. This includes:

- Impacts on the social environment, including access and use of leisure and recreation facilities;
- Impacts on the economic environment, primarily in regard to education and employment;
- Impacts on the bio-physical environment; and
- Impacts on the institutional and built environment.

19.2 Methodology

19.2.1 The study areas for human health effects have been defined as the 2km zone of influence, the 5km zone of influence, and the wider baseline study area. The 2km zone of influence covers the area in which most direct physical and mental health and wellbeing impacts are anticipated to occur. The 5km zone of influence is used solely for assessing the provision of primary healthcare, due to the semi-rural nature of the Scheme's location. Finally, the wider baseline study area, which covers the authority areas of Bedford Borough Council, Milton Keynes City Council, North Northamptonshire Council, and West Northamptonshire Council are used for assessing education and employment impacts due to the geographic expanse, influence and scale of the Scheme.

19.2.2 The methodology of this assessment is consistent with internationally recognised standards for the understanding of health, and professional guidance published by the Institute of Environmental Management and Assessment, Public Health England (and its successors), Public Health Wales, and guidance published by local authorities.

19.2.3 The gathering of baseline data has relied on the most up-to-date publicly available data sources (as of 31 March 2025) accessed online, or by request to the host local authorities. Due to the closely interdependent nature of human health effects to other technical chapters written in the ES, the human health chapter draws additional baseline data from:

- Chapter 7: Climate Change **[EN010170/APP/GH6.2.7]**;
- Chapter 8: Landscape and Visual Impact **[EN010170/APP/GH6.2.8]**;
- Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]**;
- Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**;
- Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]**;
- Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]**;



- Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**;
- Chapter 21: Electromagnetic Fields **[EN010170/APP/GH6.2.21]**;
- Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]**; and
- Chapter 23: Major Accidents and Disasters **[EN010170/APP/GH6.2.23]**.

19.2.4 The assessment of health and wellbeing impacts is applied to the general population, and to vulnerable groups or receptors (as defined in IEMA Guidance) identified through baseline conditions analysis. Consideration of vulnerable groups was utilised to effectively determine sensitivity of the population as a whole and identify what impacts the Scheme may have on health inequalities. The impacts of the Scheme on determinants of human health are assessed using professional judgement, good practice, and drawing on other assessments within the Environmental Statement, relying on a source-to-receptor pathway approach to determine where, and what, those impacts are likely to be.

19.3 Baseline

Human Environment

- 19.3.1 The 2021 Census identifies a total population in the 2km zone of influence of approximately 62,200, of whom 19.0% are aged up to 15 years old, and 20.4% are aged 65 or above, the latter of which is greater than national rates.
- 19.3.2 Of the population in the 2km zone of influence a total of 4.5% have a self-assessed declaration of health as being “bad” or “very bad”. Additionally, the proportion of the population in the 2km zone of influence self-assessing that their day-to-day activities are limited a little or a lot by a long-term health condition or disability is 16.6%. As of January 2025, the proportion of the working age population (age 16-64) in the 2km zone of influence who are entitled to Personal Independence Payment (PIP) is 8.6%. Generally, the population of the 2km zone of influence is of comparable or better health than the average for England and Wales.
- 19.3.3 The most recent data available on deprivation experienced in England is the Index of Multiple Deprivation (IMD) study from 2019 which identifies that overall deprivation in the zone of influence is low, with 26% of neighbourhoods in the 2km zone of influence being in the 50% most deprived areas in England. However, one of these (North Northamptonshire 33B, formerly Wellingborough 007B), is in the 10% most deprived areas. This is reflective of the levels of deprivation with regard to health and disability, and quality of the living environment in the 2km zone of influence. The IMD 2019 study does however identify that residents in the 2km zone of influence are more deprived than the national average in access to suitable housing and services.
- 19.3.4 General health indicators at the local authority level demonstrate that the wider baseline study area performs at or similarly to the national level with respect of life expectancy, and under-75 mortality. Notable exceptions are the consistently lower than average life expectancy inequality rates for both males and females,



but a greater than average suicide rate and emergency hospital admissions for intentional self-harm per 100,000 people across the wider baseline study area.

- 19.3.5 Within the 2km zone of influence, life expectancy at birth for both males and females in the zone of influence is higher than the national average for England. The 2km zone of influence has lower deaths of all causes for under-75s, lower deaths from respiratory diseases at all ages, and lower deaths from causes considered preventable compared to national rates. The estimated prevalence of depression in the 2km zone of influence is slightly higher than across the wider baseline study area and across England, as are rates of emergency hospital admissions for intentional self-harm, albeit with significant variance between different neighbourhoods. It is also indicated that the 2km zone of influence performs worse than the national average of the 15 year old population engaging in regular smoking, but obesity in Year 6 children is overall lower across the zone of influence than the wider baseline study area and the national average. Finally, Local Insights reporting demonstrates that the 2km zone of influence has a significant diversity in community wellbeing, with the median Community Needs Index score being slightly worse than the average score for England.

Social Environment

- 19.3.6 As of 2023, the wider baseline study area has an affordability ratio (between median average house value and the average (median) workplace-based full-time earnings) in the range of 7.33 to 8.30, consistent with the national average for England and Wales of 7.71, and substantively greater than the affordability threshold of 5.0. An estimated 19.3% of households in the wider baseline study area are in private rental accommodation. There are an estimated 180 vacant private rental properties in the 2km zone of influence and 5,100 in the wider baseline study area. The wider baseline study area hosts an estimated 13,500 serviced accommodation rooms, with a minimum anticipated vacancy rate of 14%.
- 19.3.7 The 2km zone of influence is host to a well-connected network of public rights of ways and permissive recreational routes, which are important for both connectivity, and personal activity and wellbeing. The 2km zone of influence also boasts a good number of leisure and recreation facilities including navigable waterways, formal sports recreation grounds, recreational aviation facilities, equestrian centres, and a small number of recreational play and informal sport areas in local villages and settlements for children.
- 19.3.8 Roadside footpaths, cycle paths, and on-road cycle infrastructure is limited in the 2km zone of influence, particularly outside built-up areas. No part of the Scheme lies more than 10 miles (16km) from the nearest railway station, and communities nearest the Scheme also host a number of bus services. Mears Ashby is the largest settlement in the 2km zone of influence with no bus services.
- 19.3.9 Generally, road incidents are spread throughout the study area. Across principal A-roads, the number of incidents and their severity is higher than that for local roads, as would be expected given the nature of these roads, the level of traffic that they accommodate, and the extents they cover within the study area.



- 19.3.10 Many of the communities in the 2km zone of influence are centred around villages with a historic core and key community buildings or spaces. Community culture is also likely to be influenced by access and connection to the countryside as a result of the semi-agricultural landscape and provision of public rights of ways to access it. The 2km zone of influence is host to only a small number of existing solar PV developments, although a significant National Grid substation and overhead transmission line infrastructure are present. Large scale solar energy infrastructure and engagement with the Development Consent Order process is more likely than not to be novel to the residents in the area.

Economic Environment

- 19.3.11 The proportion of the population between the ages 16-64 years old achieving no qualifications in the wider baseline study area varies from 3.6-7.7%, with a resultant average of 6.0%. This is consistent with, albeit slightly lower than, the national rates for England (6.2%) and the UK (6.6%). Attainment of the equivalent of a national vocational qualification (NVQ) Level 4 and higher qualifications (Foundation Degree or higher) is at 42.0% in the wider baseline study area, compared to 46.7% in England, and 47.1% across the UK. The population of the wider baseline study area is also identified as more likely than the national average to be deprived of access to suitable education and skills attainment.
- 19.3.12 As of September 2024, the wider baseline study area has an economic activity rate within members of the working age (16-64-year-old) population of 81.5%. This is substantially higher than the national average for England (78.8%) and the UK (78.4%). The unemployment rate is 2.9%, substantially lower than the national average for England (3.9%) and the UK (3.7%). For residents within the wider baseline study area, the approximated median annual gross salary for full-time workers (in 2024) was £38,000, marginally higher than the median of England, at £37,600, and the UK median, at £37,400.
- 19.3.13 As of February 2025, the proportion of 16-64 year olds claiming either Jobseekers Allowance or Universal Credit and “searching for work” in the 2km zone of influence was 2.9-3.1%. This is substantially lower than the claimant rate across the wider baseline study area (3.7-4.0%), and significantly lower than the national rate for England and Wales (4.2-4.4%).

Bio-physical Environment

- 19.3.14 Vulnerable populations to climate change include those with long-term cardiovascular and respiratory illnesses or disabilities who are at greater risk due to reduced air quality, elderly and very young children who are at greater risk of heatstroke, people living in poor quality housing, and people living in locations susceptible to natural disasters, such as floods and landslips exacerbated by climate change.
- 19.3.15 Air quality in the 2km zone of influence is well below Air Quality Strategy objective limits for particulate matter and common pollutants. Reported exceedances of NO₂ levels in the surrounding areas are as a result of concentration of pollutants from busy points on the road network in Northampton and in Wellingborough.



- 19.3.16 The Sites and Cable Route Corridor are predominantly at low risk of fluvial (river) and very low risk of pluvial (surface water) flooding. Exceptions to this are on Green Hill F, Green Hill BESS, and the Cable Route Corridor where associated with the River Nene and its tributaries, including Grendon Brook.
- 19.3.17 There are no licensed groundwater abstractions for potable water within 500 m of the Scheme, and sand and gravel extraction can be found next to Green Hill BESS and the Cable Route Corridor. Green Hill G contains up to a high risk of unexploded ordnance remaining in deep soil from WWII explosives deactivation and demolition works.
- 19.3.18 Baseline noise measurements have been taken at 25 locations across the Scheme to determine potential impacts on residential receptors. A number of subsections of the population may be more vulnerable to noise and vibration, principally those living closest to noise sources, but additionally those with sensory sensitivities and impairments to whom additional noise impacts would have a disproportionate effect on amenity.
- 19.3.19 There are existing cable routes and electrical infrastructure within the Sites and surrounding areas. These will have associated electromagnetic fields. The Scheme does not use any existing electrical infrastructure, up to its Point of Connection at the National Grid substation at Grendon. The greatest risk to human health from electromagnetic fields is as a result of prolonged exposure to high-strength electromagnetic fields. In addition, concerns and anxiety regarding exposure from major electrical infrastructure may manifest as mental health and wellbeing effects.

Institutional and Built Environment

- 19.3.20 The 5km zone of influence (for assessing primary health services) contains 12 General Practice (GP) healthcare facilities and have a total patient list of approximately 140,000 patients served by the full-time equivalent of 57.2 GPs. The ratio of patients to GPs is higher than the national average for England, and is significantly higher at six of the 12 practices in the 5km zone of influence.
- 19.3.21 The 2km zone of influence also contains at least ten specialist care facilities, with facilities ranging from children's therapy, supported living, and elderly care, to those that provide specialist residential care for adults with learning disabilities who require full time care. Two of these facilities are directly adjacent to the Scheme at Site A and Site F and are likely to be extremely sensitive to impacts.
- 19.3.22 Four hospitals with specialist services and Accident and Emergency Departments can be found in major settlements in the wider baseline study area. The four A&E departments have varying waiting times and discharge times. No specific hospital performs significantly better or worse than the others, or by national averages, by the indicators assessed

19.4 Embedded Mitigation Measures

- 19.4.1 Embedded mitigation measures incorporated into the Scheme are set out in detail in the following documents, which control human health impacts throughout the construction, operational and decommissioning phases of the Scheme:



- Outline Construction Environmental Management Plan (OCEMP) **[EN010170/APP/GH7.1]**;
- Outline Skills, Supply Chain and Employment Plan (OSSCEP) **[EN010170/APP/GH7.8]**;
- Outline Construction Traffic Management Plan (OCTMP) **[EN010170/APP/GH7.9]**;
- Outline Public Rights of Way and Permissive Paths Management Plan (OPRoWMP) **[EN010170/APP/GH7.10]**;
- Outline Landscape and Ecological Management Plan (OLEMP) **[EN010170/APP/GH7.4]**;
- Outline Operational Environmental Management Plan (OOEMP) **[EN010170/APP/GH7.2]**; and
- Outline Decommissioning Statement (ODS) **[EN010170/APP/GH7.3]**.

19.4.2 Each of these control documents are secured by requirement in the DCO **[EN010170/APP/GH3.1]** which requires detailed versions of these documents to be submitted that are substantially in accordance with their outline versions.

Construction

19.4.3 The layout and configuration of the Scheme have been designed to include measures to minimise likely significant effects on human health receptors during the Scheme's construction phase.

19.4.4 Construction is anticipated to take place across an approximate two-year period. Flexibility for construction phasing and staggering is included in the OCEMP **[EN010170/APP/GH7.1]** to reduce impacts on environmental receptors. This is able to reduce the intensity of peak construction activities on the Scheme, and redistribute where activities are taking place to minimise peak human health impacts in a time period or in any single location.

19.4.5 The Scheme design includes embedded visual mitigation to provide suitable buffers from roads, public rights of ways, recreation facilities, and neighbouring buildings and land uses to onsite infrastructure such as solar panels, substations, and BESS. These measures seek to reduce the likely effects on the desirability of these receptors for leisure and play, and on local perceptions of community identity, and are set out in the OLEMP **[EN010170/APP/GH7.4]**.

19.4.6 During construction, the OCEMP **[EN010170/APP/GH7.1]** commits to providing a Community Liaison Manager, to whom any comments, concerns or complaints about the construction of the Scheme can be raised, either directly by members of the public, or via elected representatives on parish or town councils, councillors, and Members of Parliament. This role will be used to continue open channels of communication between the community and the operators of the Scheme to mitigate impacts on community identity and influence.

19.4.7 Additional topic-specific mitigation and enhancement measures as set out in other chapters within the Environmental Statement that relate to human health



are controlled through the OCEMP [EN010170/APP/GH7.1], OSSCEP [EN010170/APP/GH7.8], and OCTMP [EN010170/APP/GH7.9].

Operation

- 19.4.8 As during construction, the embedded visual mitigation for the operational period includes buffers from roads, public rights of ways, recreational facilities and neighbouring buildings. Furthermore, proposed landscaping planting is likely to mature over the lifetime of the Scheme, which will mitigate impacts the landscape for residents and visitors to the area, to the benefit of leisure and play, and local perceptions of community identity.
- 19.4.9 Furthermore, the appointment of a Community Liaison Manager shall be implemented through the OOEMP [EN010170/APP/GH7.2] to provide a dedicated community contact to the Scheme's operators during peak operational and maintenance activities such as BESS and PV infrastructure replacements. A full-time member of the Scheme's operational team should also be in position as a dedicated community contact to ensure community concerns are heard, responded to and suitably addressed throughout the duration of the Scheme's operational phase.
- 19.4.10 Additional topic-specific mitigation and enhancement measures as set out in other chapters within the ES that relate to human health are controlled through the OOEMP [EN010170/APP/GH7.2], OLEMP [EN010170/APP/GH7.4], and OSSCEP [EN010170/APP/GH7.8]. This includes enhancements to existing public rights of ways and the provision of new non-vehicular permissive paths as part of the Scheme, and implementation of long-term enhancement measures throughout the operational lifetime of the Scheme to improve the level of local education and skills uplifting, local employment, including continuing measures in supporting diversified agricultural practices.

Decommissioning

- 19.4.11 As during construction, the implementation of a dedicated Community Liaison Officer is to be secured through the ODS [EN010170/APP/GH7.3] to provide a community contact to address and respond to concerns, anxieties, or complaints by the community.
- 19.4.12 Additional topic-specific mitigation and enhancement measures as set out in other chapters within the Environmental Statement that relate to human health are controlled through the ODS [EN010170/APP/GH7.3] and OSSCEP [EN010170/APP/GH7.8].

19.5 Additional Mitigation and Enhancement Measures

Construction

- 19.5.1 The OCEMP [EN010170/APP/GH7.1] commits to providing support to construction workers to find and register with GPs across the wider baseline study area in reasonable proximity to their temporary or full-time accommodation and where such GP surgeries have reasonable capacity to take on additional patients. This is to reduce the concentration of effect in the 5 km zone of influence for



primary healthcare provision to ensure increased demand on healthcare services does not significantly adversely affect accessibility to existing service users.

- 19.5.2 Additional location specific mitigation is proposed for the identified residential care home adjacent to Site F. The OCEMP [EN010170/APP/GH7.1] commits to keeping in direct contact with the operators of the care home during construction, and subject to agreement, minimising working hours within 100m of the residential home property boundary, avoiding using any part of the Sites and Cable Route Corridor within 100m of the residential home for storage of materials, and implementing landscape works within 50m of the residential home as early as possible in the construction programme.

Operation

- 19.5.3 During peak operational activities associated with the replacement of PV and BESS infrastructure, additional mitigation measures with respect of identifying healthcare facilities with the greatest capacity for inbound workers, and restrictive working conditions in proximity to locations of highest sensitivity should be implemented as proposed for construction, and secured as required in the OOEMP [EN010170/APP/GH7.2].

Decommissioning

- 19.5.4 As secured through the ODS [EN010170/APP/GH7.3], impacts on primary healthcare services will be reduced through supporting decommissioning workers to find and register with GPs across the wider baseline study area in reasonable proximity to their temporary or permanent accommodation and where such GP surgeries have reasonable capacity to take on additional patients.
- 19.5.5 The ODS [EN010170/APP/GH7.3] will also include requirement for location-specific mitigation to be provided at the point of drafting and implementation of the final Decommissioning Statement, ahead of Scheme decommissioning. This will include a requirement to identify residential care homes and institutions that may be of specific vulnerability to impacts from decommissioning activities, and provide targeted mitigation measures in response to, and in consultation with, any identified receptors.

19.6 Assessment of Impacts and Effects

- 19.6.1 The human health chapter assesses the impacts on the following receptors for the construction, operation (including peak replacement scenario), and decommissioning of the Scheme:
- Social environment;
 - Housing;
 - Open space, leisure and play;
 - Transport modes, access and connections;
 - Community identity, culture, resilience and influence;
 - Economic environment;
 - Education and training;



- Employment and income;
- Bio-physical environment;
 - Climate change mitigation and adaptation;
 - Air quality;
 - Water quality and availability;
 - Land quality;
 - Noise and vibration;
 - Electromagnetic fields;
- Institutional and built environment;
 - Health and social care services; and
 - Wider societal infrastructure and resources.

Construction Phase

Social Environment

- 19.6.2 Environmental Statement Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** identifies that construction workers are to be housed in temporary accommodation, primarily vacant private rental properties, or in serviced accommodation. This therefore ensures no effect on access to permanent housing, and a negligible magnitude impact on access to temporary accommodation in the wider baseline study area. Access to appropriate housing is a determinant of health across both physical health, and mental health and wellbeing, due to factors including physical suitability, overcrowding, access to outdoor space, and affordability and the risk of homelessness. Resultantly, the effect on human health with regard to access to housing is therefore anticipated to be a medium-term temporary minor adverse effect. This is not a significant effect.
- 19.6.3 Likely effects on open space, leisure and play during construction have been considered in Environmental Statement Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** and individually assessed in Environmental Statement Appendix 17.1: Tourism and Recreation Receptor Tables **[EN010170/APP/GH6.3.17.1]**. Impacts on open space, leisure and play as determinants of health are driven by reduced activity affecting physical health, while reduced enjoyment of recreational facilities (as a result of visual impact, or disruption to use) can reduce the mental health benefits associated with leisure and play. Children, and adults with limited mobility are most vulnerable to these types of impact. Resultantly, the effect on human health with regard to open space, leisure and play during construction is anticipated to be a medium-term temporary minor adverse effect. This is not a significant effect.
- 19.6.4 The ability for people to access public transport, and move around the study area for transport and access assessment is related to health and wellbeing primarily through ability to access healthcare, services and employment, and to ensure



social connections and isolation are not adversely affected. The transport assessment set out in Environmental Statement Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]** demonstrates that the only access road likely to experience a greater than 10% increase in HGV construction traffic is Highfield Road, Mears Ashby due to the low existing levels of heavy goods vehicles movements. Impacts to human health are likely to be extremely limited to those who reside on Highfield Road, and the amenity of non-vehicular users of Highfield Road. As a result, residents and users of Highfield Road are likely to experience up to a minor adverse effect on human health.

- 19.6.5 Sense of community is a multi-faceted wider determinant of human health and is influenced by a number of factors that primarily affect mental health and wellbeing. Community identity and culture with respect to people, and sense of place is likely to be affected by direct visual impacts within communities, and on surrounding public rights of ways and transport routes as experienced by users. A communities' distance from the Scheme, level of engagement, and the part of the Scheme which impacts upon a community most, will vary the amount to which communities perceive the level to which their resilience and influence is being affected during the progression of construction works. Information on the construction programme will be made available to affected communities ahead of construction commencing. The Community Liaison Manager will also be available for community dialogue throughout the construction process. As a result, the likely human health effect as a result of changes to community identity, culture, resilience and influence is a medium-term temporary minor adverse effect overall including within the communities most immediately affected. This is not a significant effect.

Economic Environment

- 19.6.6 Likely effects on education and training during construction have been considered in ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** with residual effects subject to additional mitigation and enhancement measures. Education and training are considered as determinants of health due to the beneficial impact on both physical and mental health and wellbeing as a result of direct ability to find and sustain work, and indirectly to improved socio-economic status and quality of life associated with access to better income as a result of suitable education and training. The effect on human health with regard to education and training during construction is anticipated to be a medium-term temporary minor beneficial effect. This is a not significant effect.
- 19.6.7 Likely effects on employment and income during construction have been assessed in ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. As with education and training, employment and income are considered as determinants of health due to the beneficial impact on both physical and mental health and wellbeing as a result of sustained and improved socio-economic status and quality of life associated with suitable access to employment and income. Changes to human health with regard to employment and income during construction are anticipated to generate a no



greater than a medium-term temporary negligible beneficial effect. This is a not significant effect.

Bio-physical Environment

- 19.6.8 Environmental Statement Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]** sets out the assessment of the likely effects on air quality as a result of the construction of the Scheme. Effects on air quality are most likely to impact children, and adults with preexisting cardiovascular diseases or long-term disabilities impacting breathing (such as asthma). As a result of embedded dust and emissions mitigation measures to minimise air quality impacts on human health, the construction of the Scheme is to result in no more than a medium-term minor adverse effect. This is a not significant effect.
- 19.6.9 Environmental Statement Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]** sets out that during construction, the most likely impacts relevant to human health relate to a temporary increase in impermeable area, silt-laden runoff, and spillage and leaks of pollutants from construction activities. These impacts have the potential to impact on-site workers, people living downstream of the Sites next to affected watercourses, and people using affected water bodies for recreation and bathing (such as Sywell Reservoir). Subject to implementation of embedded and additional mitigation measures to protect both onsite workers and offsite receptors from flooding and water quality impacts, the magnitude of impacts on human health is anticipated to be negligible. As such, the overall anticipated effect on human health as a result of changes to water quality is a medium-term temporary minor/negligible adverse effect. This is a not significant effect.
- 19.6.10 Environmental Statement Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]** identifies that, subject to implementation of mitigation, that the residual effects experienced by construction workers are likely to be unexploded ordnance (UXO) risk at Green Hill G, and risks from contamination during construction activities on the Scheme. Key risks associated with contamination are physical injury, dermal contact, ingestion and inhalation risks to physical health, while contamination of controlled waters is a substantial risk for nearby residents reliant on groundwater abstraction for potable water. The effects to human health are anticipated to be a medium-term temporary minor adverse effect on construction workers, and a long-term minor/negligible adverse effect to both nearby residents and users in the built environment. These are not significant effects.
- 19.6.11 Noise and vibration effects associated with the Scheme's construction activities are likely to be localised to individual receptors nearest to noise and vibration sources on the Scheme's Sites, Cable Route Corridor and access routes. Individual receptors – notably residential dwellings - are identified to be of high sensitivity to noise and vibration, with vulnerable people such as those with sensory impairments, mental disabilities, and those less able to move around or leave their properties being of high sensitivity to these impacts resulting in distress, anxiety, and longer-term impacts on wellbeing. As a result of Section 14.11 of ES Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]**



identifying no significant effects, the resultant effect to those at highest risk may experience up to a short- to medium-term minor/negligible adverse effect on their health and wellbeing. This is a not significant effect.

- 19.6.12 High-level electromagnetic fields along the grid connection cable route are not anticipated to be generated from the Scheme during construction. The physical impact to human health is therefore neutral during this time, although the mental health impact as a result of anticipation of the Scheme may have an overall, medium-term temporary negligible adverse effect on the population living closest to Scheme. This is a not significant effect.

Institutional and Built Environment

- 19.6.13 Environmental Statement Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** identifies that the likely inbound temporary workforce is anticipated to have a negligible magnitude impact on the resident population. This is likely therefore to bring a respective negligible magnitude impact as a result of increased demand for healthcare services across the wider baseline study area. Members of the population most reliant on healthcare services due to long-term illnesses, disabilities, and age-related illnesses are of a high sensitivity to changes to availability of access to healthcare services as a result of increased demand. Subject to additional mitigation measures to limit impact on primary healthcare services within the 5km zone of influence for primary health services by reducing the concentration of effect on GP practices, the resultant level of induced impact on healthcare services is likely to have a short- to medium-term temporary minor/negligible adverse effect on human health. This is not a significant effect.
- 19.6.14 As the Scheme is unlikely to increase the number of people requiring residential social care, there is no likely effect on demand for social care. However, existing residents and patrons of social care facilities are also likely to be of greater sensitivity to their surrounding environment and amenity impacts from the Scheme. Of particular note is the residential care facility in proximity to Green Hill F, which will require additional mitigation to ensure adverse effects are minimised. The resultant human health effect to residents at this specific receptor is a medium-term temporary minor adverse effect. This is therefore not significant.

Operational Phase

Social Environment

- 19.6.15 Likely effects on open space, leisure and play during the operation of the Scheme have been considered in Environmental Statement Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** and individually assessed in Environmental Statement Appendix 17.1: Tourism and Recreation Receptor Tables **[EN010170/APP/GH6.3.17.1]**. During the operational lifetime of the Scheme, this includes the enhancement of the public rights of ways network and access to the countryside through the provision of new permissive paths across six of the eight solar array Sites, as shown on ES Figure 4.22: Indicative Permissive Paths **[EN010170/APP/GH6.4.4.22]**. Resultantly, the impact on human health with regard to open space, leisure and play is therefore anticipated



to be a long-term minor adverse effect. The peak replacement scenario may cause greater impacts on some individual open spaces, and leisure and play facilities, however this is a short-term impact and is not anticipated to increase the overall effect on open space, leisure and play in the 2km zone of influence for human health. This is therefore not a significant effect.

- 19.6.16 The Scheme is designed to ensure public rights of ways and permissive recreational routes across the Sites are kept open during the operational lifetime of the Scheme, to ensure the continued functional connectivity of the off-road access network. The Scheme is anticipated to generate traffic during its operational phase comparable to existing agricultural traffic. Peak operational impacts are not anticipated to be as extensive as during construction. As such the level of impact on amenity, road user or pedestrian safety, as a result of fear and intimidation on and by road users, or functional connectivity and access on the local road network is also likely to be a negligible impact, as is the level of impact on public transport access and use. As a result, there is anticipated to be no greater than a long-term minor/negligible adverse effect to human health in the study area (for Transport and Access) with no more than a peak short-term minor adverse effect to human health during replacement activity. These are not significant effects.
- 19.6.17 The Scheme is likely to generate up to a low negative magnitude of impact on community identity and culture, including in respect of feelings of the attractiveness of the area and community pride in its place, and thus on the mental wellbeing of the population. This is anticipated to reduce towards negligible during the lifetime of the Scheme as mitigation planting matures, the use of onsite permissive paths becomes more widespread, and as ecological mitigation becomes more obvious in its biodiversity gains. The resultant effect on community identity and culture during the operational lifetime of the Scheme is therefore anticipated to be a temporary medium- to long-term minor adverse effect initially, before reducing to a long-term minor/negligible adverse effect in the communities closest to the Scheme, and a long-term negligible adverse effect elsewhere in the 2km zone of influence. The replacement of infrastructure on the Scheme is not anticipated to change long-term effects on community identity and culture. These are not significant effects.
- 19.6.18 During the Scheme's operational lifetime, the continued availability of a community contact (and during peak activities a dedicated Community Liaison Manager) will mitigate community anxieties by providing a continued dialogue between communities and the Scheme's operators. Therefore, the likely effect on human health from changes to community resilience and influence is a long-term minor/negligible adverse effect, with short to medium-term temporary minor adverse effects at the beginning of the operational lifetime of the Scheme and during peak replacement activities. These are not significant effects.

Economic Environment

- 19.6.19 Likely effects on education and training during operation have been considered in Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation [EN010170/APP/GH6.2.17] with residual effects subject to additional mitigation



and enhancement measures. As during construction phase, people with existing limitations in access to suitable education and training are of the highest sensitivity to changes in access to education and training opportunities. The effect on human health with regard to education and training during operation is anticipated to be a long-term minor/negligible beneficial effect. This is not a significant effect.

- 19.6.20 Likely effects on employment and income during operation have been assessed in Section 17.8 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. This assessment identifies that with additional enhancement to be set out in the OSSCEP, there is an overall long-term minor adverse effect on the labour force, but a resultant long-term minor beneficial effect on economic prosperity and income are anticipated in the wider baseline study area as a result of changes to the long-term employment profile. As there are likely to be both beneficial and adverse contributing factors, the overall effect on human health is likely to be neutral. Notwithstanding this, the worst-case effect will be to those who are likely to experience loss of employment and as a result may experience a long-term minor adverse effect to human health. This is not a significant effect.

Bio-physical Environment

- 19.6.21 Environmental Statement Chapter 7: Climate Change **[EN010170/APP/GH6.2.7]** estimates that over the operational lifetime of the Scheme, the quantum of electricity generated is approximated to be 533,000-670,000MWh per annum. With regard to human health, the Scheme is likely to contribute towards a benefit in human health as a result of decreasing risk from future climate change events, and increasing the national adaptability to climate change going forward. As a result, the Scheme is anticipated to contribute a long-term negligible beneficial effect to human health outcomes. This is not a significant effect.
- 19.6.22 Environmental Statement Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]** sets out the assessment of the likely effects on air quality as a result of the operation of the Scheme. Emissions from any instances of fire at Green Hill BESS are likely to be the main sources of air quality impacts during the Scheme's operational lifetime. As a result, the greatest level of effect to human health is anticipated to be a short-term minor adverse effect, and only in the rare event of a BESS fire. This is not a significant effect.
- 19.6.23 Environmental Statement Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]** set out that during operation, the impacts relevant to human health include diffuse pollution resulting from fire, and increased runoff to watercourses from a permanent increase in impermeable areas. Residual risks to human health, subject to implementation of embedded design and additional flood risk and hydrology specific mitigation measures, are considered to be negligible in magnitude, and as such the overall anticipated effect on human health as a result of changes to water quality is a long-term minor/negligible adverse effect. This is not a significant effect.
- 19.6.24 Environmental Statement Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]** identifies that onsite workers may be impacted by



contamination, UXO, and radon gas during operation and maintenance activities on the Scheme. As such, the anticipated effect on onsite workers is anticipated to be a long-term minor adverse effect. For residents and those in the built environment surrounding the Scheme, or those using the land after the Scheme's decommissioning, the key risks associated with contamination are as a result of contamination of controlled waters due to potential spillages or leakages of temporary fuels and chemicals stored on site, or as a result of contaminated firewater from controlling potential BESS fires. The likely effects to human health during operation are considered to be a long-term minor adverse effect. These are not significant effects.

- 19.6.25 Environmental Statement Chapter 14: Noise and Vibration **[EN010170/APP/GH6.2.14]** sets out that no individual receptors are anticipated to experience any greater than negligible changes in levels of noise during the operational lifetime of the Scheme as a result of noise from electrical infrastructure onsite. This is likely to induce no more than a negligible magnitude impact on health and wellbeing, and as such those at highest risk may experience up to a long-term negligible to minor/negligible adverse effect, which accounts for any perceived increase in nuisance over the lifetime of the Scheme. During the peak replacement scenario, the magnitude of noise and vibration impacts are likely to be similar to those during construction. As such, the resultant human health effect on high sensitivity receptors is likely to be up to a short- to medium-term minor/negligible adverse effect. Therefore, these are not significant effects.
- 19.6.26 The primary source of radiation from the Scheme is electromagnetic fields generated along the high voltage cable routes between the onsite substations, and the grid connection cable. Electromagnetic fields have the potential to impact upon human health where the electromagnetic field is very strong, or where the exposure to an electromagnetic field is experienced over significant periods of time. Therefore, a minimum 5 m setback distance is implemented between the high-voltage cables and any residential or business property to ensure ICNIRP reference levels are not exceeded in locations people stay for a long duration. Transient movements, such as walking on roads, public rights of ways or working in fields with cables buried beneath are not likely to induce human health effects as the exposure times are short. Applying the embedded mitigation in the design of the Scheme, physical human health impacts from electromagnetic fields and mental wellbeing impacts to those who retain anxieties about the risks of electromagnetic fields are anticipated to have a long-term negligible adverse effect. This is not a significant effect to human health.

Institutional and Built Environment

- 19.6.27 The operation of the Scheme is anticipated to have a neutral long-term effect on human health as a result of changes to healthcare service access. During the peak replacement scenario, inbound temporary workers are likely to increase demand on primary and emergency care access. The impact on healthcare services is to be mitigated through directing workers to practices with greatest capacity, and thus likely to have a short-term temporary minor/negligible adverse effect on human health as a result of increased demand on healthcare services



and subsequent decrease in accessibility to existing service users. This is not a significant effect.

- 19.6.28 The operation of the Scheme is not anticipated to generate any direct impacts on provision of social and residential care. However, those already in social and residential care, such as those in the identified specialist care facilities are of greater sensitivity and thus have additional mitigation measures applied. The resultant human health effect on high sensitivity receptors in social and care facilities is a long-term minor/negligible adverse effect, including during peak replacement activities. This is not a significant effect.
- 19.6.29 The Scheme in its operational lifetime is valuable both for national energy security but also helps supply electricity for the benefit of people's lives and livelihoods while contributing to improving the country's climate change resilience. The ability for the Scheme to contribute towards these goals is likely to lead to a long-term minor beneficial effect on human health within the Wider Baseline Study Area. This is not a significant effect.

Decommissioning Phase

Social Environment

- 19.6.30 The decommissioning of the Scheme is likely to generate 75-80% as much employment as during the construction phase, and thus a proportional requirement of inbound decommissioning workers. Whilst the availability of housing at the point of decommissioning cannot be determined at this point, the level of effect on human health as a result of reduced access to housing is likely to be similar to that during construction. Therefore, it can be assumed that there will be a medium-term temporary minor adverse effect. This is not a significant effect.
- 19.6.31 Likely effects on open space, leisure and play during decommissioning are expected to be similar to those experienced during construction, subject to changes to the future baseline as a result of the passage of time and early projections of population demographics. Resultantly, the effect on human health with regard to open space, leisure and play during construction is anticipated to be a medium-term temporary minor adverse effect. This is not a significant effect.
- 19.6.32 Impacts during decommissioning upon the ability for members of the public to access public transport, access and receive services on the local highway network, and functionally use the local highway and public rights of ways network as non-vehicular users are likely to be no greater than those experienced during construction. As such, the effect on human health and wellbeing is anticipated to be no more than a medium-term temporary minor adverse effect.
- 19.6.33 With respect to sense of place, the decommissioning of the Scheme is likely to have a mixed positive and negative impact on community identity and culture, as a result of the land being returned to agricultural use which some people may see as favourable, but also given the up to 60 year age of the Scheme at the point of decommissioning, this change may remove a feature that some members of community have only ever known to be there. Considering a worst-case scenario where this is more negative than positive, this would therefore constitute a



medium-term temporary minor adverse effect during decommissioning, before likely returning to neutral following restoration of the land to agricultural use. With respect of resilience and influence, communities are likely to seek greater influence or control of what decommissioning and restoration works will mean for them. The Community Liaison Manager will be reestablished during decommissioning activities onsite to assist in mitigating community anxieties during decommissioning and restoration works. As a result, the likely human health effect as a result of changes to community resilience and influence during construction is no greater than a medium-term temporary minor/negligible adverse effect. These are not significant effects.

Economic Environment

- 19.6.34 Likely effects on education and training during decommissioning are likely to be similar to those experienced during construction, with commitments made to enhancement of education and skills uplifting opportunity set out in Section 17.9 of ES Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]**. Resultantly, a negligible positive impact on human health with regard to education and training during decommissioning is anticipated to generate a medium-term temporary minor/negligible beneficial effect. This is not a significant effect.
- 19.6.35 Environmental Statement Chapter 17: Socio-Economics, Tourism and Recreation **[EN010170/APP/GH6.2.17]** demonstrates the effects on employment and income as a result of the Scheme's decommissioning will be similar to those experienced during decommissioning are anticipated to be no greater than a medium-term temporary minor/negligible beneficial effect. This is not a significant effect.

Bio-physical Environment

- 19.6.36 Environmental Statement Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]** identifies there is the potential for fugitive dust emissions, vehicle emissions and NRMM emissions during the decommissioning phase. These potential effects are likely to be similar to those identified during the construction phase. The resultant human health effect is no more than a medium-term minor adverse effect. This is not a significant effect.
- 19.6.37 For decommissioning effects, Environmental Statement Chapter 10: Hydrology, Flood Risk and Drainage **[EN010170/APP/GH6.2.10]** identifies the most likely impacts relevant to human health are similar to those during construction, and thus relate to temporary increase in impermeable area, silt-laden runoff, and spillage and leaks of pollutants from decommissioning activities. Residual risks to human health, both of onsite workers and offsite receptors, from these sources are considered to be negligible as a result of on-site mitigation measures. As such, the resultant anticipated effect on human health is a medium-term temporary minor/negligible adverse effect. This is not a significant effect.
- 19.6.38 Environmental Statement Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]** identifies that during decommissioning, residual effects from ground contamination from onsite works and UXO are likely to be



similar to those experienced during construction. The effects to human health are anticipated to be a medium-term temporary minor adverse effect on construction workers and to nearby residents and users in the built environment. These are not significant effects.

- 19.6.39 As during construction, noise and vibration impacts associated with the Scheme's decommissioning are likely to be localised to individual receptors nearest to noise and vibration sources on the Scheme's Sites and access routes.. The resultant human health effect to those at highest risk is anticipated to be no more than a short- to medium-term minor/negligible adverse effect on their mental health and wellbeing. This is not a significant effect.
- 19.6.40 High-level electromagnetic fields along the Cable Route Corridor from the Scheme will cease at the point of decommissioning. The resultant effect is therefore a neutral effect to human health.

Institutional and Built Environment

- 19.6.41 The likely inbound temporary workforce for decommissioning is anticipated to have a negligible magnitude impact on resident population. This is likely therefore to bring a respective negligible magnitude impact as a result of increased demand for healthcare services across the wider baseline study area. Future baseline conditions cannot be accurately predicted, however age-related illnesses are likely to be of greater concern in future. With the implementation of additional mitigation measures to reduce effects on GP surgeries, the resultant level of induced impact on healthcare services is likely to have a short- to medium-term temporary minor/negligible adverse effect on human health. This is not a significant effect.
- 19.6.42 As the Scheme's decommissioning is unlikely to increase the number of people requiring residential social care, there is no further effect to the provision of residential or social care. Future users of these facilities are likely to experience similar impacts during decommissioning as during construction, and as such will be subject to additional mitigation measures. The resultant human health effect to residents in social and residential care facilities is a residual medium-term temporary minor adverse effect. This is therefore not significant.



20 Arboriculture

20.1 Introduction

- 20.1.1 Environmental Statement Chapter 19: Arboriculture **[EN010170/APP/GH6.2.19]** has considered the assessment of impacts and effects in respect to arboricultural features (individual trees, groups of trees and woodlands).

20.2 Methodology

- 20.2.1 The potential effects from the Scheme to ancient and veteran trees and ancient woodlands at the Sites have been assessed. In addition, the potential effects from the Scheme to all arboricultural features within the Cable Route Corridor have been assessed.

- 20.2.2 Data used for the assessment included:

- Existing records of ancient and veteran trees and ancient woodlands;
- Records of protected trees (such as those protected by a Tree Preservation Order or Conservation Area); and
- Tree surveys of the Sites and Cable Route Corridor undertaken from 2023-2025

- 20.2.3 All surveys were undertaken in accordance with industry guidelines.

20.3 Baseline

- 20.3.1 Across the Scheme, a total of 952 individual trees, 168 groups of trees, 8 woodlands and 8 hedgerows were recorded by the arboricultural surveys. 59 veteran trees were recorded, including one ancient tree. Five ancient woodlands were found to be located directly adjacent to the Scheme: Horn Wood, Sywell Wood, Three Shires Wood, Nun Wood and Barslay Spinney.

20.4 Mitigation Measures

- 20.4.1 Tree surveys have informed the indicative design of the Sites to minimise impacts to arboricultural features. Most elements of the design of the Sites are situated outside the canopy spreads and rooting areas of arboricultural features.

- 20.4.2 Within the Cable Route Corridor, where veteran trees were identified, the Cable Route Corridor within the Order Limits has been widened to allow sufficient space for cable installation works to work around veteran trees.

- 20.4.3 Additional mitigation measures will be required for trees, particularly along the Cable Route Corridor, to ensure that tree removal, pruning and excavation within rooting areas is avoided and minimised. Such measures will include prioritising the removal of poorer quality trees with limited life expectancy over trees of higher quality and longer life expectancies as well as deploying tree protection fencing and ground protection during construction to protect trees from construction activities. An Arboricultural Clerk of Works will be nominated at the construction stage to work collaboratively with the construction contractor to ensure tree protection measures detailed in the Outline Arboricultural Method Statement are followed.



- 20.4.4 Some tree removal will likely be required along the Cable Route Corridor and around protected vehicular access points. Tree losses will be compensated for with the significant new tree planting proposed at the Sites which will greatly enhance the long-term canopy cover of the Scheme area.

20.5 Assessment of Impacts and Effects

Construction Phase

- 20.5.1 No ancient woodland, ancient or veteran trees will require removal during the construction phase. No protected trees (subject to a Tree Preservation Order) or Conservation Area will require removal during the construction phase.
- 20.5.2 Significant residual impacts are anticipated to other arboricultural features including:
- Possible canopy pruning to veteran tree A2F2-T2 for visibility splays adjacent to a Temporary Access Point may result in a residual moderate impact to this tree; and
 - Category B (moderate quality) trees may still require removal along the Cable Route Corridor and removal may result in residual moderate impacts.
- 20.5.3 Non-significant residual impacts are anticipated to other arboricultural features including:
- Minor residual impacts are anticipated from partial removal and pruning of a small section of Category A woodland (receptor W0122) for a Temporary Access Point, pruning to Category A tree EF16-T4 for a Permanent Access Point as well as from the possible removal of Category C and U trees in the Cable Route Corridor and canopy and root impacts to Category B trees within the Cable Route Corridor.



21 Agricultural Circumstances

21.1 Introduction

21.1.1 Environmental Statement Chapter 20 Agricultural Circumstances [EN010170/APP/GH6.2.20] has considered the findings of the likely significant environmental effects of the Scheme in relation to agricultural circumstances, which include:

- Agricultural land;
- Soils; and
- Agricultural landholdings.

21.2 Baseline and Methodology

21.2.1 The baseline conditions have been established based on desk-based study and field surveys.

21.2.2 The desk-study information on agricultural land and soils was obtained from Defra and National Soil Re-sources Institute. The field survey was carried out by qualified soil scientists by following Agricultural Land Classification system of Defra.

21.2.3 The ALC survey has been completed across the Sites. A Soil Resource Survey will be completed after getting consent and before construction to check the Cable Route. This is because the cable installation will only cause temporary and minor disturbance to the soil and farmland, and land will be restored to its original condition once construction is completed.

21.2.4 The majority of the land in the Scheme is arable. The desk study and field surveys indicate that the soils of the Sites are predominantly slowly permeable, calcareous or non-calcareous clayey soils. The agricultural land classification grades of the Sites and Cable Route Corridor range from Grade 1 to 3b. The best and most versatile land grades cover 854.5 ha, making up 65% of the Order Limits.

21.2.5 Agricultural landholding information was obtained through farm interviews and the agricultural landholdings within the Scheme boundary are predominantly arable farm.

21.3 Mitigation Measures

21.3.1 An Outline Soil Management Plan has been developed as part of the Outline Construction Environment Management Plan to protect agricultural land and soil resources. This includes soil mitigation measures for soil handling during the construction, operation and decommissioning. The key soil mitigation measures are as follows:

- Preconstruction planning;
- Site preparation;
- Soil stripping;



- Soil storage and maintenance;
- Soil reinstatement; and
- Soil aftercare.

21.3.2 Disturbance to and severance of farming activities have been considered in the design of the Scheme to avoid disruption during the construction, operation and decommissioning phases.

21.4 Assessment of Potential Effects

21.4.1 The assessment of agricultural land, soils and agricultural landholdings followed industry standards.

21.4.2 During construction, the Scheme may impact soil function and soil volume (via sealing and loss of soil) as well as soil condition due to the general construction activities. With effective good practice soil handling, reinstatement and re-use measures in place, secured by the Soil Management Plan [EN010170/APP/GH7.6], the adverse effect on soils will be predominantly minor and not significant.

21.4.3 During the operational phase, maintenance on the Sites will be minimal. Scheduled replacements of panels and batteries will occur throughout the Scheme's lifetime, following good soil handling practices as per the Soil Management Plan. The conversion of land currently under arable production to grassland (land between and under the solar panels) during the operation phase has potential benefits in relation to soil health and agricultural land. Stopping cultivation will reduce soil disturbance, and the grassland can increase soil organic carbon, improve soil structure, enhance infiltration, and boost soil microbial populations. Research from Defra supports these benefits, showing that converting tillage land to permanent pasture has positive effects on soil organic carbon and the environment.

21.4.4 Due to the requirement of best and most versatile agricultural land for the Scheme, there will be a moderate adverse effect on agricultural land. However, as stated above, as the arable land will come out of intensive arable farming and be converted into grassland, the Scheme will have a potential beneficial effect on agricultural land.

21.4.5 After decommissioning, all land will be restored and returned to the landholders for agricultural use. All infrastructure will be removed to avoid any obstructions to farming. The impact on soils, agricultural land, and landholdings will likely be similar to the construction phase, with ongoing adherence to the Soil Management Plan as outlined in the Decommissioning Environmental Management Plan.

21.4.6 The Scheme will have no significant effect on agricultural landholdings.



22 Electromagnetic Fields

22.1 Introduction

22.1.1 Environmental Statement Chapter 21 Electromagnetic Fields [EN010170/APP/GH6.2.21] has considered the assessment of impacts and effects in respect to electromagnetic fields on human health associated with the Scheme. The assessment considers the construction and operation phases of the Scheme, regarding the proposed high-voltage underground Cable Route Corridor.

22.1.2 Radiation levels reduce with distance which means, for example, the typical magnetic field from a vacuum cleaner reduces from 800 micro-Tesla to 2 micro-Tesla when the separation distance increases from 3 centimetres to 100 centimetres.

22.2 Methodology

22.2.1 The assessment follows established industry standards and guidance, including the International Commission on Non-Ionizing Radiation Protection (ICNIRP) reference levels. It uses a desk-based approach with clearance distances calculations to assess potential electromagnetic fields exposure. The methodology uses conservative assumptions where applicable and considers optionality within the electrical design, in turn considering worst-case scenarios to ensure a complete assessment.

22.3 Baseline

22.3.1 The baseline conditions are based on a desk-based review of aerial and street view imagery, as presented in the Electromagnetic Field Assessment [EN010170/APP/GH6.3.21.1]. No fieldwork or site surveys were undertaken. The Scheme is located on predominantly agricultural land, with existing cable routes and electrical infrastructure within the Order Limits and the surrounding area. However, the Scheme does not use any of the existing electrical infrastructure, up to its Point of Connection at the National Grid substation at Grendon. Existing electrical infrastructure will comply with the reference levels and respect any required setback distances, meaning significant cumulative impacts are not predicted based on the relative locations of existing and proposed electrical infrastructure relative to the receptors. Therefore, the assessment focuses solely on the proposed electrical infrastructure of the Scheme.

22.4 Mitigation Measures

22.4.1 The Scheme includes the following embedded mitigation measures:

- Using underground cables, which significantly reduces electromagnetic fields exposure compared to overhead lines;
- Ensuring all electrical infrastructure is 'UKCA' and/or 'CE' marked, confirming compliance with safety regulations; and
- Maintaining safe setback distances of at least 5 metres from receptors.



22.5 Assessment of Impacts and Effects

- 22.5.1 The assessment concludes that the electromagnetic fields levels associated with the Scheme will remain below the International Commission on Non-Ionizing Radiation Protection public exposure reference levels during all phases.

Construction Phase

- 22.5.2 The Scheme will not be powered during construction except during the testing and commissioning process, resulting in lower electromagnetic fields exposure. No significant electromagnetic fields effects are anticipated.

Operational Phase

- 22.5.3 During operation, electromagnetic fields levels along the cable route will remain below the ICNIRP reference levels, even in sections with multiple high-voltage cables, whereby the reference level is exceeded directly on the cable route centreline. The applied setback distances ensure no significant impacts on nearby receptors, as electromagnetic fields levels decrease with distance.

Decommissioning Phase

- 22.5.4 Electromagnetic fields arise from the generation, transmission, distribution and use of electricity. Electromagnetic fields occur around all electronic infrastructure. The assessment of impacts therefore focuses on the potential impacts of electromagnetic fields from the underground cable routes proposed as part of the Scheme, during the construction and operational phases only.

22.6 Conclusions

- 22.6.1 No significant effects are predicted from the Scheme in respect to electromagnetic fields and human health, as any electromagnetic fields are predicted to be below the ICNIRP reference levels for public exposure.



23 Ground Conditions and Contamination

23.1 Introduction

23.1.1 Environmental Statement Chapter 22: Ground Conditions and Contamination has considered the assessment of impacts and effects in respect to the following key receptors:

- Construction workers;
- Controlled waters;
- Future use and the built environment;
- Ecology and sensitive land uses.

23.2 Methodology

23.2.1 The assessment methodologies align with relevant planning policies and industry guidance to evaluate the Scheme's potential impacts on ground conditions and contamination. The study area includes nine sites (Green Hill A to G and Green Hill BESS) and the Cable Route Corridor. Baseline soil and groundwater conditions were established through desktop reviews, including a Preliminary Geo-Environmental Risk Assessment, to identify contaminant linkages and assess risks to key receptors.

23.2.2 Key steps in the methodology include:

- Reviewing the environmental setting, including geology, hydrogeology, hydrology, current site use, and surrounding areas.
- Investigating the sites' historical activities.
- Examining regulatory information (e.g., Environmental Protection Act 1990, Part IIA), planning records, and potential unexploded ordnance risks.
- Conducting a visual inspection of accessible areas.
- Reviewing available third-party reports.
- Developing a conceptual site model to identify site zones and potential contaminant linkages.
- Evaluating contamination risks and geotechnical constraints in the context of the Scheme.

23.2.3 The methodology emphasises the identification of contaminant linkages via the conceptual site model to assess whether contamination sources could cause significant harm to receptors.

23.3 Baseline

Geology, Hydrogeology and Hydrology

23.3.1 An aquifer is a body of rock or sediment that holds and transmits groundwater. It acts as a natural underground reservoir, storing water and allowing it to flow through its porous materials. Aquifers are designated dependent on their ability to hold and transmit groundwater, for example Principal Aquifers have high



permeability and can store and yield significant amounts of groundwater, Secondary A Aquifers contain permeable layers that can support water supplies at a local scale, Secondary B Aquifers, lower permeability than Secondary A and usually fractured or contain small amounts of groundwater, Secondary Undifferentiated Aquifers are where aquifer characteristics are highly variable, some parts may be permeable, while others are not, and Unproductive Strata which have very low permeability and do not yield significant groundwater.

Superficial Deposits

- The Superficial Deposits are varied across the Site, comprising areas of clay-rich diamicton or till to areas of mixed sands, gravels, silts and clays.
- Superficial Deposits present at the Site include the Oadby Member, Bozeat Till, Milton Formation, Ecton Member, Glaciofluvial Deposits, River Terrace Deposits and Alluvium Deposits.
- Secondary A Aquifers: Glaciofluvial Deposits, Alluvium, Milton Formation, Ecton Member and River Terrace Deposits.
- Secondary Undifferentiated: Oadby Member.
- Unproductive Strata: Bozeat Till.

Bedrock

- The underlying Bedrock is also varied across the Site, comprising areas of mudstone, limestone, sandstone and siltstone.
- Bedrock present at the Site include the Whitby Mudstone Formation, Blisworth Clay Formation, Kellaways Clay Member, Wellingborough Limestone Formation, Blisworth Limestone Formation, Cornbrash Limestone Formation, Northampton Sand Formation, Stamford Member, Kellaways Sand Member and Rutland Formation.
- Principal Aquifer: Blisworth Limestone Formation.
- Secondary A Aquifers: Northampton Sand Formation, Stamford Member, Wellingborough Limestone Member, Cornbrash Limestone Formation and Kellaways Sand Member.
- Secondary B Aquifer: Rutland Formation.
- Unproductive Strata: Whitby Mudstone Formation, Blisworth Clay Formation and Kellaways Clay Member.

Made Ground

- Made Ground, which is defined as land that has been artificially built up or altered by human activity, usually by adding materials like soil, rubble, or waste, is anticipated at several sites. However, the Made Ground is considered to be limited in thickness and generally associated with developed or farmyard areas.



Groundwater Abstraction Points

- 23.3.2 The majority of groundwater abstraction within 500m of the Scheme is used for general farming and domestic uses, with surface water abstractions used for spray irrigation. No potable groundwater abstraction points are located within 500m of the Scheme.

Surface Water Features

- 23.3.3 The Sites contain a variety of water bodies and drainage features. Drainage ditches are present on-site at Green Hill A, D, E, F, and G. Nearby off-site drainage ditches are noted at Green Hill A.2 and B. Ponds are located on-site at Green Hill B and F, while an off-site pond lies near Green Hill C. Reservoirs in the vicinity include Pitsford Reservoir, 1km north-west of Green Hill B, and Sywell Reservoir, 450 m west of Green Hill E. Streams along the boundaries of Green Hill BESS connect to nearby lakes (Grendon Lakes and Grendon Quarter Pond), with the River Nene situated 620 m north-west. The proposed cable route will cross the River Nene north of Grendon.

Mining

- 23.3.4 There are five recorded mineral sites within the Sites, all of which are now ceased:
- Walgrave Lodge Sand Pit (north-west Green Hill A): Sand extraction, active from 1884 to 1974.
 - Walgrave Pit (central-south Green Hill A): Clay, shale, sand, and gravel extraction, with no evidence of quarrying on historical maps.
 - Old Gravel Pit (south-west boundary of Green Hill A): Sand and gravel extraction, with no evidence of quarrying on historical maps.
 - Mears Ashby Iron Ore Pit (western boundary of Green Hill C): Iron ore extraction, shown on 1901 maps with quarrying evidence until 1958; now heavily vegetated.
 - Ward's Barn Sand Pit (western boundary of Green Hill E): Sand extraction via opencast methods, shown on 1901 maps with quarrying evidence until 1988; now a slight topographic bowl.
- 23.3.5 Within 250 m of the Scheme, 20 additional BGS Mineral Sites are recorded for iron ore, sand, gravel, limestone, clay, and shale. All are ceased except the active Earls Barton Quarry in the central area near the Cable Route Corridor.
- ### Historical Summary
- 23.3.6 Historical records since 1888 indicate the Sites have primarily been used for agriculture, with limited development including roadways, a railway, farm tracks, and agricultural buildings. A sewage works operated in the western part of Green Hill E from 1927 to 1958 before transitioning to woodland by 2004.
- 23.3.7 Notable agricultural buildings include:
- Buildings in northern central area of Green Hill C (1900–1971).



- Barns/storage in central Green Hill E (1884–present).
- Three barns in western Green Hill F, with one disappearing by 2003 and the others remaining.
- Tinick Farm in central Green Hill G (1885–1981).

23.3.8 Three quarries are mapped on-site:

- Walgrave Lodge Sand Pit in north-western area of Green Hill A (1884–1974).
- Mears Ashby Iron Ore Pit along the western boundary of Green Hill C (1901–1958).
- Ward's Barn Sand Pit along the western boundary of Green Hill E (1901–1988).

23.3.9 Within the surrounding area, Sywell Airfield, built in 1928 and used during WWII, remains operational with a museum, hotel, and industrial estate 650 m south-west. A small brickworks and pit near eastern portion of Green Hill F (1884) became disused by 1901, returning to agriculture and later a pond by 1952. Historical aerial photographs from 1947 and 1948 highlight ground disturbance within the central portion of Green Hill G. Further information has been provided in the section below. Grendon Substation has existed since 1970.

Unexploded Ordnance

23.3.10 A Detailed UXO Risk Assessment by 1st Line Defence (DA20134-00, 29th June 2024), and peer review from Impartial Assessments (24th October 2024), evaluated potential risks at Green Hill G. The site was identified as a former WWII USAAF practice bombing range (Lavendon PBR) and an explosives demolition ground, operational from 1944. Aerial imagery identified crater features from controlled explosions, likely leaving behind significant quantities of inert scrap metal, though partially destroyed UXO may still pose a residual risk. A 1957 aircraft crash in the far east of the site scattered wreckage across the south-east but is not considered a UXO source. Risk zones have been classified as high-risk in the central area, low to moderate-risk in the central north, west, and south, and low-risk along the northern, western and southern boundaries.

23.4 Mitigation Measures

23.4.1 The Outline Construction, Operation and Decommissioning Statement (OCEMP, OOEMP and ODS [EN010170/APP/GH7.1,2,3]), will guide mitigation measures and good practice measures to minimise land and groundwater contamination during construction, operation and decommissioning. These measures include, but are not limited to, the following:

- Horizontal directional drilling beneath the River Nene will reduce environmental impacts in regard to the disruption to the watercourse, sediment displacement and potential release of contaminants, with spill response plans and closed-loop drilling systems in place to manage drilling fluids and fuels.



- Discovery Strategy protocols will address any identified contamination during development, including potential landfill contamination near Sywell Range, Barton Plant Ltd and Earls Barton Quarry.
- Site clearance prior to development within Green Hill G, to remove any identified munitions across the site area. The use of concrete feet within the high-risk zone, to eliminate the need for deep, blind intrusions such as percussive piling or borehole drilling. The establishment of a UXO Risk Management Plan, conducting site-specific UXO awareness briefings, and ensuring the presence of a UXO specialist ('Watching Brief' supervision) during any excavations within the high-risk area.
- Floor loads to be transferred to ground improved soils or to piles through concrete ground beams/concrete frame or otherwise suspended.
- Toolbox talks, PPE, and hygiene measures will ensure worker safety.
- Dust suppression systems will mitigate airborne contamination.
- Topsoil will be stored and reused appropriately, avoiding Flood Zone 3 areas.
- Bulk fuels and chemicals will be stored in bunds 110% of the volume, any spillages will be promptly addressed by appropriate measures, such as spill kits, and a spill response plan.
- A Battery Storage Safety Management Plan (BSSMP) will govern safe battery handling.
- Pollution Prevention Plans and Sustainable Drainage Systems (SuDS) will be developed in alignment with established guidelines.
- Durable underground cable materials will mitigate any corrosion, with bunded containment systems prioritised in sensitive areas.
- Real-time monitoring will detect faults in solar and battery systems, ensuring early detection and rectification of issues.
- UXO risks will be managed through briefings and a UXO Risk Management Plan.
- Radon risks will be mitigated per BRE guidelines.
- Any unsuitable ground conditions will necessitate ground improvement or pile foundations.

23.5 Assessment of Impacts and Effects

Construction Workers

- 23.5.1 Construction workers involved in the Scheme's construction and decommissioning phase may be exposed to contamination through dermal contact, ingestion, or inhalation. Operational phase workers face lower risk due to limited contamination sources and pathways. A potential UXO risk has also been identified for construction workers at Green Hill G.



- 23.5.2 With the implementation of mitigation measures outlined in the OCEMP, OOEMP and ODS, the impact is considered not significant.

Controlled Waters

- 23.5.3 Groundwater contamination may occur during construction and decommissioning phase due to the mobilisation of existing contaminants, however limited sources of contamination have been identified. Controlled waters could be impacted by fuel or chemical spills, faulty batteries or cables, and fire-related incidents, including ash deposition and extinguishing water at Green Hill BESS, across all project phases. The River Nene may also be affected by the construction of the Cable Route.

- 23.5.4 With the implementation of mitigation measures outlined in the CEMP, OEMP and DEMP, the impact is considered not significant.

Future Use and Built Environment

- 23.5.5 Following decommissioning, the land is intended to return to agricultural use. While limited existing contamination has been identified, there is a risk of contamination from chemical spills, fuel leaks, and BESS fires. Alluvial deposits and Made Ground pose challenges due to low bearing capacity and potential settlement issues. Parts of the site are within areas of elevated radon potential (above the action level of 10–<30%), with prolonged exposure increasing health risks.

- 23.5.6 With the inclusion of the embedded and additional mitigation measures outlined above, the impact and effect on future users and the built environment is minimised, and the effect is considered not significant.

Ecology and Sensitive Land Uses

- 23.5.7 Ecological and sensitive land use receptors, including sites of special scientific interest, special areas of conservation, special protection areas, Ramsar sites, and areas with sensitive flora and fauna, may face contamination risks from mobilised existing contaminants during construction and decommissioning, however limited sources of contamination have been identified. The Cable Route Corridor will cross beneath the River Nene using horizontal directional drilling methods. There is a potential that an impact could be caused to the controlled water environment, leading to the downstream Upper Nene Valley Gravel Pits SSSI, SPA and Ramsar site. Green Hill BESS is also located within proximity to the Gravel Pits. However, it must be noted that the ecologically significant and sensitive land use areas are not located within the development area boundaries.

- 23.5.8 With the implementation of mitigation measures outlined in the CEMP, OEMP and DEMP, the impact is considered not significant.



24 Major Accidents and Disasters

24.1 Introduction

24.1.1 Environmental Statement Chapter 23: Major Accidents and Disasters [EN010170/APP/GH6.2.23]. For this assessment, major accidents and disasters as they relate to the Scheme, fall into three categories:

- Events that could not realistically occur, due to the nature of the Scheme or its location;
- Events that could realistically occur, but for which the Scheme is no more vulnerable than any other development; and
- Events that could occur, and to which the Scheme is particularly vulnerable, or which the Scheme has a particular capacity to exacerbate.

24.2 Methodology

24.2.1 Major accidents and disasters have the potential to impact people, assets, property and the surrounding environment to varying degrees of significance. The major accidents and disasters assessment identifies possible major accidents or disasters which have the potential to result in likely significant effects. Through this assessment, mitigation measures have then been identified to reduce and manage the risk of potential hazards.

24.2.2 A number of receptors present in the vicinity of the Scheme have been assessed in relation to their vulnerability to major accidents and disasters. These include:

- The surrounding population and human health specifically members of the public, local communities, road users and nearby workers;
- Nearby infrastructure and built environment;
- The natural environment including biodiversity, land and soil, ground and surface water, air and climate;
- Historic environment; and
- Airfields.

24.2.3 A shortlist of potential Major Accidents and Disasters was then taken forward for further analysis. The assessment has considered the risk of major accident or disaster in relation to flooding, fire and explosions, road accidents, aviation accidents, damage or severance of utilities, unstable ground conditions and risks associated with vegetation, pests and diseases.

24.2.4 The baseline for the assessment for the assessment has been informed by other technical chapters of the Environmental Statement where relevant and the assessment uses the findings from several other assessments presented in the Environmental Statement.

24.3 Mitigation Measures

24.3.1 The Applicant has committed to constructing and managing the Scheme in accordance with the following non-exclusive list of standards and systems:



- Environmental, Health and Safety Management systems;
- Supplier management environmental, health and safety standards (e.g., Construction Skills Certification Scheme); and
- Risk management systems.

24.3.2 A series of management plans will support the DCO Application and secure clear and consistent approaches to control activities within the Scheme's Order Limits. The relevant management plans include:

- Outline Battery Storage Safety Management Plan;
- Outline Construction Environmental Management Plan;
- Outline Construction Traffic Management Plan;
- Operational Environmental Management Plan;
- Outline Operational Traffic Management Plan; and
- Decommissioning Statement.

24.4 Assessment of Impacts and Effects

Flooding

24.4.1 Impacts and effects in respect of flood risk, surface water drainage and water resources are further discussed in Chapter 10: Hydrology, Flood Risk and Drainage [EN010170/APP/GH6.2.10].

24.4.2 With regards to flooding, the anticipated impacts of increased rainfall and probability of extreme weather events (further discussed in Chapter 13: Climate Change [EN010170/APP/GH6.2.13]) are not significant. As for flooding pertaining to construction activities, these are explored in detail within Chapter 10: Hydrology, Flood Risk and Drainage [EN010170/APP/GH6.2.10]. In summary, it is concluded that following the implementation of mitigation measures, for example temporary drainage networks and minimised compaction of soil, there are to be negligible effects.

24.4.3 The project has been designed to avoid areas with a high risk of flooding for critical infrastructure, ensuring safety for both workers and infrastructure. In areas that might flood up to 1 meter, measures are in place to protect construction workers and non-flood sensitive infrastructure, including a flood risk management action plan. While substations and BESS areas will increase surface water runoff, permeable surfaces and planting will mitigate this, resulting in negligible impact on surface water flooding. With these measures in place, all potential effects are considered to be not significant

Fires and Explosion

24.4.4 During the construction and decommissioning phase, the risk of fire and explosions from the BESS is minor and not significant due to its containerised design.

24.4.5 During operation however, when the batteries are under load, there is an expected moderate-minor adverse risk. Batteries under load pose inherent risks



as a technological failure can increase the probability of fire. Through the mitigation measures proposed and the appropriate placement of battery cells, this impact is reduced and is not considered significant. An Outline Battery Storage Safety Management Plan **[EN010170/APP/GH7.7]** has been produced for the Scheme and will be updated and maintained as a 'live document' throughout the operational phase of the Scheme.

24.4.6 ES Chapter 16: Air Quality **[EN010170/APP/GH6.2.16]** sets out the likely effects on air quality; including an assessment of unplanned emissions from an accidental BESS fire during the operation and maintenance phase of the Scheme. The assessment of BESS fire emissions demonstrates the receptor most greatly affected by a BESS fire would be the bridleway Mears Ashby TN7, albeit the risk of occurrence (including the occurrence of an easterly wind) is very low. Overall, any impact on human health from a BESS fire is expected to be minor and short-term and not significant.

24.4.7 A potential risk of unexploded ordnance (UXO) has been identified at Green Hill G, a former World War II bombing range. This poses a risk to construction workers during intrusive activities like digging trial pits or laying foundations. Mitigation measures to protect workers are detailed in Section 22.9 of Chapter 22: Ground Conditions and Contamination **[EN010170/APP/GH6.2.22]**. During the operational phase, the risk is lower, with measures for maintenance and replacement works included in the OEMP. With these measures, the environmental impact of UXO is considered moderate to minor and not significant.

Road Accidents

24.4.8 The assessment of road accidents and safety is presented in ES Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]**. During the construction phase, the assessment concludes that the likely effects of the Scheme will either be negligible or minor adverse in nature and not significant. Embedded mitigation measures will be implemented during the construction period, as outlined within the Outline Construction Traffic Management Plan **[EN010170/APP/GH7.9]**.

24.4.9 Traffic associated with the operation and maintenance phase (including replacement of equipment) is considered to be lower and no worse than that associated with the construction phase.

Aviation Incidents

The assessment of effects set out in ES Chapter 15: Glint and Glare **[EN010170/APP/GH6.2.15]** states that no significant effects are predicted in respect of aviation receptors during the operational lifetime of the Scheme. Glint and Glare was predicted towards modelled aviation receptors at six nearby aerodromes. Upon a review of mitigating factors and embedded mitigation, a low impact, and therefore a non-significant effect, has been predicted towards all six



modelled aerodromes. As such, there are no significant effects relating to major accidents and disasters with regard to aviation accidents.

Damage or cut-off of utilities

The design of the scheme layout has utilised topographical and geophysical survey data, alongside mapping provided by telecommunication and utilities providers to ensure underground and overground utilities are adequately offset from the Scheme. This will ensure safe working procedures can be maintained, access can be provided for utility maintenance, and construction impacts can be mitigated against. As a result, the Scheme is not expected to have any adverse impacts on telecommunication, television, or utilities.

Unstable ground conditions

- 24.4.10 Alluvial deposits and Made Ground pose challenges due to low bearing capacity and potential settlement issues. The sensitivity criteria set out in Chapter 22: Ground Conditions and Contamination [EN010170/APP/GH6.2.22] identifies that the Scheme is of medium sensitivity for unstable ground conditions however, with the implementation of the additional mitigation measures for unstable ground conditions, the risk to the built environment will be reduced and the impact is considered not significant.

Vegetation pests and diseases

- 24.4.11 The greatest level of impact relating to vegetation, pests and diseases is anticipated from the potential spread of invasive species during construction, operation and decommissioning phases. Although not identified within the Scheme, precautionary measures to avoid the accidental spread of invasive species have been set out in the Outline Ecological Protection and Mitigation Strategy [EN010170/APP/GH7.5]. As a result of the mitigation measures within this strategy, the residual effect of the spread of invasive species is a neutral effect and is therefore not significant.



25 Other Environmental Matters

25.1 Introduction

- 25.1.1 Environmental Statement Chapter 24: Other Environmental Matters [EN0101070/APP/GH6.2.24] has considered the assessment of impacts and effects in respect to Light Pollution, Waste Production and Management and Telecommunication, Utilities and Television.

Light Pollution

- 25.1.2 Standard good practice measures will be employed to minimise light spill and glare during the construction, operation, maintenance, and decommissioning phases of the Scheme. Temporary lighting will be required for safety during construction and decommissioning, limited to core working hours (07:00 to 18:00 Monday to Friday, 08:00 to 13:30 on Saturdays), with focused directional fittings to minimise outward spill. However, some activities may be required outside of these times (such as the arrival and departure of construction workers, the delivery of abnormal loads, night-time working for cable construction works in public highways or horizontal directional drilling activities), focused task specific lighting may be required for these activities e.g. horizontal directional drilling operations to meet safety requirements.
- 25.1.3 During the operational phase, no part of the Scheme will be continuously lit, and permanent lighting is not required within the solar array sites. Motion-sensing security lighting will be provided within substations and the battery energy storage systems for maintenance and security purposes.
- 25.1.4 Temporary lighting may be needed for replacement activities during the operational phase, similar to that of the construction phase, following good practice measures to minimise light spill.

Waste

- 25.1.5 A description of the potential streams of construction waste and estimated volumes are included within Chapter 24: Other Environmental Matters.
- 25.1.6 The detailed Construction Environmental Management Plan [EN010170/APP/GH7.1], Operational Environmental Management Plan [EN010170/APP/GH7.2] and Outline Decommissioning Statement [EN010170/APP/GH7.3] will include measures to ensure waste will be managed on-site in line with the waste hierarchy (prevention; preparing for reuse; recycling; other recovery, including energy recovery; and disposal) and opportunities to recycle and reuse waste will be explored.
- 25.1.7 A detailed Site Waste Management Plan (SWMP) will be developed to manage materials efficiently as well as outline the aims, objectives, and ongoing management responsibilities, including practices for management and storage, and set targets for waste reduction, landfill diversion, and reuse.
- 25.1.8 Waste produced during construction, operation (including maintenance) and decommissioning will be managed by appropriately permitted carriers and facilities in line with the appropriate environmental permits and requirements. All



waste management will comply with relevant industry regulations and legislation. All waste transported off-site will be delivered to licensed receivers.

- 25.1.9 The Scheme is expected to generate Waste from Electrical and Electronic Equipment (WEEE), which will be recovered and recycled by authorised preprocessors. Batteries will be separated from WEEE for disposal.
- 25.1.10 During decommissioning, infrastructure will be removed, recycled, or disposed of according to good practice. The Applicant is committed to maximising recycling and reuse of components, adhering to industry best practices.
- 25.1.11 Given the nature of the Scheme, significant quantities of waste are not anticipated. Following the implementation of appropriate control measures, no significant effects are anticipated during the construction or decommissioning phases. The nature of the waste streams and predicted volumes are such that the Scheme is not anticipated to result in significant adverse effects on landfill capacity.

Telecommunications, Utilities and Television

- 25.1.12 Solar farms can affect existing underground utility infrastructure, such as through 'cable strike' during piling or excavation. Although these effects are not considered environmental and do not require assessment under EIA Regulations, they can impact existing utility infrastructure.
- 25.1.13 A desk-based study has been completed to identify potential utilities providers across the Order Limits and consultation received from relevant providers have informed the Scheme design and protective provisions.
- 25.1.14 The design of the Scheme's layout has utilised topographical and geophysical survey data, alongside mapping provided by telecommunication and utilities providers to ensure underground and overground utilities are adequately offset from the Scheme. The Crossing Schedule identifies necessary crossings and safety measures.
- 25.1.15 Safe working procedures will be maintained. Where the Cable Route Corridors cross telecommunication and utilities, the cables will be laid so that the utilities are crossed at 90° where possible and will be suitably offset where running parallel, to minimise impacts.
- 25.1.16 The Scheme design is low height and is not anticipated to impact on radio and television reception.
- 25.1.17 During decommissioning, cables will be decommissioned in accordance with best practices and guidance at the time, which currently is leaving the cables in situ. No significant effects on utilities are predicted during operation. In applying mitigation measures, the Scheme is not expected to have any adverse impacts on telecommunication, television, or utilities.



26 Cumulative Effects and Effects Interaction

26.1 Introduction

- 26.1.1 Environmental Statement Chapter 25: Cumulative Effects and Effect Interactions [EN010170/APP/GH6.2.25] has considered the potential cumulative effects during the construction, operational and maintenance and decommissioning phases.

26.2 Methodology

- 26.2.1 Two types of cumulative effects have been considered in the assessment in accordance with the EIA Regulations and good practice guidance, these are:
- **In-combination effects:** Effects interactions and combination of different environmental residual (post-additional mitigation) effects from within the Scheme affecting a single receptor.
 - **Cumulative effects:** Potential impacts arising from two or more developments that are reasonably foreseeable and/or consented, but not yet part of the existing baseline environment. These developments, if in proximity to the Scheme, may lead to cumulative effects on the same receptor
- 26.2.2 A list of proposed schemes that overlap the Order limits or are located close enough to the Scheme that they have the potential to generate significant cumulative effects have been identified. The list of proposed schemes has been shared with West Northamptonshire, North Northamptonshire and Milton Keynes Councils.
- 26.2.3 The list of developments of cumulative developments is set out in **Appendix 2** of this report. These developments were screened to assess their potential interaction with the Scheme and a short list of cumulative developments was produced to inform the cumulative effects assessment. The short list of developments are shown on **Figure 25.1**.
- 26.2.4 The potential for cumulative effects and interactions as a result of the Scheme are summarised in Environmental Statement Chapter 25: Cumulative Effects and Effect Interactions [EN010170/APP/GH6.2.25].

26.3 In-Combination Effects

- 26.3.1 Tables 24.3 and Table 25.4 in Environmental Statement Chapter 25: Cumulative Effects and Effect Interactions [EN010170/APP/GH6.2.25] summarise the potential effect interactions. No significant effect interactions are anticipated as a result of the construction, operation and maintenance or decommissioning of the Scheme.

26.4 Cumulative Effects

- 26.4.1 Within the majority of technical chapters, no likely significant effects have been identified through the cumulative effects assessment where they were not already predicted for the Scheme in isolation. Nor are any significant effects associated



with the Scheme made greater (e.g. moderate to major) when considering these other developments alongside the Scheme.

- 26.4.2 Chapter 9: Ecology and Biodiversity **[EN010170/APP/GH6.2.9]** has identified a likely significant beneficial effect at a local level for bats through the creation of habitats from the Scheme. The extension of the country park within planning reference KET/2018/0965 (the East Kettering Sustainable Urban Extension (SUE) (also called Hanwood Park) (an outline application with EIA for 5,500 dwellings and related development will enhance local foraging habitat quality. Residential projects will likely provide bat roosting boxes, increasing roosting opportunities, although urban habitats may benefit fewer species. Overall, this could result in a significant beneficial effect at a district level.
- 26.4.3 Chapter 13: Transport and Access **[EN010170/APP/GH6.2.13]** has undertaken the cumulative assessment and shows that traffic flows associated with the cumulative schemes. No links during the construction phase exceed assessment thresholds. Therefore, there would be no cumulative significant adverse effect on transport and access on any of part of the study area.
- 26.4.4 Chapter 17: Socio-Economics, Tourism, and Recreation **[EN010170/APP/GH6.2.17]** identifies beneficial effects during construction related to the uplift of construction workers and economic impacts on the overall existing economy generated from Scheme and surrounding developments construction.
- 26.4.5 The construction work, traffic, and views will adversely affect the desirability, use, and financial performance of local tourism spots like Overstone Grange Farm. Similarly, these impacts will affect footpaths and bridleways, such as Overstone DG2, Grendon TF2, and Grendon TF17. This will lead to a moderate adverse effect in the medium term. Further to this, organised sports facilities, like Northampton Shooting Ground, will also experience moderate adverse effects in the medium term due to construction work, traffic, and views.
- 26.4.6 During the operational phase an uplift of 34,800 Full Time Equivalent jobs per annum, will contribute £2.31 billion Gross Value Added per annum in the study area, resulting in a long-term moderate beneficial effect. The increase in Gross Value Added per annum will amount to a 5.4% rise from the 2022 baseline, resulting in a long-term moderate beneficial effect.



27 Summary and Conclusions

- 27.1.1 The Environmental Statement sets out the approach and methodology, assessment and conclusions of the environmental impact assessment that has been undertaken for the Scheme.
- 27.1.2 The environmental impact assessment sets out mitigation measures have been identified to mitigate and control environmental effects during construction, operation (including maintenance) and decommissioning phases of the Scheme.

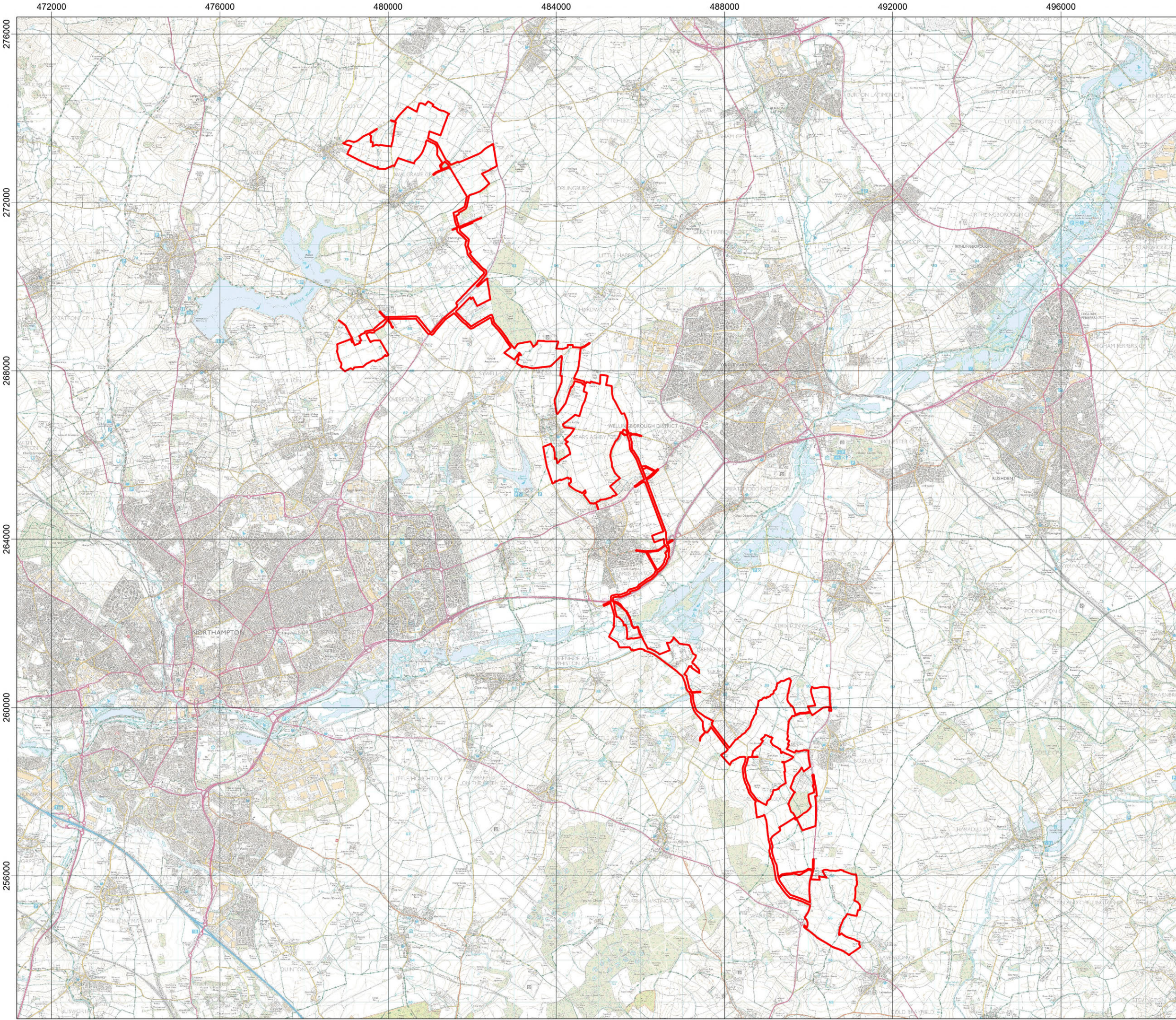


Appendix 1 – Figures

Figure 1.1 Location Plan

Figure 4.1 to 4.5 Site Access Points

Figure 25.1 Cumulative Assessment Sites

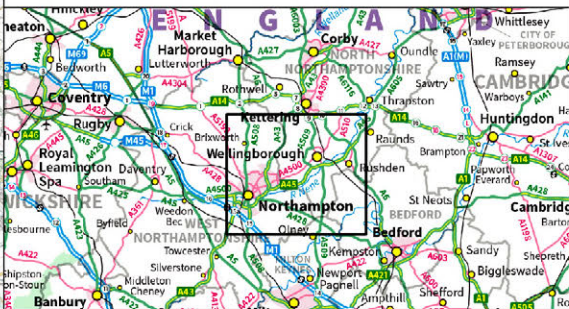


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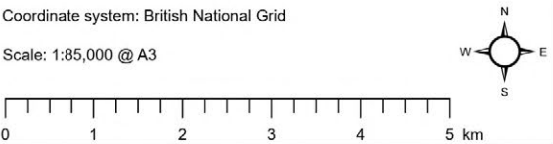
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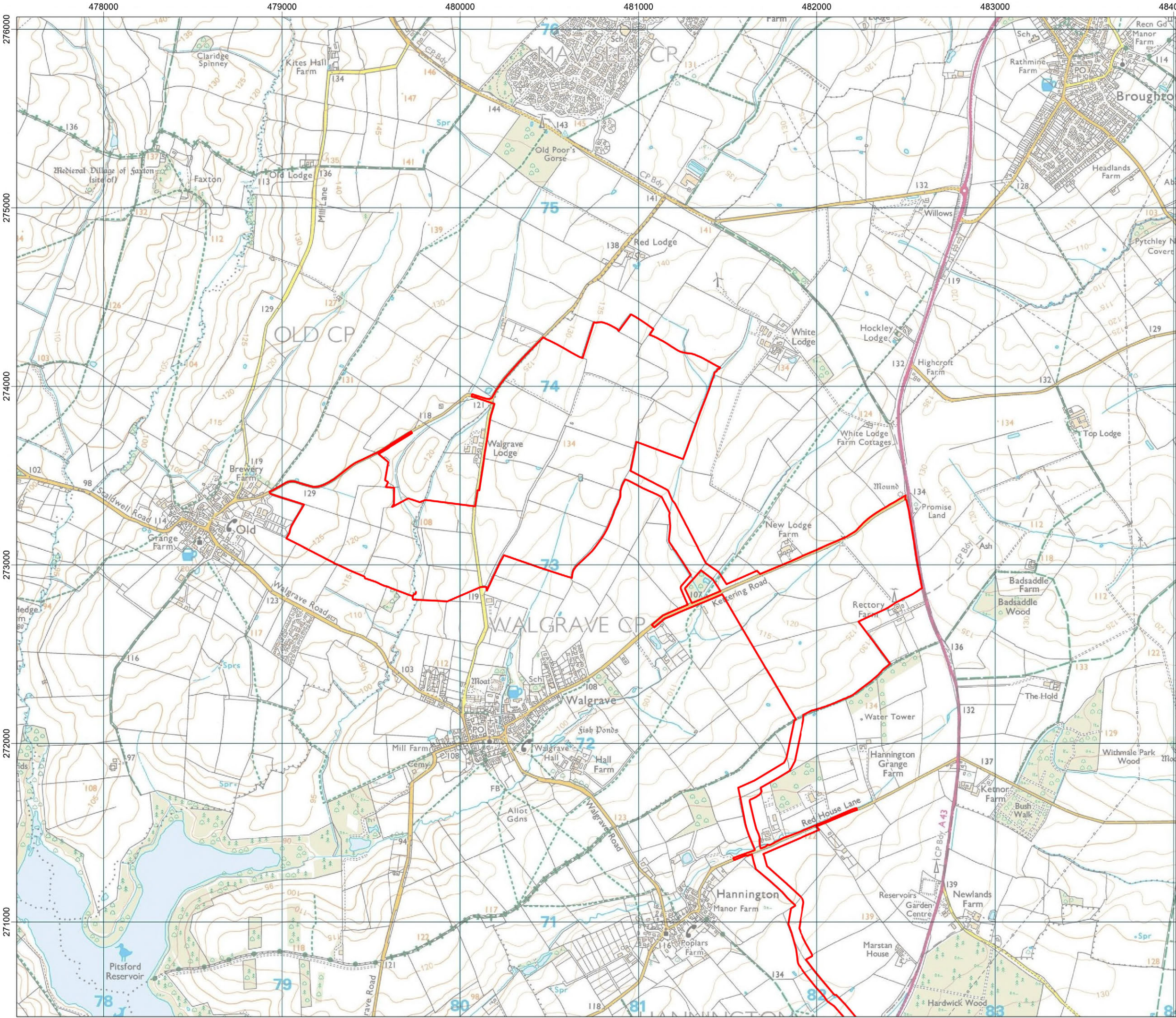
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Date: Lanpro, IGP, 2025
Base map: © Crown copyright and database rights 2025, Ordnance Survey 0100031673



APFP Regulation: 5(2)(a)
Application Doc No.: EN010170/APP/GH6.5
Drawing no.: P3535_LPR_ZZ_XX_DR_Z_DEV_0171





Title: Figure 1.1.1 Location Plan
Green Hill A & A.2



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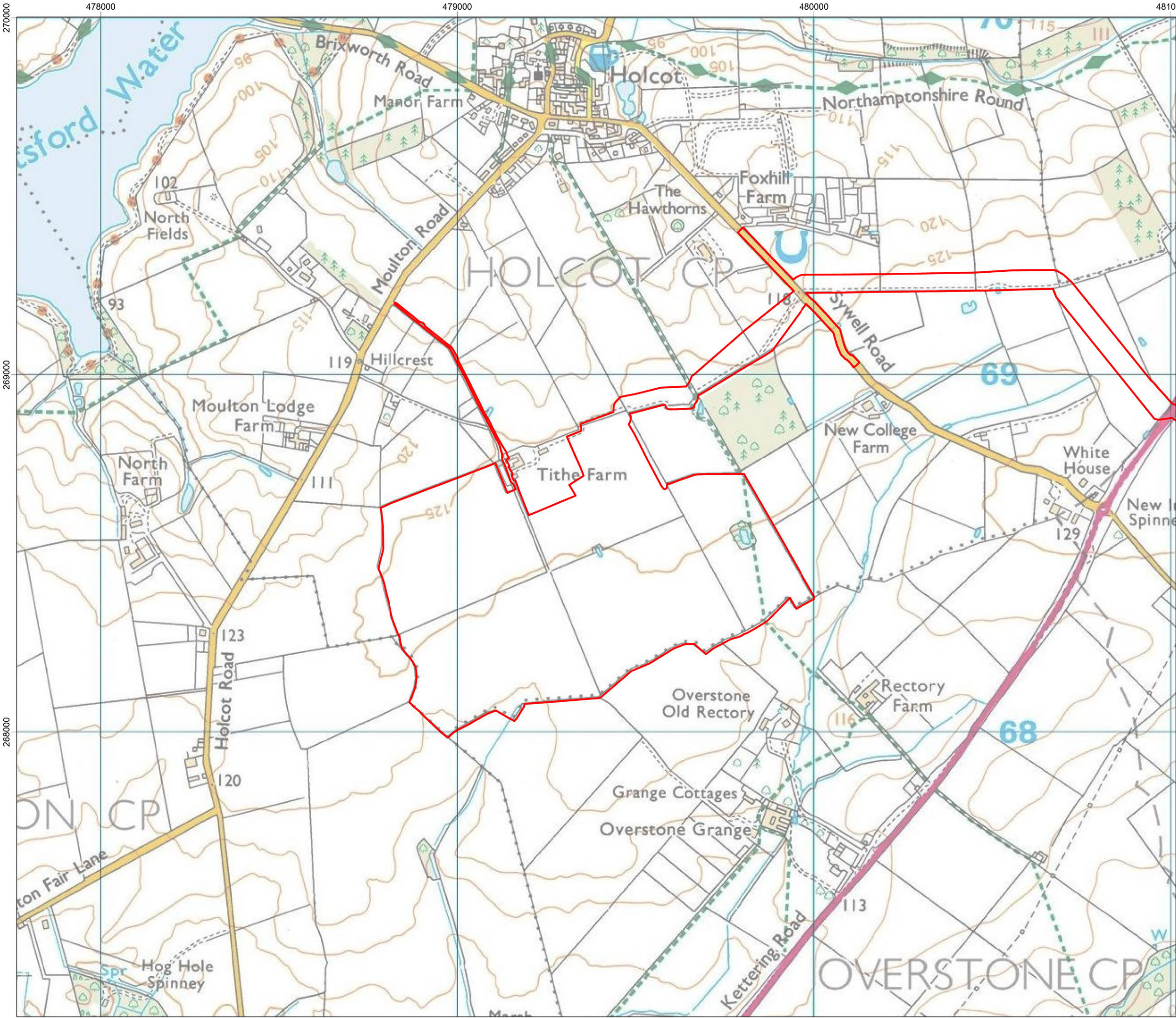
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Application Doc No.: EN010170/APP/GH6.5
Drawing no.: P3535_LPR_ZZ_XX_DR_Z_DEV_0171

Coordinate system: British National Grid
Scale: 1:20,000 @ A3







Title: Figure 1.1.2 Location Plan
Green Hill B

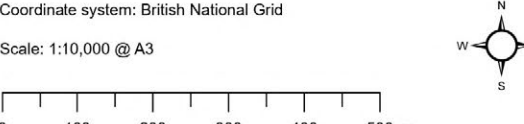
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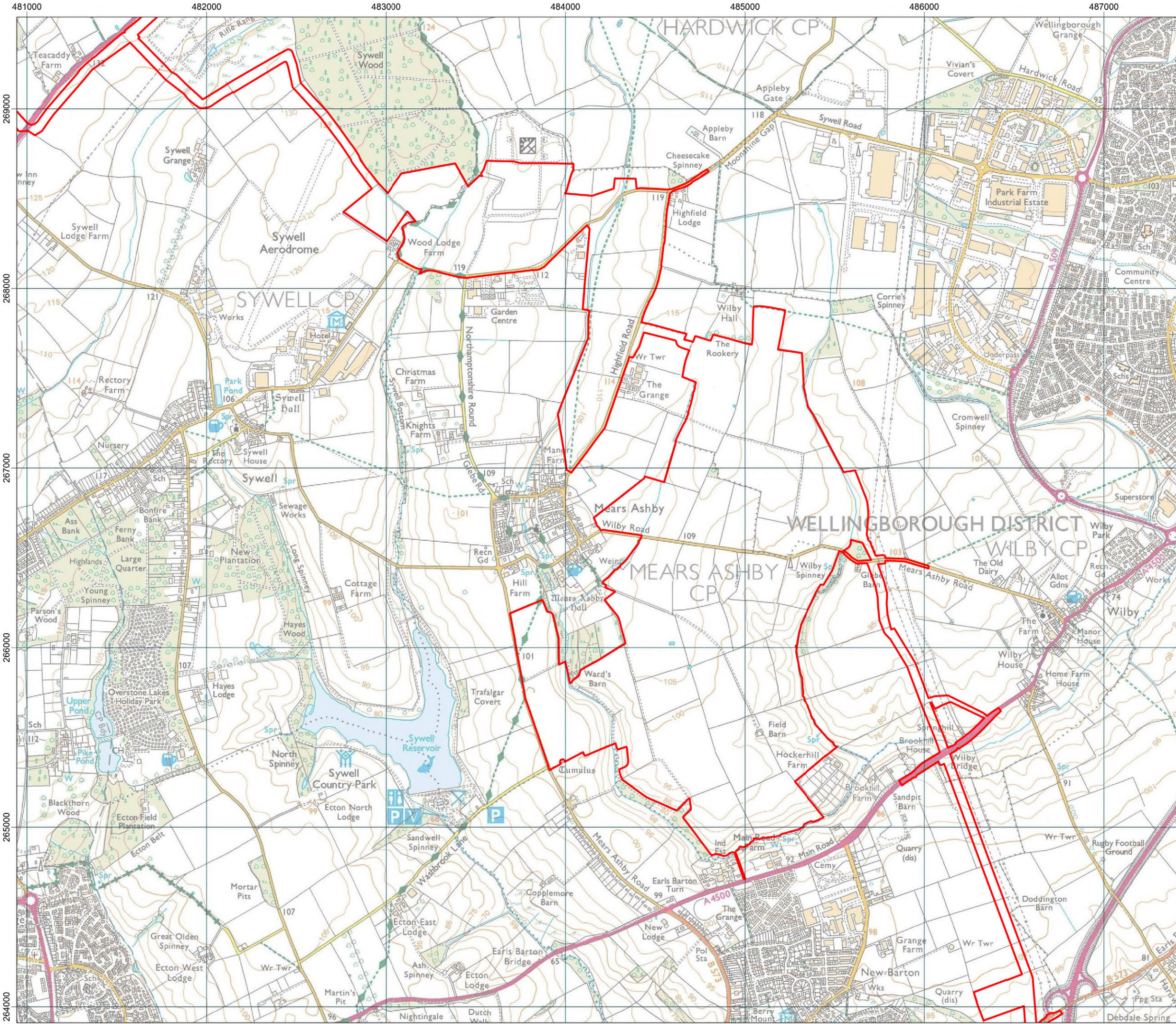
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Application Doc No.: EN010170/APP/GH6.5
Drawing no.: P3535_LPR_ZZ_XX_DR_Z_DEV_0171

Coordinate system: British National Grid
Scale: 1:10,000 @ A3






Title: Figure 1.1.3 Location Plan
Green Hill C, D & E

Document: Non-Technical Summary

Legend:
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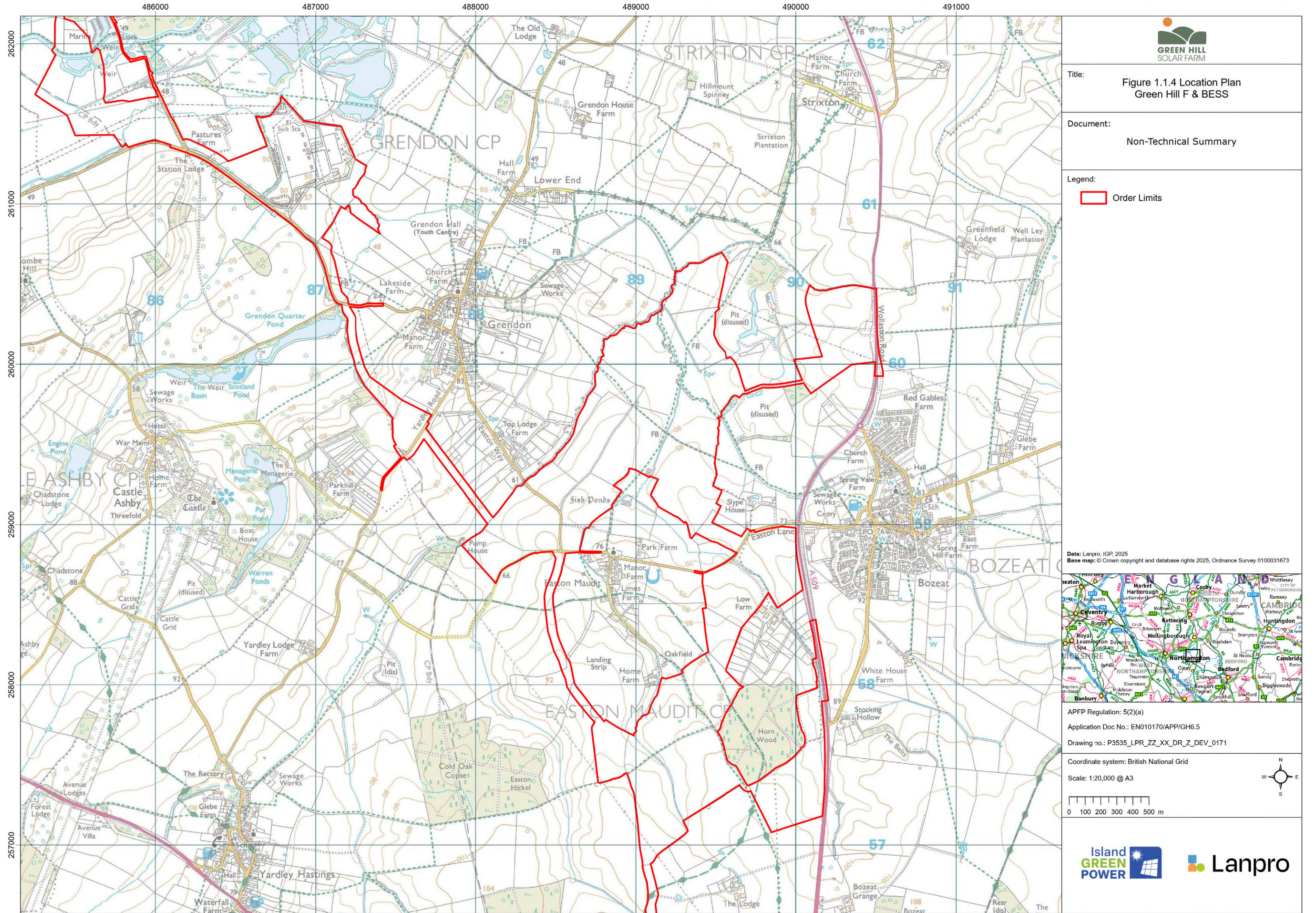
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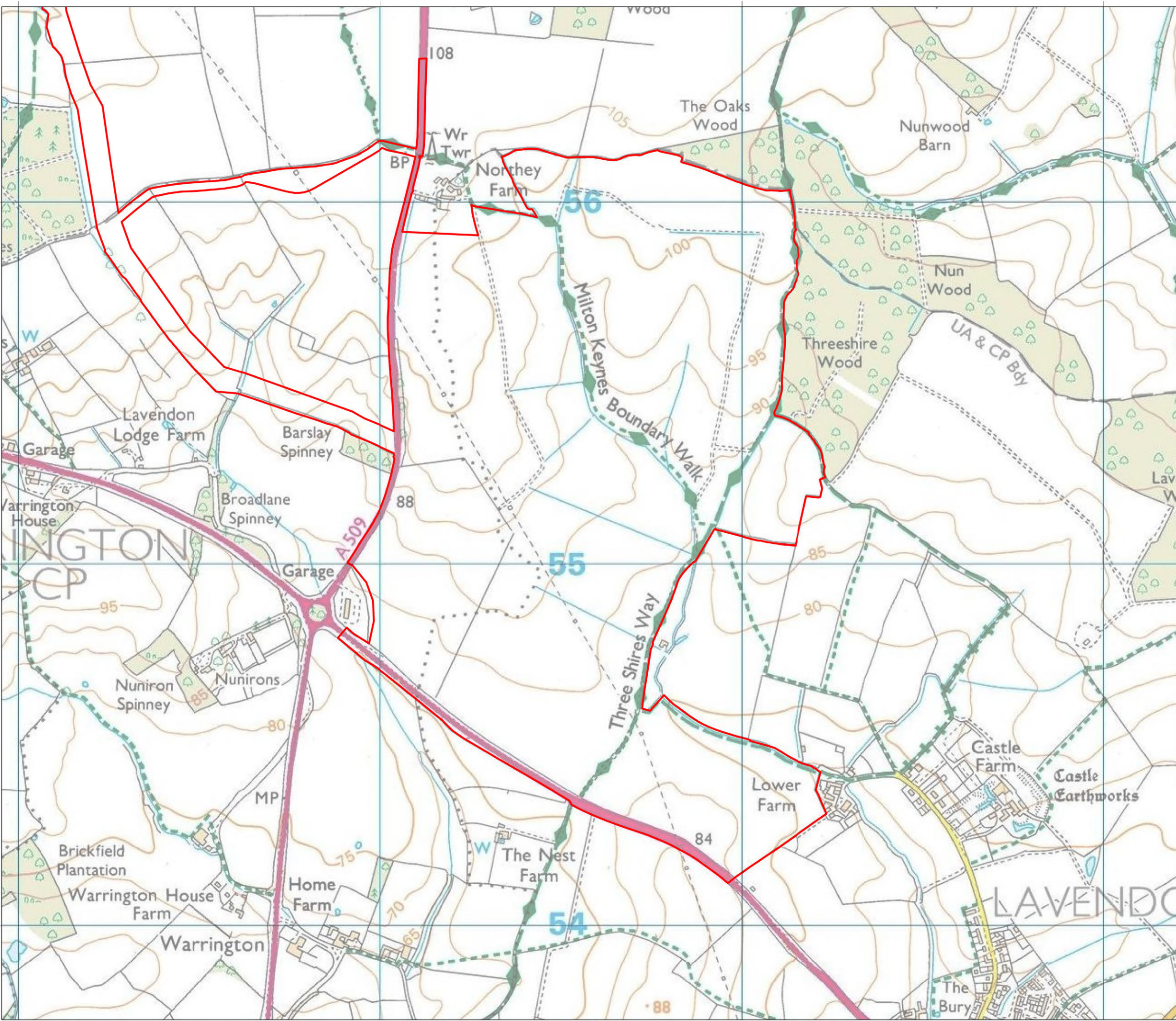


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Application Doc No.: EN010170/APP/GH6.5
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Green Hill G

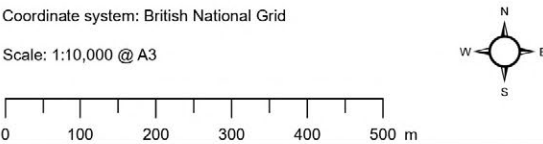
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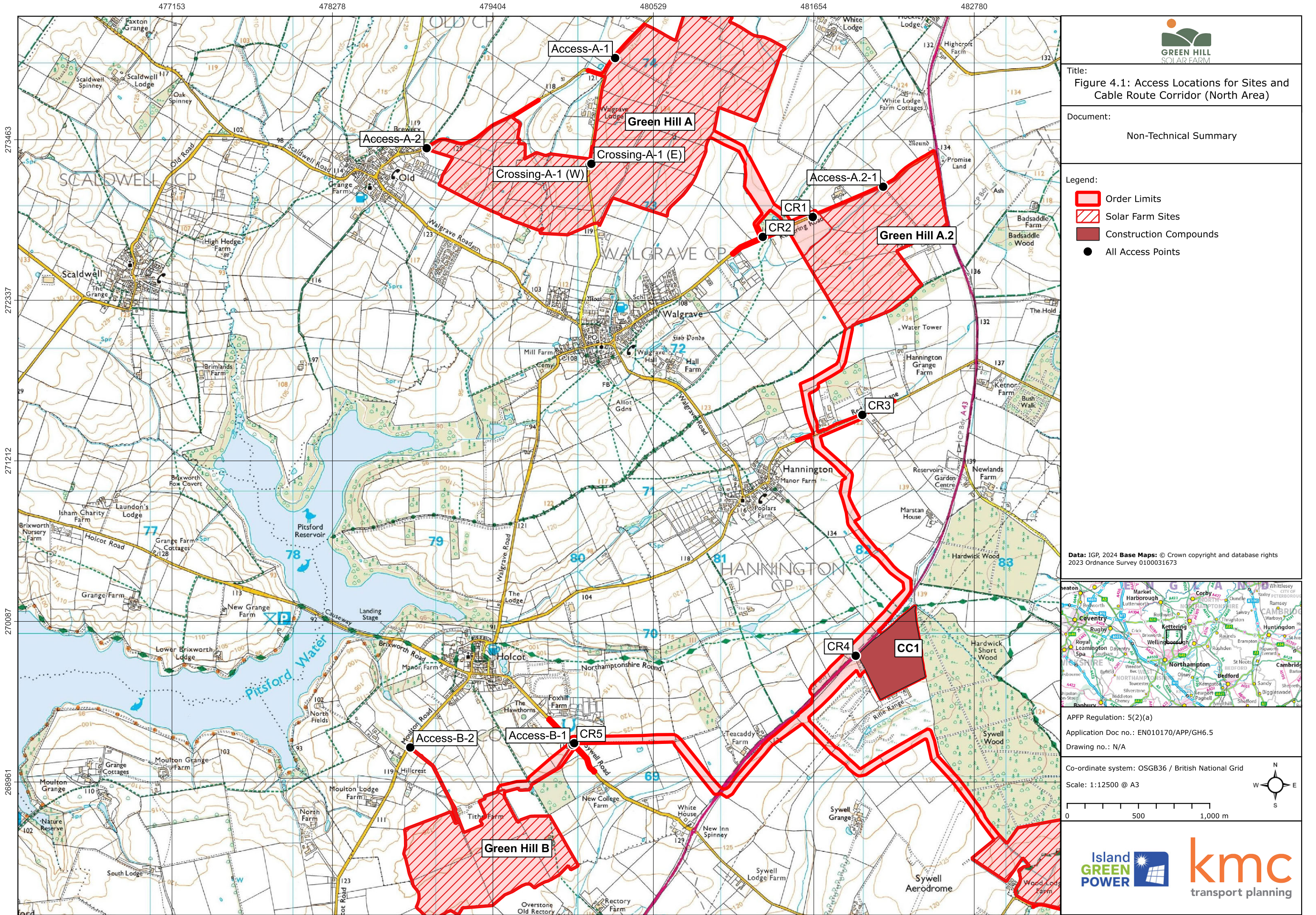
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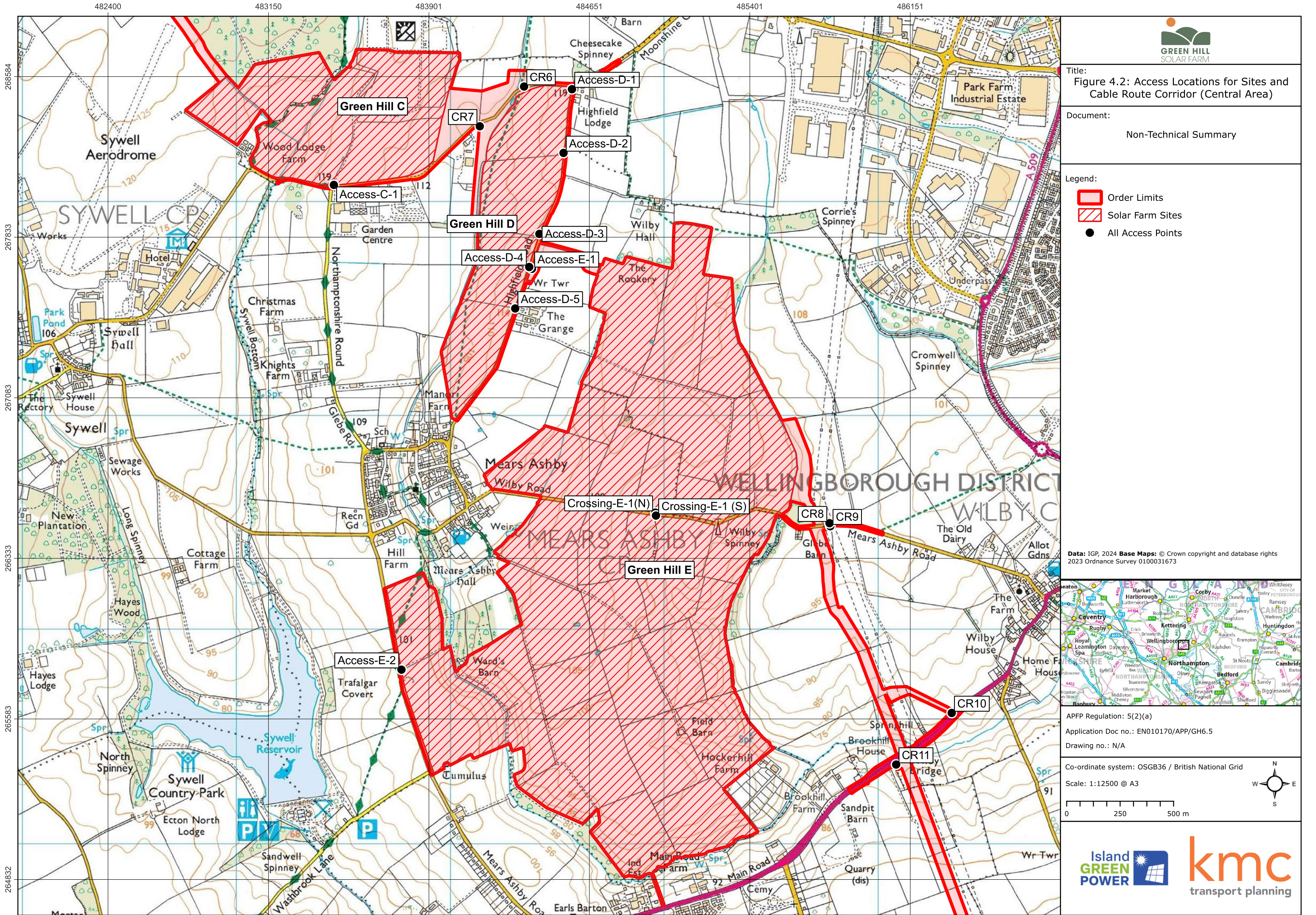
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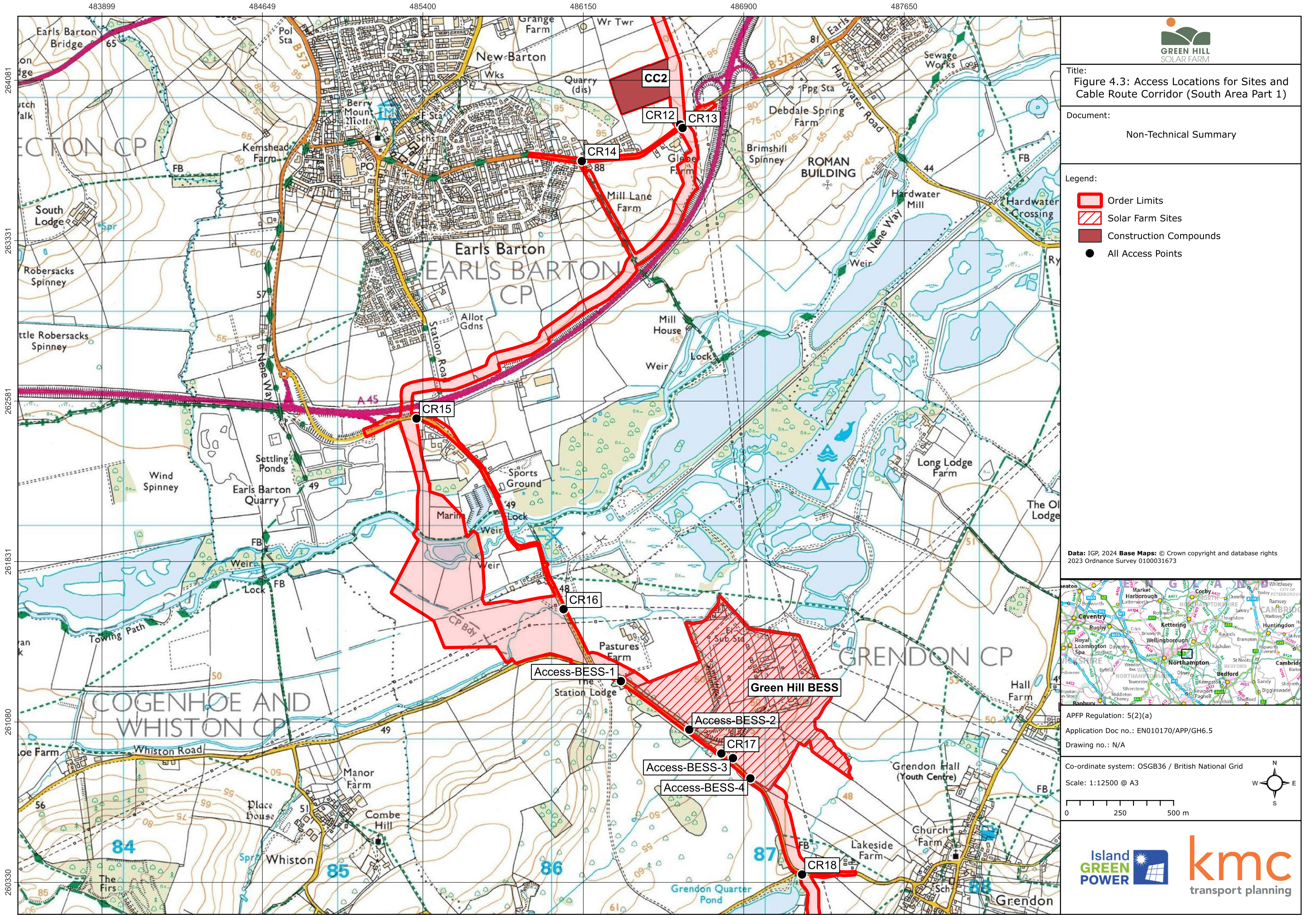


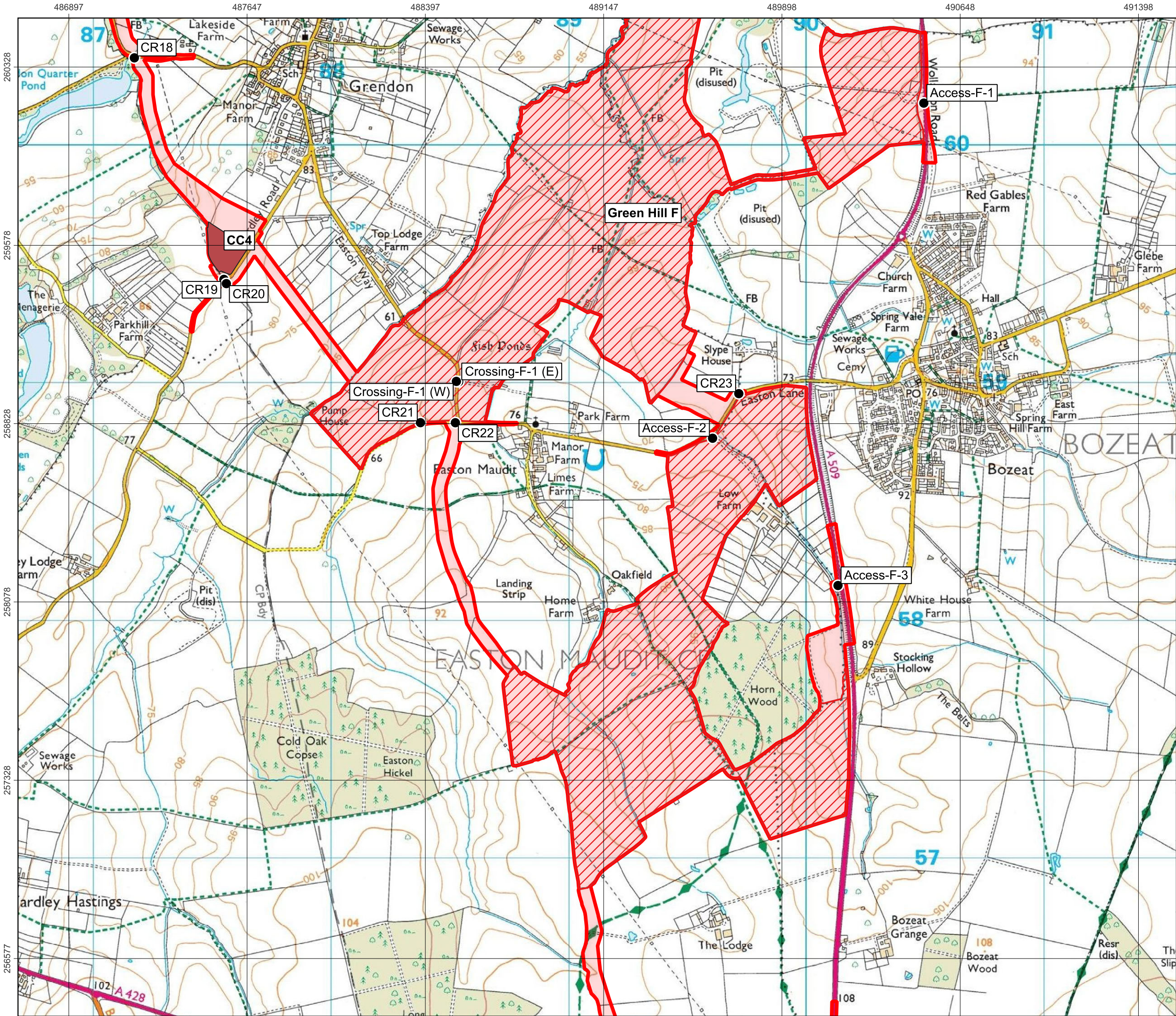
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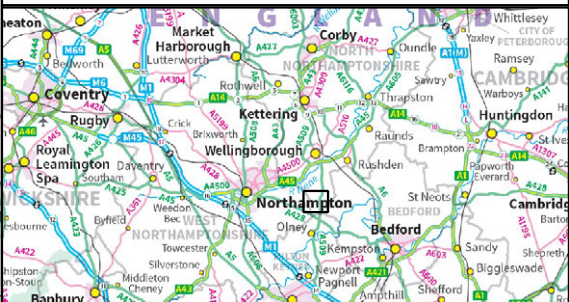


Title:
Figure 4.4: Access Locations for Sites and
Cable Route Corridor (South Area Part 2)

Document:
Non-Technical Summary

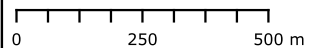
- Legend:
- Order Limits
 - Solar Farm Sites
 - Construction Compounds
 - All Access Points

Data: IGP, 2024 Base Maps: © Crown copyright and database rights
2023 Ordnance Survey 0100031673



APFP Regulation: 5(2)(a)
Application Doc no.: EN010170/APP/GH6.5
Drawing no.: N/A

Co-ordinate system: OSGB36 / British National Grid
Scale: 1:12500 @ A3





Appendix 2 – List of Cumulative Developments

ID	Application Reference	Applicant for 'other development' and brief description
1	East Park Energy EN010141	RNA Energy The installation of solar photovoltaic panels and electrical energy storage technology, and associated infrastructure for connection to the national grid. Generation and export of up to 400 megawatts (MW) of renewable electricity, as well as the storage of up to 100 MW of electricity in the BESS.
2	WP/2012/0525/XEIA WP/2008/0150/OEIA WP/16/00271/VAR WP/14/00586/VAR WP/15/00001/CND WP/15/00061/CND WP/15/00283/CND WP/15/00378/VAR WP/16/00155/AMD WP/16/00237/CND WP/18/00442/CND WP/18/00188/REM	Land Off Niort Way Northants Llp Niort Way Wellingborough Application for a new outline planning permission to replace an extant outline planning permission, in order to extend the time limit for implementation for Ref: WP/2008/0150/OEIA for up to ,3000 dwellings, retail and commercial facilities, non-residential institutions (including primary schools and nurseries) a neighbourhood centre (comprising transport interchange, non-institutional and community facilities), open spaces and parkland, associated facilities and infrastructure (comprising utilities gas, electricity and water, sewerage and telecommunications and diversion to existing utilities where necessary) and a reserve corridor for the Isham-Wellingborough improvement (IWIMP).
3	NW/24/00138/OUT (Associated with WP/2012/0525/XEIA)	Glenvale Park Phase 2 Development Site Niort Way Wellingborough Outline Planning Application for residential-led mixed use development of up to 1,000 homes (Use Class C3), employment uses of up to 26,118 square metres (including Use Classes B2, B8 and E(g)(ii) and (iii)), sports pitches and pavilion, green infrastructure, retention of woodland and ridge and furrow, supporting infrastructure, surface water drainage, internal highway network including primary street, ground



ID	Application Reference	Applicant for 'other development' and brief description
		remodelling and other ground works as required, forming part of the Wellingborough North Sustainable Urban Extension. Access from A509 to be considered and all other matters reserved for future approval.
4	NW/22/00904/FUL (Associated with WP/2012/0525/XEIA)	Erection of 250 dwellings (including 20% affordable housing), the formation of public open space, sustainable urban drainage system, provision of roads, footways, landscaping and boundary treatments.
5	NW/24/00320/SCQ	Neilson Rail Sidings Wellingborough Northamptonshire NN8 4BH Consultation on a Screening and Scoping Request for Erection and operation of an asphalt plant and road plannings recycling, ancillary facilities and associated access onto the highway.
6	WP/2013/0190 WP/14/00212/CND WP/14/00312/CND WP/14/00353/CND WP/14/00441/CND WP/15/00809/CND WP/16/00235/CND WP/16/00296/CND WP/16/00763/CND WP/17/00039/CND WP/17/00803/CND WP/18/00586/AMD NW/21/00972/AMD NW/22/00876/AMD NW/23/00104/CND	Prologis Park Wellingborough West Land Off Sywell Road Wellingborough NN8 6BS Demolition of existing buildings and development of site for a new employment park comprising use classes B1/B2/B8 together with ancillary offices, gatehouses, car parking and associated road infrastructure and landscaping (Outline application with only the access arrangement to be considered at this stage) - Travel Plan v7 Final received 22/12/17 All Zones Appleby Lodge Way Wellingborough



ID	Application Reference	Applicant for 'other development' and brief description
	NW/24/00123/CND NW/24/00288/CND	
7	NW/22/00353/FUL NW/23/00031/CND NW/23/00094/CND	Land To The South Of The Gipsy Lane (B570) Irchester Wellingborough Northamptonshire Construction and operation of a solar farm comprising ground mounted solar photovoltaic (PV) arrays together with associated infrastructure, including DNO substations, customer substations, customer switchgear, access, fencing, CCTV cameras and landscaping
8	NW/23/00360/FUL	Grendon Lakes Main Road Grendon Northampton NN7 1JW Development of battery energy storage system (BESS) with associated infrastructure including; access, drainage and landscaping.
9	NW/21/00629/SCQ	Land To The East Of Northampton Aquapark (at Grendon Lakes) Main Road Grendon Northampton Northamptonshire Scope of the required Environmental Impact Assessment (EIA) of the proposed solar farm and associated development
10	Wellingborough East SUE (Stanton Cross) - PBW Policy Site 1 WP/2004/0600 WP/15/00481/OUT WP/15/00605/VAR	Land Between Finedon Road & The Railway, Neilson's Sidings & Land north of Finedon Road (Bovis) Finedon Road Wellingborough Northamptonshire Mixed use development including 87ha of residential development; B1, B2 and B8 development, new public transport links (buses), new and enhanced walking and cycling routes and facilities, Country Park, Neighbourhood Centre, 2 Secondary local centres, construction of access roads, bridges and highway structures, footways, footpaths, bridleways; and associated works and facilities.
11	WP/15/00727/OUT	Land Rear 260 Northampton Road And Near Wordsworth Road Park Farm Way Wellingborough Northamptonshire



ID	Application Reference	Applicant for 'other development' and brief description
		Outline planning application for residential development of up to 600 dwellings, public open space, access on to Park Farm Way, landscaping, sustainable urban drainage systems, footpaths/cycleways, and associated infrastructure. All matters reserved save for access. FURTHER INFORMATION - Revised site access
12	NW/24/00418/FUL Isham Bypass – JCS Policy 17	<p>Land Route Of Isham Bypass Wellingborough Road Isham</p> <p>Development of up to 3.5km of the A509 Isham Bypass link road west of Isham, connecting the A509 at the Symmetry Park Roundabout with the A509 south of the current junction with Hill Side. The development includes the construction of a new roundabout junction with the B574 Hill Top Road connecting with the A509, Furnace Lane, and Hill Side. Structures include new overbridges to the west of Winston Drive (The Ruts), Orlingbury Road, and at Frisby Lodge; a new non-motorised user bridge at Hill Top; a bridleway underpass south of Pytchley Brook; a mammal underpass adjacent to Hill Side; the culverting of Pytchley Brook and Hardwick Brook with the extension of the existing crossing under the A509 of (as named for the purpose of this scheme) Little Harrowden Brook. The development will also include earthworks, cuttings, and embankments and land reprofiling south of A14 and west of the A509. Works to highways also include the stopping up, diversion, improvement and provision of side roads, footways and Public Rights of Way along with the provision of street lighting. Environmental mitigation will include hard and soft landscaping, ecological works, noise barriers, a surface water drainage system and flood compensation areas along with bunds. The development also includes temporary works areas to facilitate construction and other ancillary works</p>
13	NK/2024/0613	<p>Kettering Energy Park, Burton Wold Wind Farm (land adjacent to), Thrapston Road (land West of), Burton Latimer</p> <p>EIA Scoping Opinion for development of energy infrastructure, structures to accommodate advanced agricultural systems and new employment floorspace and associated works</p>
14	NK/2024/0018	Nunnery Farm, Harrington Road, Rothwell, NN14 6AW



ID	Application Reference	Applicant for 'other development' and brief description
		Scoping Opinion request for outline permission for approximately 170,000sqm of industrial/logistics development; woodland planting, green infrastructure, and landscaping; access via a new roundabout on Harrington Road; supporting infrastructure and utilities; and demolition of existing buildings
15	NK/2022/0613	Harborough Road (land at), Millbuck Industrial Estate (land adj), Desborough, NN14 2SR Development of 32,516sqm commercial floorspace (Use Class B2 (General Industrial) and Use Class B8 (Storage and Distribution), with ancillary offices (Use Class E(g)(i)) and associated landscaping, car parking, servicing and access arrangements
16	KET/2018/0965	Symmetry Park, Kettering Kettering South (land at) (Off A509 north of Isham), Kettering. Parcel B of North Northamptonshire Joint Core Strategy 2011–2031. Up to 214,606sqm gross external area for class B8 warehousing and distribution, ancillary class B1(a) offices, with associated access, internal roads, parking, landscaping and drainage
17	North Northamptonshire Joint Core Strategy 2011–2031 Policy 37	Land at Kettering South, as shown on the Policies Map, is allocated for employment uses. Whilst Parcels A and B can come forward independently, as market demands dictate proposals should be supported by a comprehensive masterplan demonstrating how the development of parcels A and B will be coordinated to deliver a mix of employment uses, supporting infrastructure and connectivity between the parcels
18	KET/2007/0694 KET/2013/0314 KET/2013/0232 KET/2015/0967 KET/2019/0628	East Kettering Sustainable Urban Extension (SUE) (also called Hanwood Park) Outline Application with EIA for 5,500 dwellings and related development.



ID	Application Reference	Applicant for 'other development' and brief description
	KET/2020/0306	
19	North Northamptonshire Joint Core Strategy 2011– 2031 Policy 36	Land at Kettering North, as shown on the Policies Map, is allocated primarily for employment uses. The site will provide for a minimum of 40ha of B1 (business), B2 (general industry) and small scale B8 (storage and distribution) development together with approximately 3ha of leisure (D2) related uses.
20	North Northamptonshire Joint Core Strategy 2011– 2031 Policy 38	Land at Rothwell North, as shown on the policies map, is allocated for a mixed use sustainable urban extension.
21	KET/2011/0235 NK/2021/0356 KET/2017/0169 Allocated as Desborough North SUE within North Northamptonshire Joint Core Strategy	North Desborough (land at), Desborough, NN14 2SR Residential development of up to 700 dwellings including provision of a local centre primary school green infrastructure and creation of accesses
22	NK/2024/0599	Oakley Bush Solar Scheme, Geddington Road (Land to North), Newton Construction, operation and decommissioning of ground mounted solar PV panels, battery energy storage system (BESS), electricity generation substation and other ancillary infrastructure. Installation of inverters, CCTV, cabling, fencing, internal access track and other associated ancillary works



ID	Application Reference	Applicant for 'other development' and brief description
23	KET/2017/1019 NK/2021/023	Buxton Drive & Eyam Close (land off), Desborough Development of up to 135 no. dwellings with means of access considered
24	KET/2019/0606 NK/2022/0673	Harborough Road (land off), Desborough Residential development of up to 260 dwellings with access considered
25	2024/1408/MAO	Victors Barns Northampton Road Brixworth Mixed use development (Local Services Centre) comprising commercial, business and service uses, and the provision of Spa and Wellbeing Centre within Class E; mixed use restaurant and takeaway use (sui generis); and the provision of up to 16 Affordable Houses (Class C3). All matters reserved except for Access
26	2023/5978/EIA	Land South and East of Grange Park, Northampton Northamptonshire NN7 2EE Outline application for up to 850 dwellings including 35% affordable, a new local centre, land for a new 2FE primary school, open space including an extension to the adjacent country park, community allotments, landscape buffers, enhanced off-site pedestrian and cycle links, and associated off-site highways works, with all matters reserved other than site access
27	WNS/2022/2402/EIA 2024/1072/COND 2024/1073/COND 2024/1074/COND 2024/1401/COND 2024/2027/NMA 2024/2616/COND	Land South Of East Lodge Farm Quinton Road Courteenhall Construction and operation of an Anaerobic Digestion facility associated infrastructure and landscape planting. Application accompanied by an Environmental Statement



ID	Application Reference	Applicant for 'other development' and brief description
28	<p>DA/2013/0850 2023/6201/COND 2023/6198/COND 2023/6203/COND 2023/6206/COND 2023/6214/COND 2023/5526/COND 2023/6209/COND 2024/1271/COND</p> <p>Associated with Northampton North Sustainable Urban Extension</p> <p>West Northamptonshire Joint Core Strategy Local Plan</p>	<p>Overstone Leys, Northampton. Outline application of up to 2000 dwellings, with access, appearance, layout and scale unreserved for the first phase of 200 dwellings; a new section of A43 dual carriageway road; up to 3.83ha for a local centre incorporating provision for a Use Class A1 foodstore (up to 2,000 sqm), Class A4 public house (up to 650 sqm), Class C2 care home (up to 2,800 sqm), Class D1 day nursery (up to 465 sqm), Class D1 medical centre (up to 750 sqm), a parade of 5 retail units (Classes A1, A2, A3, A5 and D1) (up to 450 sqm), Class B1(c) light industry (up to 5,000 sqm); a new primary school (up to 3,150 sqm); public open space provision to include outdoor sports pitches, allotments and children's play space; structural landscape planting; associated infrastructure, including drainage features and access.</p>
29	<p>DA/2020/0001</p> <p>Associated with Northampton North Sustainable Urban Extension</p> <p>West Northamptonshire Joint Core Strategy Local Plan</p>	<p>Outline application for an urban extension consisting of circa 1600 dwellings; works to accommodate a new section of A43 dual carriageway road; up to 5.73 ha of commercial land, including: a local centre (Use Classes A1/A3/A5/D1), assisted living/residential care home (Class C2), conversion of former agricultural buildings to a community hub (Classes D1/A3) and employment (Classes B1/B2/B8); a new 2-form entry primary school; public open space, including allotments and children's play space; structural landscape planting; and associated infrastructure including drainage features, footway/cycleways and access (part access unreserved for a roundabout access into the site off the A43). AMENDED</p>
30	S/2017/2577/EIA	Land North of Newport Pagnell Road Hackleton



ID	Application Reference	Applicant for 'other development' and brief description
	WNS/2021/1997/COND WNS/2022/0110/EIA WNS/2022/0360/COND WNS/2022/0361/COND	Outline application for a residential development of up to 525 dwellings, open space, children's play area and associated infrastructure (Application accompanied by an Environmental Statement)
31	Policy N19 - Northampton, Land West of the A43 West Northamptonshire Local Plan - 2041 (Regulation 18) Consultation Draft April 2024	Land west of the A43 Residential development at N18 East of Wootton Fields will be supported.
32	2025/0069/EIA	Land north of The Green, south of Brackmills Country Park and south west of Great Houghton Outline planning application with all matters reserved (except vehicular access) for residential-led (class C3) mixed use development, with commercial uses (use class E(a), E(b) and E(c)), community use (class F.2) and ancillary infrastructure and open space, demolition and/or refurbishment of existing buildings and together with ancillary works (this application is accompanied by an Environmental Statement)
33	Wind Turbine Area of Search And Solar Farm Area of Search MK2050 (Regulation 18) Consultation Draft July 2024	The preferred areas for wind turbine development are those designated as a Wind Turbine Development Area of Search, as shown on the Policies Maps. The preferred areas for solar farm development (with a minimum size of 5MW) are those designated as a Solar Farm Development Area of Search, as shown on the Policies Maps.



ID	Application Reference	Applicant for 'other development' and brief description
34	<p>Policy CEA12 Conserving and Enhancing Landscape Character/Special Landscape Areas</p> <p>MK2050 (Regulation 18) Consultation Draft July 2024</p>	<p>Where landscape has been designated as an SLA, it is recognition of the 'special' qualities of that landscape which make it of higher sensitivity and value. This policy requires new developments to conserve and, where possible, enhance the special character and key landscape qualities of the SLAs in addition to conserving and enhancing landscape character in wider areas.</p>
35	NE/24/00667/SCR	<p>Land North Of Northampton Road Rushden</p> <p>Screening Opinion in relation to the above site for the erection of general industrial units (Use Class B2), a supermarket, non-food retail floorspace and drive to unit (all within Use Class E), EV charging facility and public open space with supporting infrastructure and associated works.</p> <p>The Site extends to c. 11.83 hectares (ha), is triangular, and bound to the north and north-west by a hedgerow, beyond which lies the A45 and the Upper Nene Valley Gravel Pits.</p> <p>Land allocated under Policy 35, Joint Core Strategy</p>
36	NE/23/00903/SCR	<p>Site 1261 Former Quarry Ditchford Lane</p> <p>To formally request a Screening Opinion from North Northamptonshire Council to determine whether the proposed solar development off Ditchford Road would constitute Environmental Impact Assessment (EIA) Development. Site 1261 Former Quarry Ditchford Lane</p>



ID	Application Reference	Applicant for 'other development' and brief description
37	20/01453/OUT Land allocated under Policy 33, Joint Core Strategy	Rushden East Urban Extension Liberty Way Rushden Northamptonshire Outline Planning Application for a Sustainable Urban Extension comprising residential development of up to 2,200 dwellings (Class C3), residential institution (Class C2), up to 110,000 square metres of employment development (Classes B2 (General Industrial), B8 (Storage and Distribution), E(comprising Office, Research and Development of Products or Processes and Industrial Processes)), two local centres, two primary schools, one secondary school, details of the principal accesses from A6 /John Clark Way roundabout and Newton Road, secondary vehicular and non-vehicular accesses, public open space including Suitable Alternative Natural Greenspace, cemetery, allotments, noise mitigation features, drainage, primary sub-station utilities apparatus and associated engineering works, demolition of existing buildings, earthworks and ground remodelling (All Matters reserved except access). Land allocated under Policy 33, Joint Core Strategy
38	10/00415/FUL 13/00005/CND	Chelveston Renewable Energy Park The Airfield Chelveston Wellingborough Northamptonshire NN9 6AU Development of wind farm comprising nine wind turbines, five of which are located within the district of East Northamptonshire, each 125m high to blade tip, one anemometer mast 80m high, construction of access tracks, underground cabling, visitor car park and viewing area
39	NE/24/01235/FUL	Site 953 Former Quarry Ditchford Lane Installation of ground mounted solar array, including mounting system, access tracks, an 11KV transformer compound, cabling, stock proof fence, CCTV and associated infrastructure and landscaping
40	23/01270/EIASCRC	Land Adjacent To Bridge Farm (Wymington) Ltd Podington Road Wymington Rushden NN10 9FT Request for an EIA Screening Opinion for the proposed development of a new solar array and ancillary buildings
41	23/01111/EIASCRC	Lime Kiln - Land At And Surrounding Wymington Road Podington Request for Screening Opinion in respect of a proposed 49.9MW solar farm



ID	Application Reference	Applicant for 'other development' and brief description
42	22/02193/MOF	<p>Hill Farm Mill Road Sharnbrook Bedford Bedfordshire MK44 1NP</p> <p>A hybrid planning application for (i) full planning permission for the development of 304 dwellings and all associated infrastructure including roads, utilities, drainage, footpaths, cycleways and landscaping; the construction of a roundabout access on the A6, construction of new vehicular accesses to Mill Road and Templars Way, and the closure of Templars Way junction with the A6, and related offsite highway improvements; construction of a car park to support the Community Hub and school pick-up/drop-off; and (ii) outline permission, with all matters reserved except access, for the development of 196 dwellings, a primary school, a community hub, and the provision of playing pitches and associated changing facility and car parking.</p>
43	24/01026/MAO	<p>Land North Of Northampton Road Bromham Bedfordshire</p> <p>Outline residential development for up to 179 dwellings, landscaping, open space and associated infrastructure with all matters reserved except for access.</p>
44	24/00810/MAO	<p>Land South Of Northampton Road Bromham Bedfordshire</p> <p>Outline planning permission with all matters reserved except the means of access via Northampton Road for: up to 315 new homes (class C3), a 64-bed care home (class C2), 0.2 hectares of land for a GP surgery or other community use (class E and F2), convenience store (class E) and associated car parking (including charging points for electric vehicles and recycling bank), public open space, skate-park, outdoor gym, play areas and ancillary uses.</p>
45	19/01904/MAO	<p>Land At Junction Of A422 And A428 In The Parish Of Bromham Stagsden Road Bromham Bedfordshire</p> <p>Outline application for the erection of up to 390 dwellings (C3 use), a sports pavilion, parking, public open space, equipped play spaces, playing fields, landscaping, earth works, sustainable drainage system and other associated infrastructure, with all matters reserved except for vehicular accesses including a new roundabout on Stagsden Road and segregated pedestrian and cycle routes.</p>
46	23/01270/EIASCR	<p>Land Adjacent To Bridge Farm (Wymington) Ltd Podington Road Wymington Rushden NN10 9FT</p>




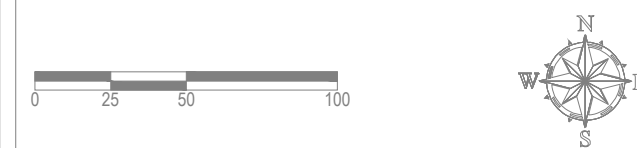
ID	Application Reference	Applicant for 'other development' and brief description
		Request for an EIA Screening Opinion for the proposed development of a new solar array and ancillary buildings

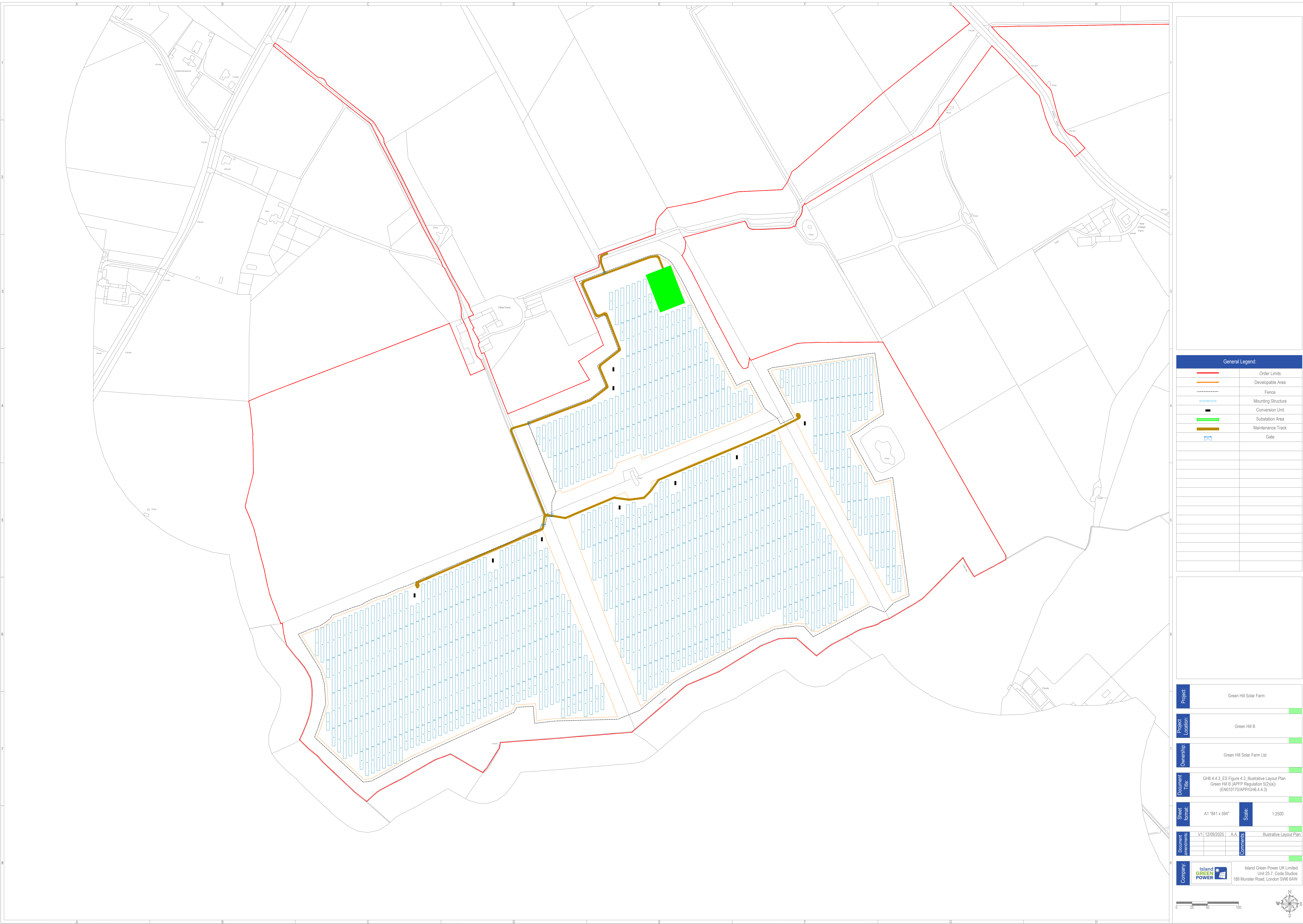


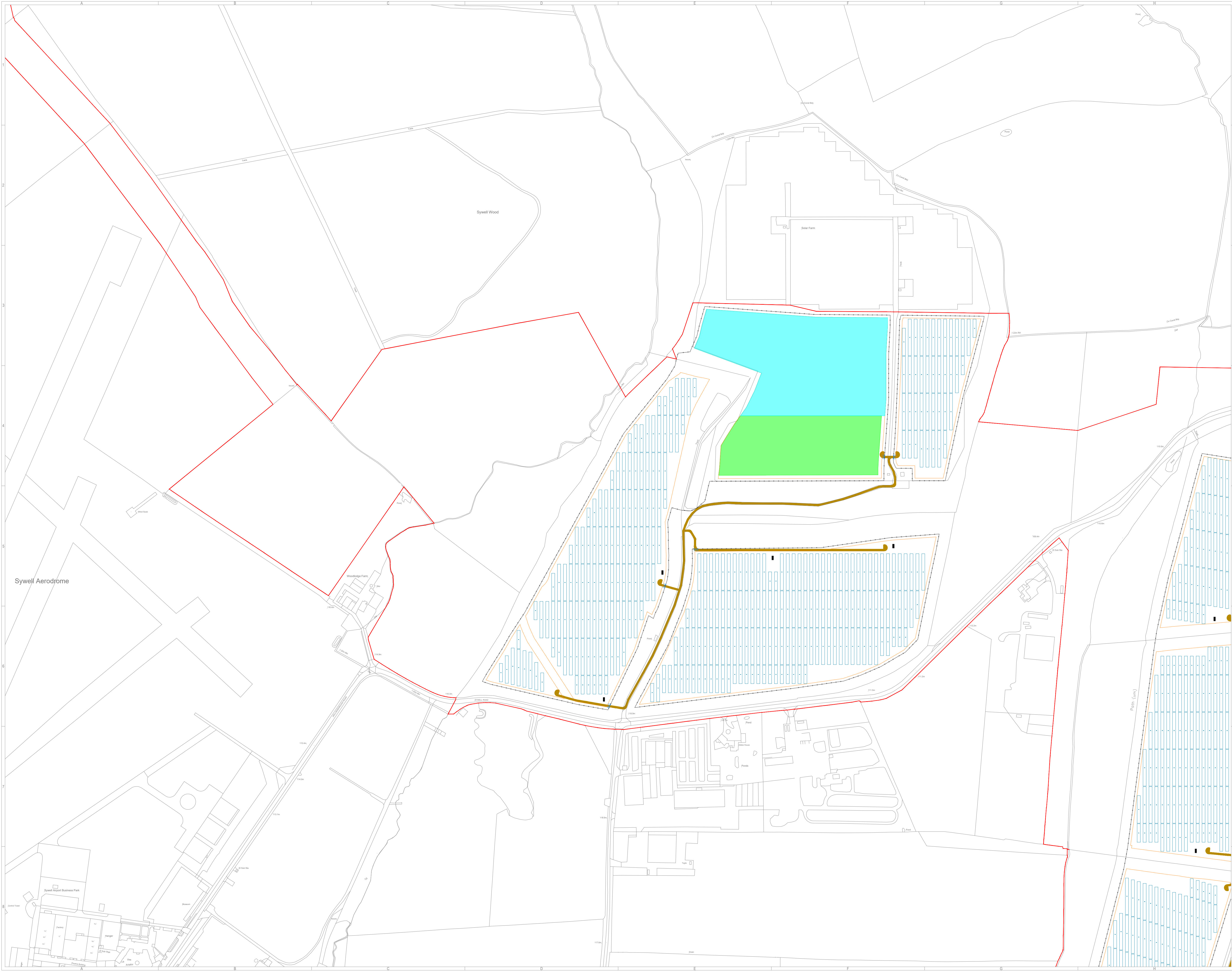
Appendix 3 – Illustrative Layouts

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Overship:	Green Hill Solar Farm Ltd		
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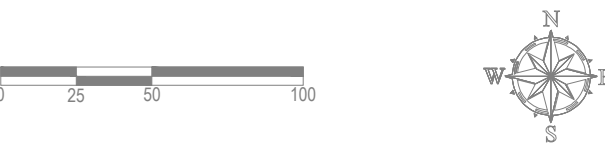


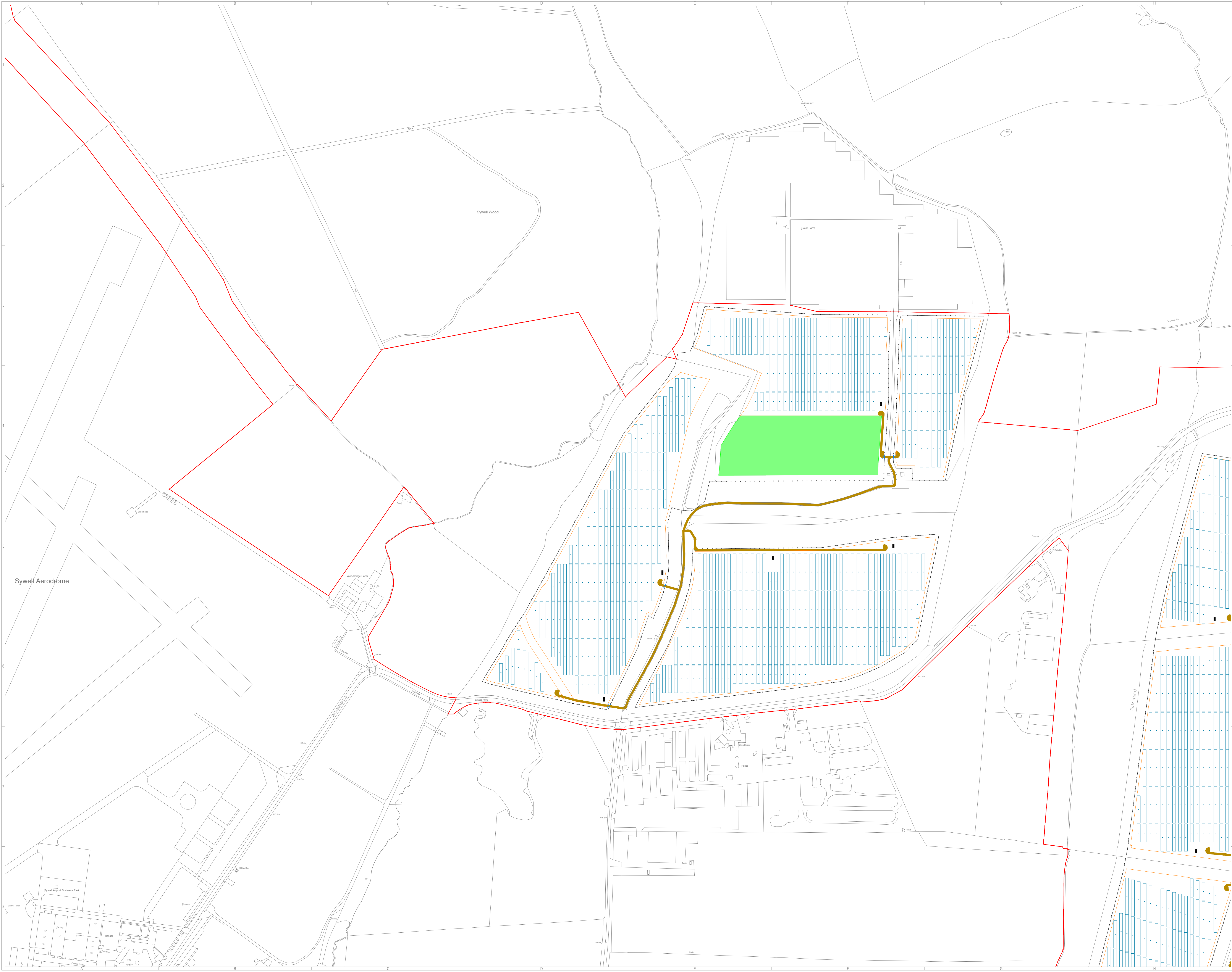




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	Fence
	Mounting Structure
	Conversion Unit
	Substation Area
	BESS Area
	Maintenance Track
	Gate

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Project Location:	Green Hill C		
Ownership:	Green Hill Solar Farm Ltd		
Document Title:	GH6.4.4.1_ES Figure 4.4.1. Illustrative Layout Plan Green Hill C Option A (APPP Regulation 5(2)(a)) (EN010170/APPP/GH6.4.4.1)		
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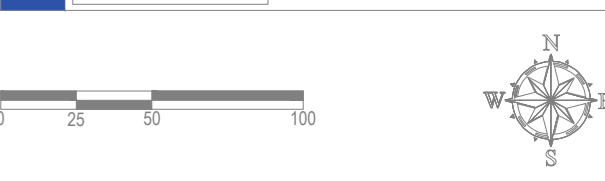


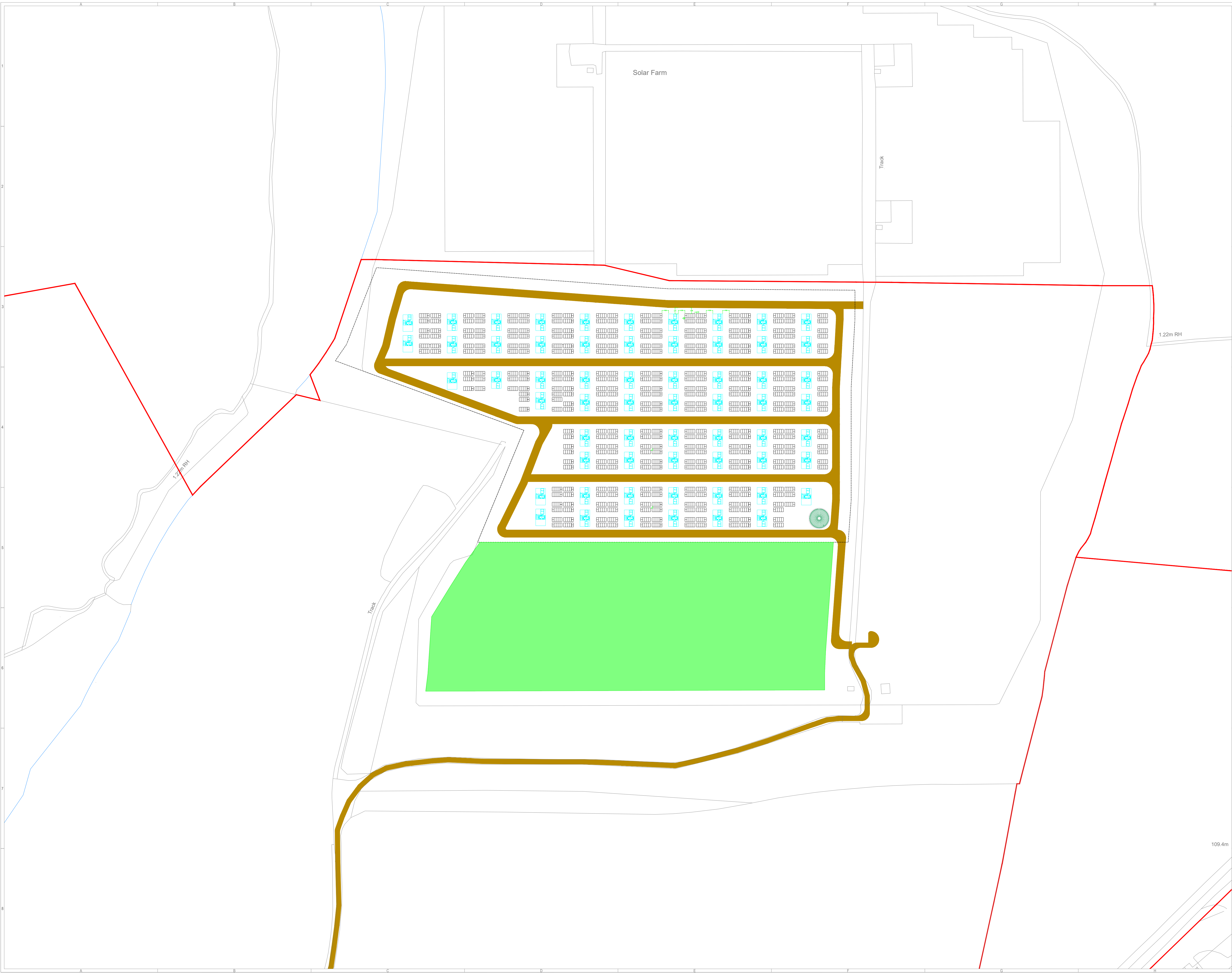




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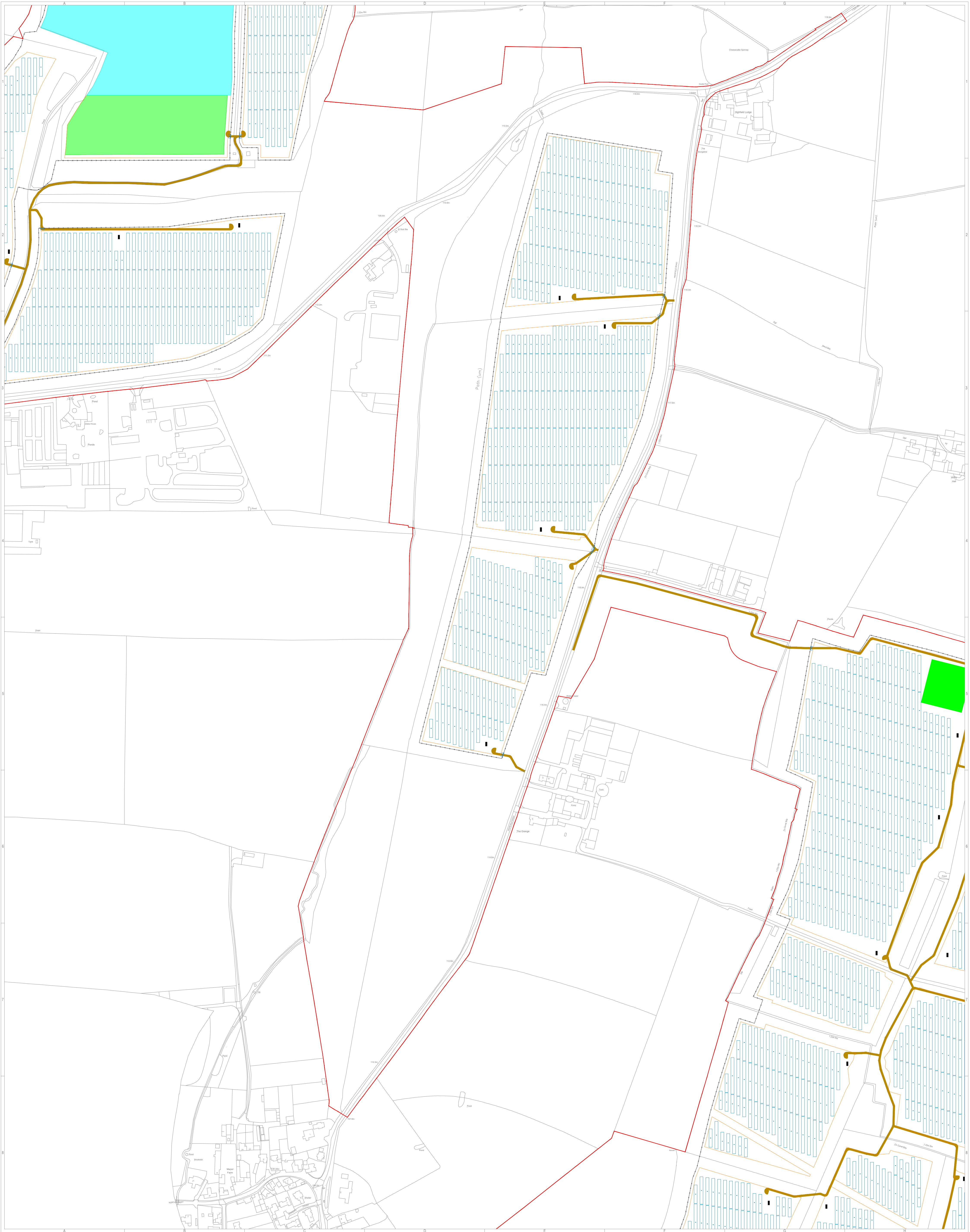
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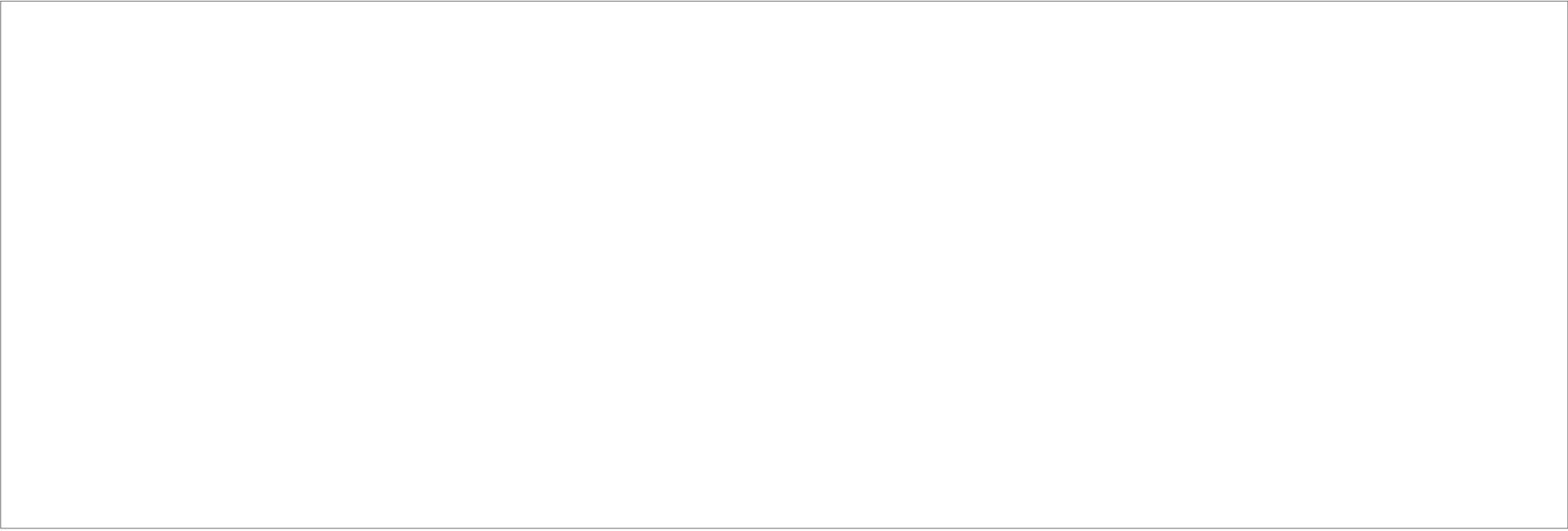
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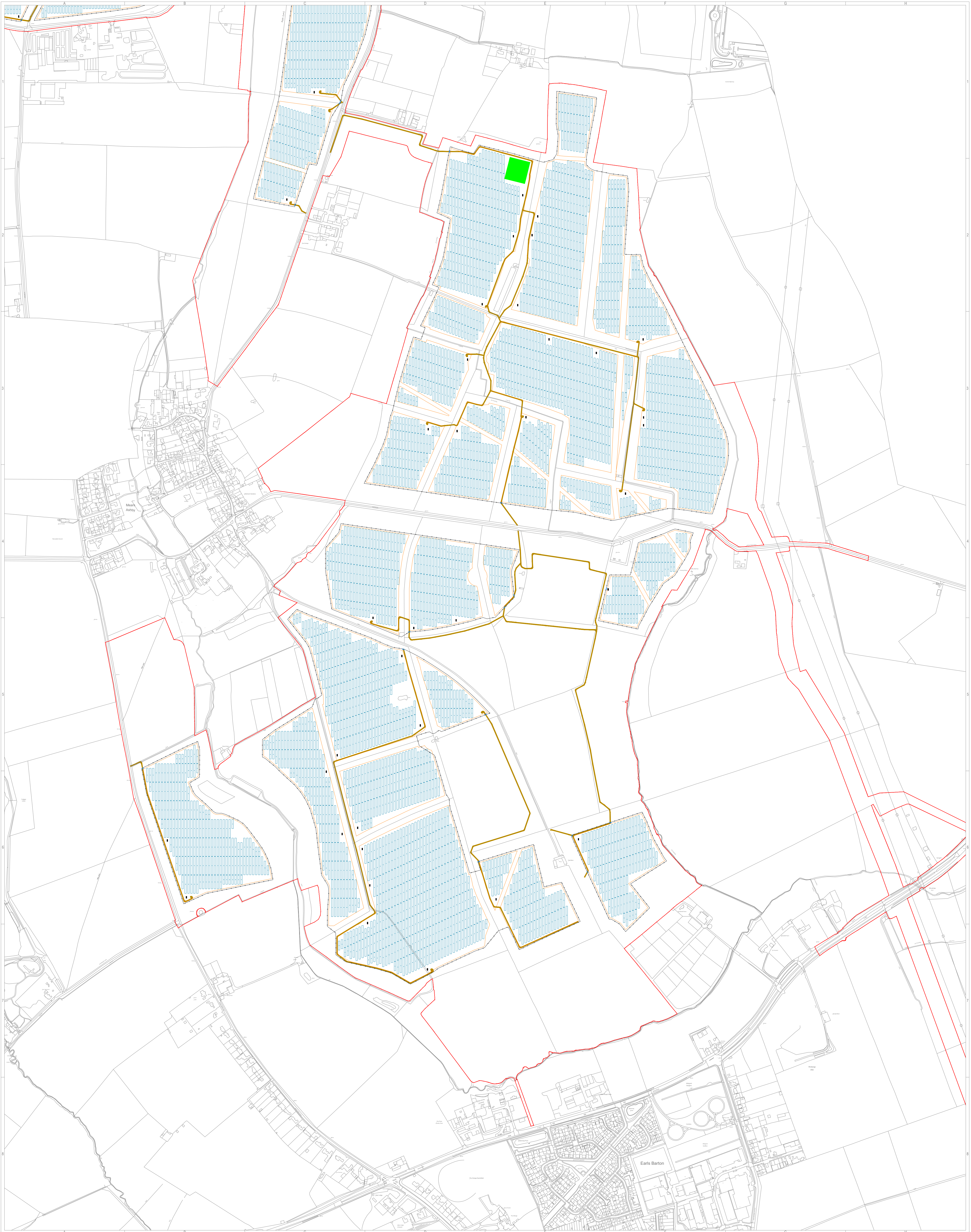


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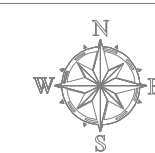
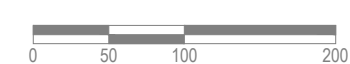
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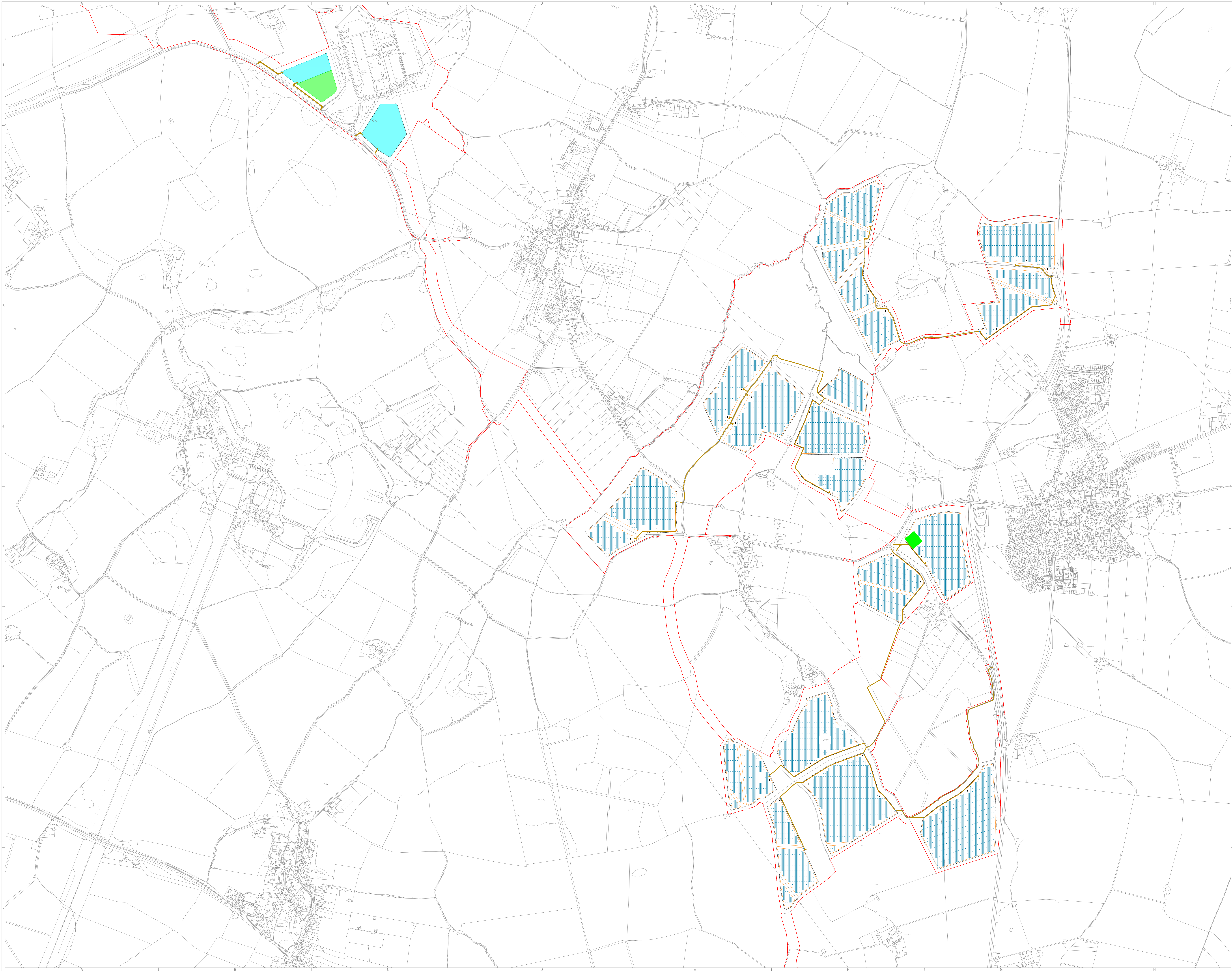


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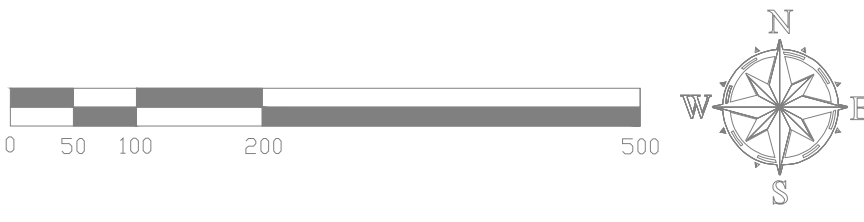


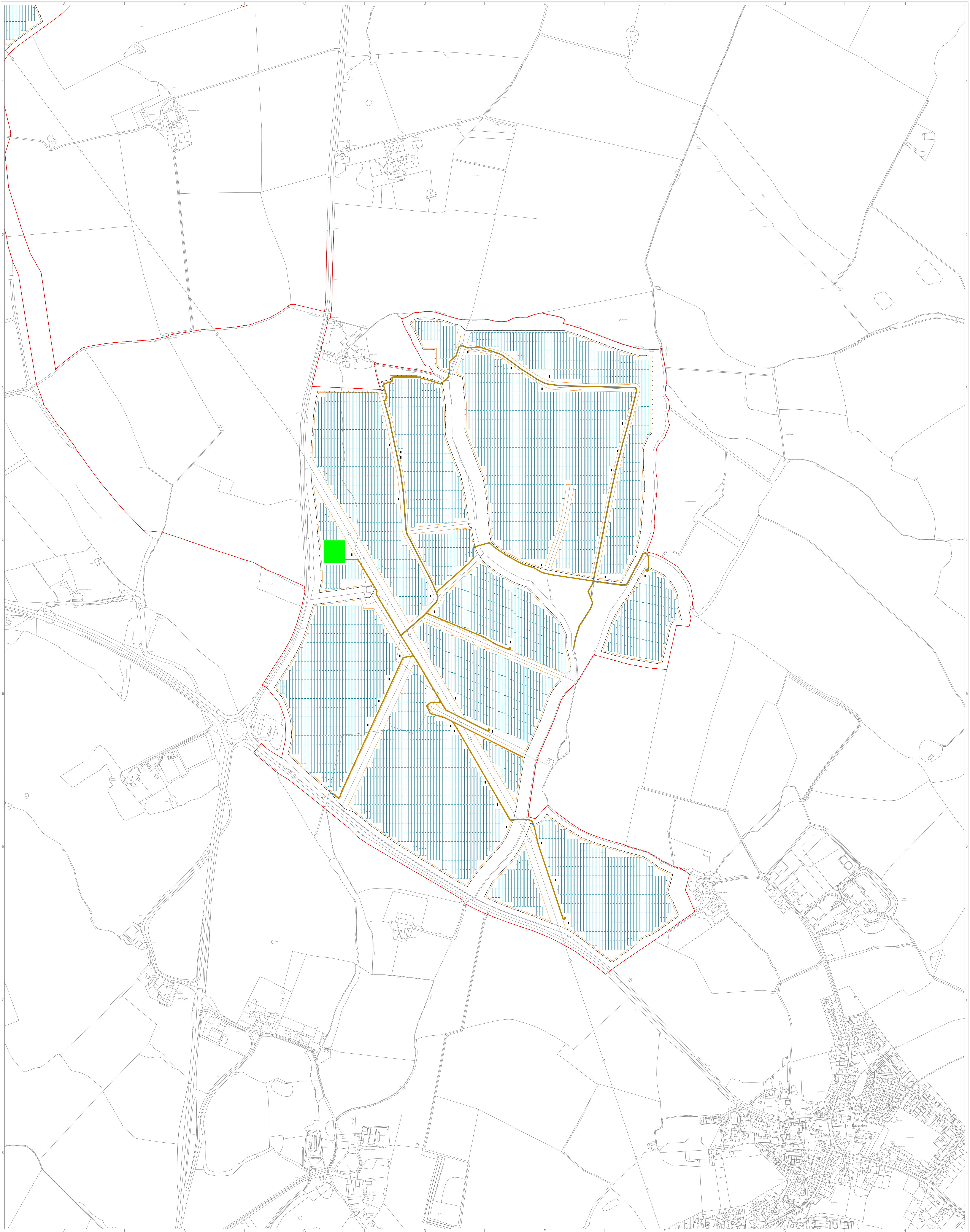
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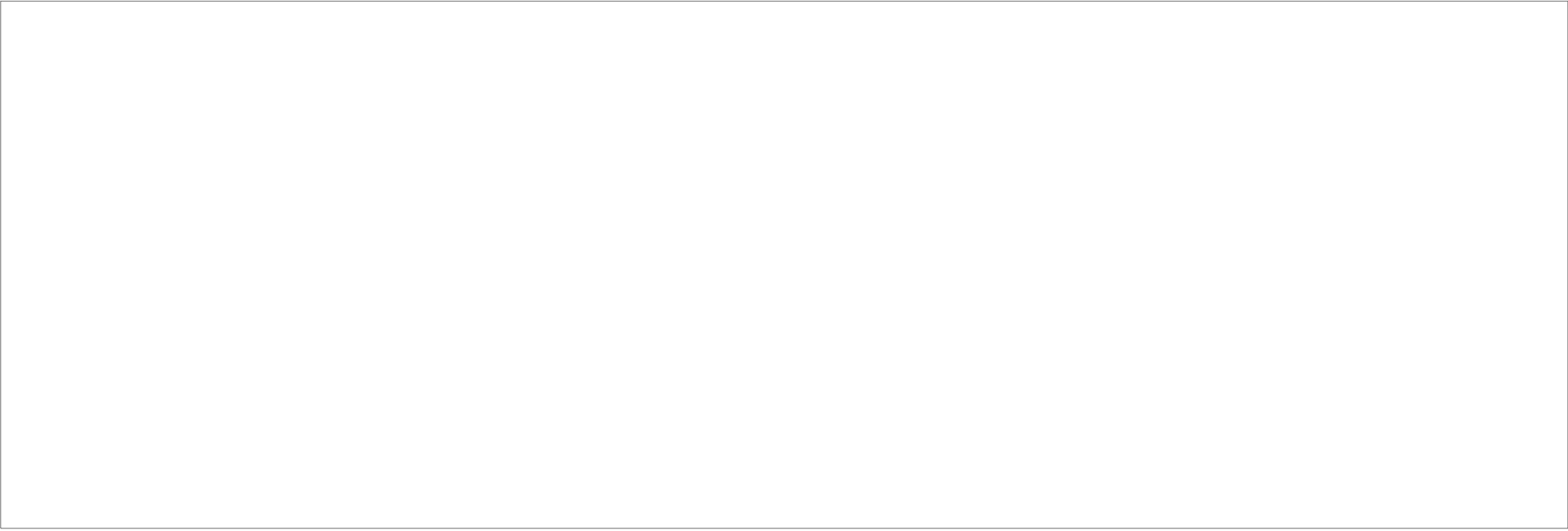
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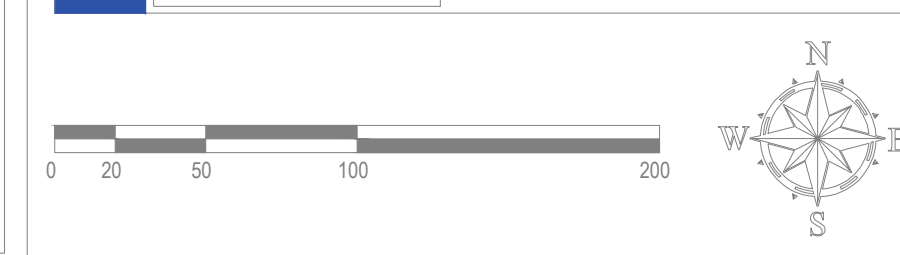


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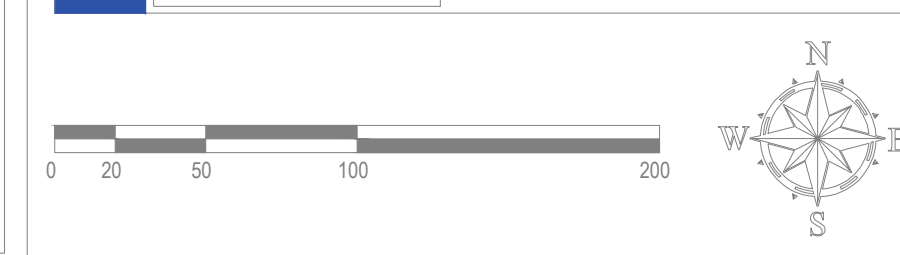
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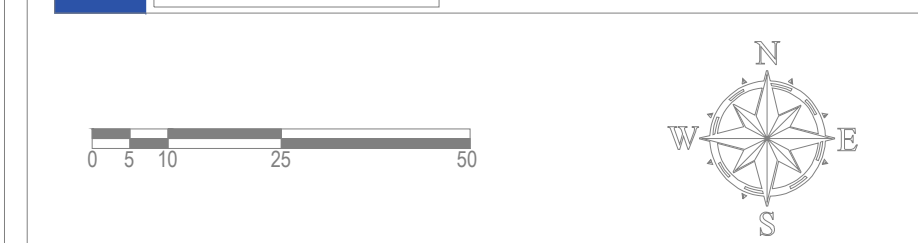
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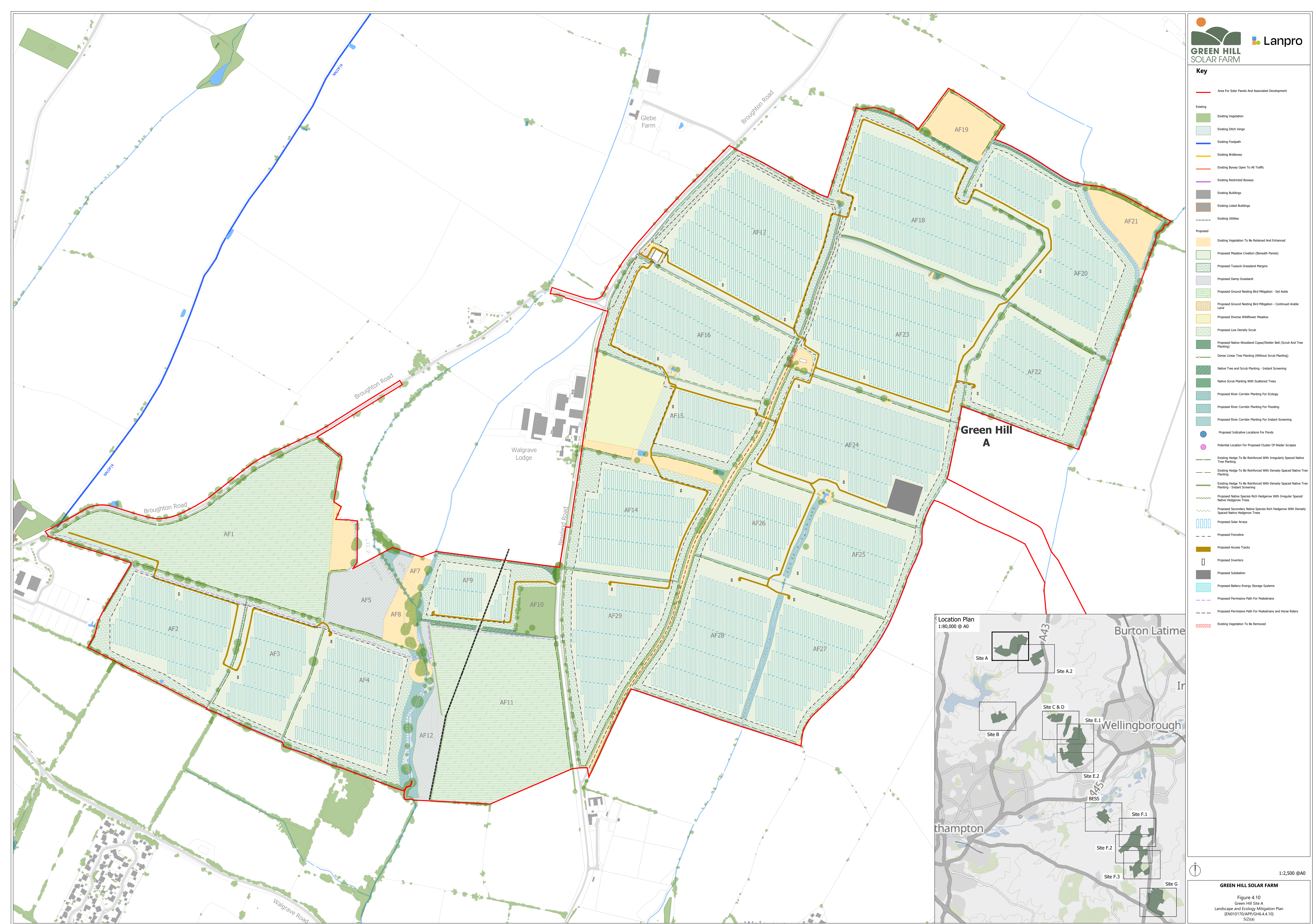
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Project:	Green Hill Solar Farm		
Project Location:	Green Hill BESS		
Ownership:	Green Hill Solar Farm Ltd		
Document Title:	GH6.4.4.9.4_ES Figure 4.9.4_Illustrative Layout Plan Green Hill BESS Energy Storage Layout Option B (APFP Regulation 5(2)(a))(EN010170/APFP/GH6.4.4.9.4)		
Sheet format:	A0 "1189 x 841"	Scale:	1:1000
Document enquiries:	V1	12/09/2025	A.A.
			Illustrative Layout Plan
Company:	 Island Green Power UK Limited Unit 25.7, Coda Studios 189 Munster Road, London SW6 6AA		



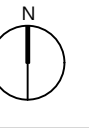
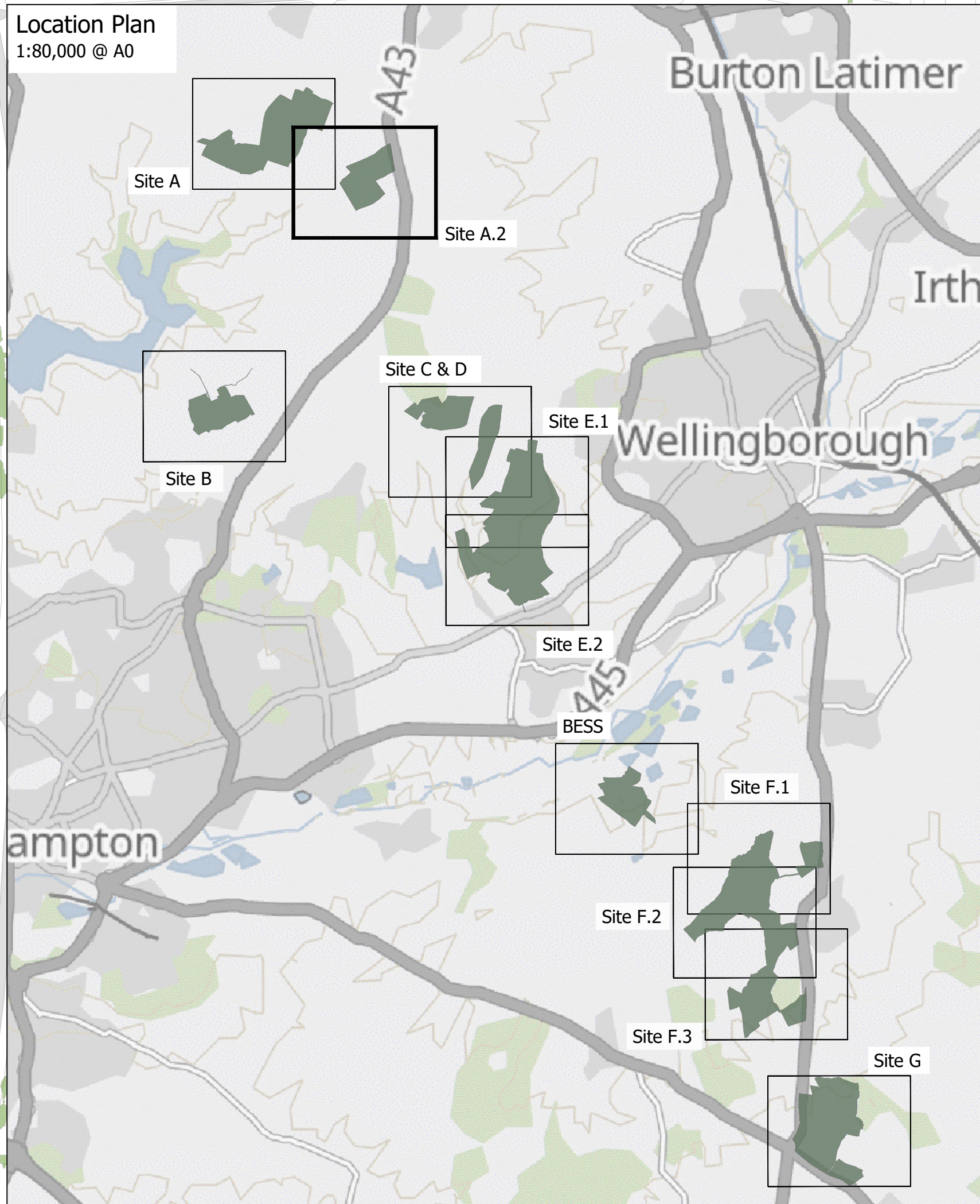


Appendix 4 - Landscape and Ecological Mitigation Plans



Key

- Area For Solar Panels And Associated Development
- Existing
- Existing Vegetation
- Existing Ditch Verge
- Existing Footpath
- Existing Bridleway
- Existing Byway Open To All Traffic
- Existing Restricted Byways
- Existing Buildings
- Existing Listed Buildings
- Existing Utilities
- Proposed
- Existing Vegetation To Be Retained And Enhanced
- Proposed Meadow Creation (Beneath Panels)
- Proposed Tussock Grassland Margins
- Proposed Dump Grassland
- Proposed Ground Nesting Bird Mitigation - Set Aside
- Proposed Ground Nesting Bird Mitigation - Continued Arable Land
- Proposed Diverse Wildflower Meadow
- Proposed Low Density Scrub
- Proposed Native Woodland Coppice/Shelter Belt (Scrub And Tree Planting)
- Dense Linear Tree Planting (Without Scrub Planting)
- Native Tree and Scrub Planting - Instant Screening
- Native Scrub Planting With Scattered Trees
- Proposed River Corridor Planting For Ecology
- Proposed River Corridor Planting For Flooding
- Proposed River Corridor Planting For Instant Screening
- Proposed Indicative locations For Ponds
- Potential Location For Proposed Cluster Of Water Scrapes
- Existing Hedge To Be Reinforced With Irregularly Spaced Native Tree Planting
- Existing Hedge To Be Reinforced With Densely Spaced Native Tree Planting
- Existing Hedge To Be Reinforced With Densely Spaced Native Tree Planting - Instant Screening
- Proposed Native Species Rich Hedgerow With Irregularly Spaced Native Hedgerow Trees
- Proposed Secondary Native Species Rich Hedgerow With Densely Spaced Native Hedgerow Trees
- Proposed Solar Arrays
- Proposed Fenceline
- Proposed Access Tracks
- Proposed Inverters
- Proposed Substation
- Proposed Battery Energy Storage Systems
- Proposed Permissive Path For Pedestrians
- Proposed Permissive Path For Pedestrians And Horse Riders
- Existing Vegetation To Be Removed

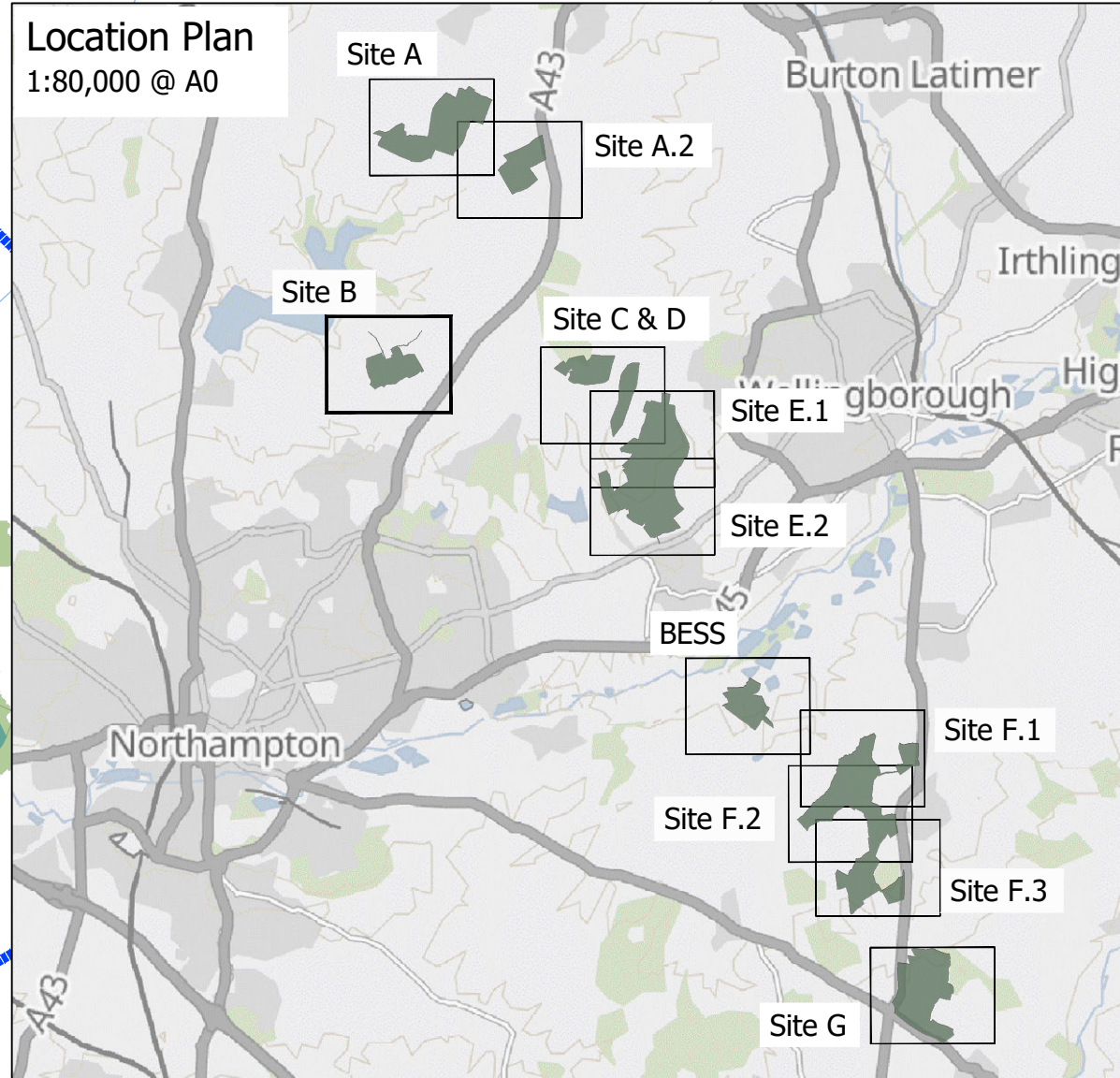


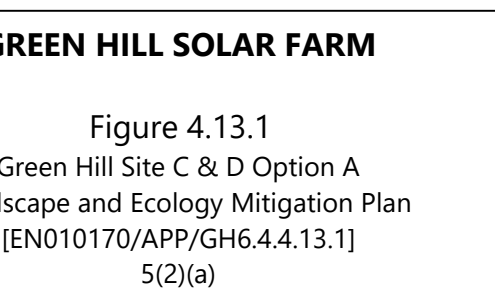
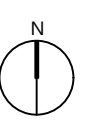
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GREEN HILL SOLAR FARM

Figure 4.11
Green Hill Site A.2
Landscape and Ecology Mitigation Plan
(END1010170/APPG/GHS.4.4.11)
5(2)(a)

- Area For Solar Panels And Associated Development
- Existing
- Existing Vegetation
 - Existing Ditch Verge
 - Existing Footpath
 - Existing Bridleway
 - Existing Byway Open To All Traffic
 - Existing Restricted Byways
 - Existing Buildings
 - Existing Listed Buildings
 - Existing Utilities
- Proposed
- Existing Vegetation To Be Retained And Enhanced
 - Proposed Meadow Creation (Beneath Panels)
 - Proposed Tussock Grassland Margins
 - Proposed Damp Grassland
 - Proposed Ground Nesting Bird Mitigation - Set Aside
 - Proposed Ground Nesting Bird Mitigation - Continued Arable Land
 - Proposed Diverse Wildflower Meadow
 - Proposed Low Density Scrub
 - Proposed Native Woodland Copse/Shelter Belt (Scrub And Tree Planting)
 - Dense Linear Tree Planting (Without Scrub Planting)
 - Native Tree and Scrub Planting - Instant Screening
 - Native Scrub Planting With Scattered Trees
 - Proposed River Corridor Planting For Ecology
 - Proposed River Corridor Planting For Flooding
 - Proposed River Corridor Planting For Instant Screening
 - Proposed Indicative Locations For Ponds
 - Potential Location For Proposed Cluster Of Water Scrapes
 - Existing Hedge To Be Reinforced With Irregularly Spaced Native Tree Planting
 - Existing Hedge To Be Reinforced With Densely Spaced Native Tree Planting
 - Existing Hedge To Be Reinforced With Densely Spaced Native Tree Planting - Instant Screening
 - Proposed Native Species Rich Hedgerow With Irregularly Spaced Native Hedgerow Trees
 - Proposed Secondary Native Species Rich Hedgerow With Densely Spaced Native Hedgerow Trees
 - Proposed Solar Arrays
 - Proposed Fenceline
 - Proposed Access Tracks
 - Proposed Inverters
 - Proposed Substation
 - Proposed Battery Energy Storage Systems
 - Proposed Permissive Path For Pedestrians
 - Proposed Permissive Path For Pedestrians And Horse Riders
 - Existing Vegetation To Be Removed





Key

Area For Solar Panels And Associated Development

Existing

- Existing Vegetation
- Existing Ditch Verge
- Existing Footpath
- Existing Brideway
- Existing Byway Open To All Traffic
- Existing Restricted Byways
- Existing Buildings
- Existing Listed Buildings
- Existing Utilities

Proposed

- Existing Vegetation To Be Retained And Enhanced
- Proposed Meadow Creation (Beneath Panels)
- Proposed Tussock Grassland Margins
- Proposed Damp Grassland
- Proposed Ground Nesting Bird Mitigation - Set Aside
- Proposed Ground Nesting Bird Mitigation - Continued Arable Land
- Proposed Diverse Wildflower Meadow
- Proposed Low Density Scrub
- Proposed Native Woodland Copes/Shelter Belt (Scrub And Tree Planting)
- Dense Linear Tree Planting (Without Scrub Planting)
- Native Tree and Scrub Planting - Instant Screening
- Native Scrub Planting With Scattered Trees
- Proposed River Corridor Planting For Ecology
- Proposed River Corridor Planting For Flooding
- Proposed River Corridor Planting For Instant Screening
- Proposed Indicative Locations For Ponds
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- Existing Hedge To Be Reinforced With Densely Spaced Native Tree Planting
- Existing Hedge To Be Reinforced With Densely Spaced Native Tree Planting - Instant Screening
- Proposed Native Species Rich Hedgerow With Irregularly Spaced Native Hedgerow Trees
- Proposed Secondary Native Species Rich Hedgerow With Densely Spaced Native Hedgerow Trees
- Proposed Solar Arrays
- Proposed Fenceline
- Proposed Access Tracks
- Proposed Inverters
- Proposed Substation
- Proposed Battery Energy Storage Systems
- Proposed Permissive Path For Pedestrians
- Proposed Permissive Path For Pedestrians And Horse Riders
- Existing Vegetation To Be Removed



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GREEN HILL SOLAR FARM

Figure 4.13.2
Green Hill Site C & D Option B
Landscape and Ecology Mitigation Plan
[EN010170/APP/GH5.4.4.13.2]
5/2(a)

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