Great North Road Solar and Biodiversity Park

Design Approach Document - Part 4 of 4

Document reference – EN010162/APP/5.6

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Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, APFP Regulation 5(2)(q)

6 THE PEIR STAGE DESIGN

6.1 THE DEVELOPMENT

71 The PEIR stage design is illustrated on Figure 7 on the preceding page. The Development broadly comprised: electrical infrastructure, including above ground solar arrays, substations and BESS; buried cables to connect the electrical components; and, areas utilised for environmental mitigation and enhancement.

6.2 ELECTRICAL AND ANCILLARY INFRASTRUCTURE

6.2.1 Solar PV Modules

72 These convert the sun's energy to electricity. These comprise dark coloured panels installed on a metal framework, south facing and tilted at a fixed angle to orient the panels so they convert the maximum amount of solar energy. The panels would be raised up from the ground to allow vegetation management and prevent plants underneath (usually grassland/meadow plants) from growing over the panels.

6.2.2 Central Inverters and Transformer Stations

73 These elements collect electricity generated by the surrounding solar PV modules and convert it ready for transmission to the intermediate substations. Transformers and inverters may be separate or combined units and are typically enclosed within metal or composite containers, painted grey or dark green, with dimensions similar to shipping containers. They would usually be sited centrally amongst the PV modules and away from the edges of solar areas.

6.2.3 Fencing and Security

74 The main type of fencing used around solar areas across the Development would be deer fencing, comprising wooden posts and wide gauge galvanised wire mesh, approximately 1.8 - 2.5 m in height. Such fences are relatively commonplace in rural areas to protect new planting from grazing by deer.

75 Smaller areas of higher security fencing would be required around high voltage electrical equipment, namely the substations and BESS, to ensure public safety. This would comprise steel palisade or welded mesh fencing up to 4 m in height; similar fencing may also be required around high value auxiliary buildings. The BESS area may also require an acoustic barrier to mitigate noise impacts. These typically comprise close board timber fences but there are a wide range of materials and designs which may be utilised.

76 The use of security cameras would be required throughout the Development. In solar areas, these would typically be installed on poles a similar height as the perimeter fencing and oriented to look along the fence lines, within the solar areas. In the substations, BESS and other compound areas, security cameras may be mounted on taller poles or affixed to buildings as required.

Solar panels and perimeter fencing

Central inverters and transformer stations located amongst solar panels

Perimeter fencing and security camera around solar area.

6.2.4 Substations

77 Intermediate substations would collect electricity from various solar areas, increasing the voltage to 132 kV for the efficient transfer of electricity to the main 400 kV substation, which would collect electricity from the intermediate substations before increasing the voltage again for onward transmission to the grid connection point at the National Grid Staythorpe Substation.

78 Substations would comprise a range of outdoor and indoor switching gear, transformers, gantries, associated electrical equipment, control rooms and ancillary buildings (including welfare facilities). Outdoor electrical equipment would typically be painted grey or uncoated, indoor electrical equipment may be housed in metal or composite enclosures or within permanent buildings which would be designed to reflect local character, as would any ancillary buildings. The primary difference in appearance between the intermediate substations and the main 400 kV substation would be in their physical footprint and the scale of the electrical equipment.

6.2.5 BESS

79 The BESS area would comprise an array of battery modules. The specification of these can vary but typically they comprise rectangular containers, similar in dimensions to shipping containers. Control equipment may be integrated into individual battery modules or may be external to them. Additional ancillary equipment is likely to include power control systems, comprising inverters and transformers, and a control room with staff welfare facilities.

6.2.6 Cables

80 The electricity generation, transmission and storage infrastructure across the Development would be connected by underground cables. No new overhead power lines are proposed as part of the Development.

6.3 ENVIRONMENTAL MITIGATION AND ENHANCEMENT

81 Environmental mitigation and enhancement takes many forms and is described in detail within the relevant topic chapters of the ES. This section describes the mitigation and enhancement elements that would have a notable presence in the landscape and would be evident to people living in, visiting and travelling around the local area.

6.3.1 Hedgerow Management and Planting

82 Existing hedgerows within the Order Limits would typically be ‘gapped up’ with new planting infilling existing gaps within hedgerows to aid the screening of solar areas and improve the condition of the existing landscape features. Where hedges run along the edge of solar areas these would generally be allowed to grow up to a height of c. 3 m.

83 Extensive areas of new hedgerow planting, primarily around solar areas, would also be provided to further screen these and other parts of the Development. In general, new hedgerow planting would reinforce the existing character of the local area although the new hedges and changes in management of existing hedgerows would result in changes to the outlook from some roads and PRoW. Double hedgerows are typically

Typical 132 kV substation Photo © Alan Wood Engineering

Typical 400 kV substation Photo © Bob Harvey (cc-by-sa/2.0)

Outgrown hedgerow (left) and trimmed hedgerow (right) at Moorhouse

proposed along PRoW and new permissive routes where they pass between solar PV areas, as illustrated below, or where routes run alongside existing hedgerows with solar areas introduced on the same side. This is already typical of some paths in the area, such as to the east of Moorhouse and north of Caunton, but elsewhere would result in a sense of enclosure and a new experience for users of some routes.

84 Most local roads in and around the ES Order Limits are lined by hedgerows on both sides at present so changes would usually be limited to a slight increase in the degree of existing enclosure as a result of taller hedgerows and gaps being infilled - benefits of which include improving landscape condition, further screening of the Development and promoting biodiversity.

6.3.2 Woodland and Tree Planting

85 Proposed hedgerows will incorporate trees where overshadowing of solar panels is not a consideration, typically the northern edge of solar areas or in hedgerows away from solar panels; gapping up of existing hedgerows will also include the introduction of trees where appropriate. New woodlands would also be planted, ranging from small areas strategically placed to screen particular parts of the development to extensions of existing woodlands and more substantial new woodland areas. Overall, the Development would see the planting of tens of thousands of new trees, reinforcing the existing wooded character of the local area and providing a range of habitats and ecological benefits.

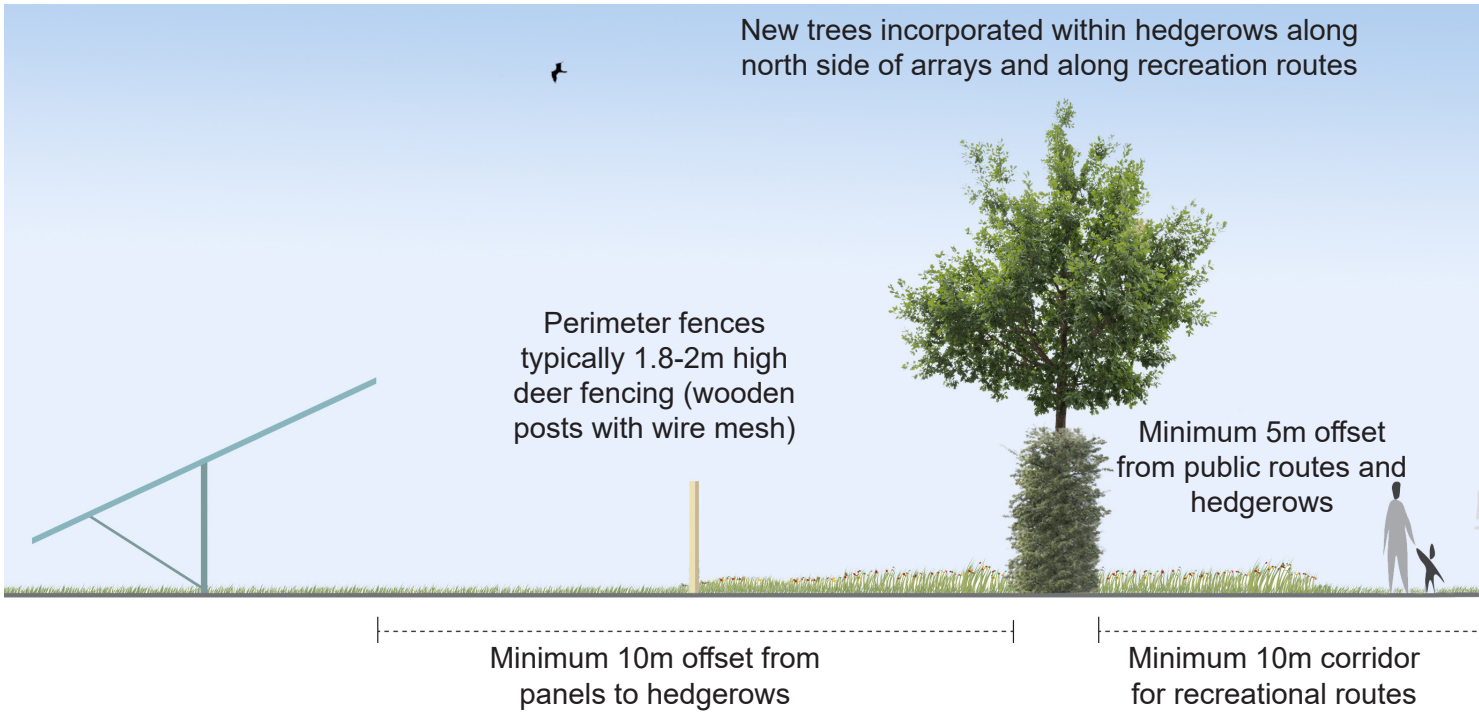
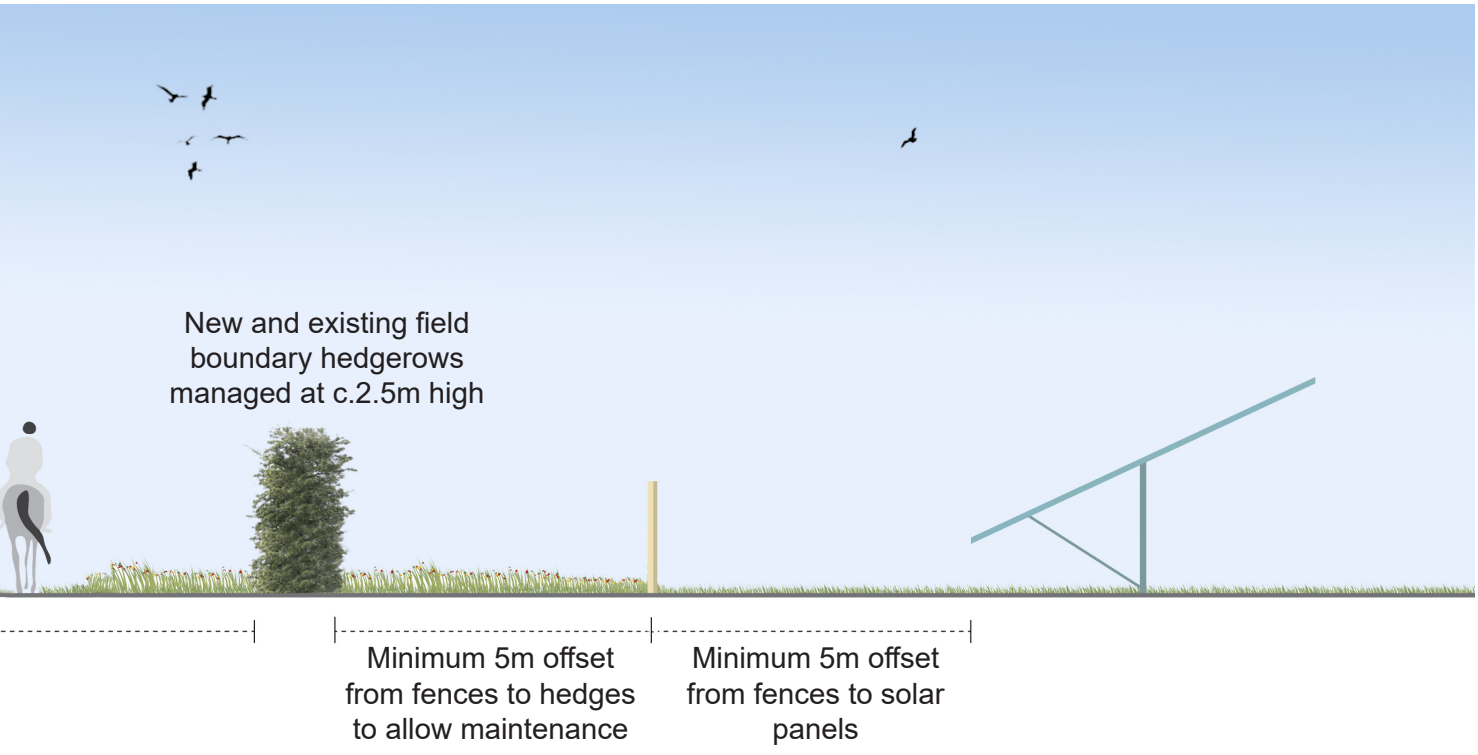


Figure 7: Typical section through double hedged path

6.3.3 Permanent Grassland and Farmland Management

86 A number of areas across the Development have been identified for the introduction of permanent grassland and others for implementation of particular management practices within retained agricultural land in order to provide ecological enhancements and mitigation. Although this will have a limited influence on the character or appearance of the area, a slight increase in permanent landcover may be noted where intensive arable farming currently prevails.



7 THE DESIGN RESPONSE

The design of the Great North Road Solar and Biodiversity Park has been an iterative process responding to technical engineering challenges, environmental surveys, and consultation feedback. Good design requires a holistic approach with input from all disciplines to provide in an integrated solution. The decision making process involved input from multiple teams and stakeholders.

87 As set out in section 1.3 Government guidance[14] defines 'good design' and explains how the design of a project responds to the overarching design principles for national infrastructure[15] as set out by the National Infrastructure Commission (NIC). These are defined as:

- **Climate** – mitigate greenhouse gas emissions and adapt to climate change;
- **People** – reflect what society wants and share benefits widely;
- **Places** – provide a sense of identity and improve our environment; and
- **Value** – achieve multiple benefits and solve problems well.

88 This chapter focuses on the design response relating to the landscape and environmental design, and the technical infrastructure components which have been wholly or partly driven in response to the requirements of 'good design' and the existing location context.

89 It is not intended that this chapter provides a design rationale for all elements of the Development, such as those that are constrained by safety requirements, manufacturing capabilities or industry standards and/or were not influenced by the requirements of 'good design' and the existing location context.

90 The design parameters for the individual and specific elements of the components which make up the Development are outlined in, and controlled by, the Concept Design Parameters and Principles [EN010162/APP/7.14]. **Table 1** provides examples of how the project responds to the overarching design principles.

14 Department for Levelling Up, Housing and Communities (2024). Planning Act 2008: Pre-application stage for Nationally Significant Infrastructure Projects. Available at https://www.gov.uk/guidance/planning-act-2008-pre-application-stage-for-nationally-significant-infrastructure-projects.

15 National Infrastructure Commission (No Date). Design Principles for National Infrastructure. Available at: https://nic.org.uk/studies-reports/design-principles-for-national-infrastructure/#tab-summary.

Table 1: Design response to overarching design principles

Topic	Design Principle Code	NPS for Renewable Energy Infrastructure (EN-3) project specific de-sign principle	Example of the Applicant applying the design principle
Climate	CL2	Seek to minimise whole life emissions of the project	Applicant sought to use UK milled steel, delivered by rail freight, produced in an electric arc furnace and manufactured onsite, powered via off-grid solar micro-generation and BESS. Applicant sought for the UK steel to be recycled at the end of the operational life of the project, with a buy-back principle meaning re-use in future UK construction projects.
Climate	CL3	Ensure the project can adapt flexibly to climate change	Applicant has ensured that the panels sit outside Flood Zone 2 and Flood Zone 3 following the most recent flood modelling for climate change, meaning the Development design has taken the risk around climate flexibility for solar farms seriously.
People	PE1	Communicate openly with local communities and stakeholders	Applicant has engaged freely and openly with communities and stakeholders meaningfully and extensively
People	PE2	Minimise the need to use compulsory purchase powers;	Applicant has worked extremely hard to ensure the usage of compulsory powers has been minimised.
People	PE3	Seek local knowledge and views to inform and improve the project	Met with 18 of the 19 parish councils to shape the design and actively seek views from local people and stakeholders. These meetings led to design changes at Eakring, among many other examples.
People	PE4	Deliver wider societal benefit by funding Community Benefit	NG+ programme created, with dedicated account managers to run the programme over the course of the application period. Participation has been heavily encouraged and many projects are underway or are planned as part of the programme https://ngplus.uk NG+ – An annual £1M community support scheme linked to the proposed Great North Road Solar Park in Newark. NG+ is a community support scheme linked to the proposed Great North Road Solar and Biodiversity Park in Newark. Our mission is to deliver a brighter future through our annual one-million-pound fund. https://ngplus.uk
People	PE5	Be a good neighbour to local residents and businesses	The principles have ensured that support is always given first to local businesses such as a renewable energy company, local print companies, caterers, accommodation providers have come from a local priority list, always seeking to support the local college to house design workshops.
Places	PL1	Design at a human scale and embed nature-based solutions	Nature-based solutions are strongly evident in the LEMP, from natural water management systems, to planting to reduce effects of heavy rainfall to ensuring small mammals can enter the solar farm.

Topic	Design Principle Code	NPS for Renewable Energy Infrastructure (EN-3) project specific de-sign principle	Example of the Applicant applying the design principle
Places	PL2	Seek opportunities to enhance access and recreation to improve health and well-being	21 new permissive footpaths, and 6 new permissive bridleways, creating 32.6 km of new permissive routes (as described in Table 18.7). A circular recreational route would be created around the Order Limits, covering 50.6 km, including 12.5 km of new permissive path, as detailed in Chapter 18: Recreation, with wild flower and tree planting, bird and bat boxes proposed to encourage users to enjoy nature with a walk or run.
Places	PL3	Deliver biodiversity net gain that exceeds mandatory requirements	Development to deliver a substantial biodiversity net gain, including increases of +60.7% in habitat units, +26.5% in hedgerow units, and +11.05% in watercourse units.
Places	PL4	Facilitate understanding and appreciation of local cultural heritage throughout the life of the project	Walkboards will serve as a useful tool to remind the public of their past heritage on permissive routes. Partnering with the Sherwood Forest means native woodland is proposed to be planted across the Development, boards will inform the public of the history of the area as a forest. Ridge and Furrow historic farming techniques at Laxton will be discussed towards the northern end of the Development. Boards will remind the public of the rich history of power generation in the area known as the Megawatt Valley at the western end of the Development. Discussion of its archaeological past will feature towards the south east around the mitigation areas.
Places	PL5	Design with local landscape character in mind, providing a legacy of landscape enhancement.	Design has been carefully orientated where possible towards flat topography, avoiding the most undulating areas, to better assimilate the Development into the landscape.
Value	VA1	Seek opportunities to grow planting materials within the site and nearby, for example, seed mixes and hedgerow plants;	Proposals include the planting of 60,000 trees and creation of over 800 acres outside the solar panel areas to dedicate to biodiversity. Additionally, over 40km of hedgerow planting is proposed.
Value	VA2	Measure performance of all aspects of the project against its objectives and use lessons learned to improve	Through internal processes the Applicant has measured performance and sought continuous improvement throughout the lifetime of the design, whether through additional design change sessions or through meetings with the relevant technical teams to seek improvements.
Value	VA3	Encourage engagement and provide learning opportunities	As well as engaging extensively on the Development, the EG learning Academy was created to provide free CPD courses for local people to learn the skills to be able to work in the renewable sector. With many engagement events already having taken place, over 80 local people now have solar or BESS qualifications as a result.

8 DESIGN EVOLUTION

8.1 PEIR TO ENVIRONMENTAL STATEMENT

91 This section sets out the consolidation of all works areas based on public and technical consultation responses, and design optimisation. Archaeological trial trenching results, as well as updated Environment Agency Flood Data have been the main environmental determinants for the changes.

92 At this design stage the final works areas are defined as follows:

- Work no. 1: Solar PV;
- Work no. 2: Cables;
- Work no. 3: Mitigation/enhancement;
- Work no. 4: Intermediate substations;
- Work no. 5a: BESS;
- Work no. 5b: 400 kV compound;
- Work no. 6: National Grid Staythorpe Substation and connection point;
- Work no. 7: Consented Staythorpe BESS and Connection; and
- Work no. 8: Access Works

93 Improvements in panel efficiency over the years since the initial design was conceived in 2021 is another factor that has enabled the Applicant to consolidate the design and reduce land take for solar areas (Work no. 1).

94 In many cases removing the former Work no. 2b as defined in PEIR and refining the cable routing to a 60 m-wide corridor typically enabled the reduction of the ES Order Limits either side of this.

95 The design submitted alongside the application is also accompanied by a Masterplan (see Figure 5.2 [EN010162/APP/6.4.5.2] including more advanced landscape and ecological mitigation and enhancement based on consultation responses. In addition, a TA A4.1 Public Rights of Way Strategy [EN010162/APP/6.4.4.1] has been set out consolidating the key design principles applied to retaining and improving access across the ES Order Limits of the Development.

96 Figure 8 to 11 shows the extent of the solar PV area changes from the PEIR Design to the ES design stage. Figure 5.2 Masterplan [EN010162/APP/6.3.5.2] shows the Development's design including the main components together with the mitigation and enhancement measures. The design features:

- 64,500 proposed trees (31 ha of proposed woodland);
- 50 km of proposed hedgerow;
- 999 ha of Solar PV (diverse) grassland;
- 407 ha of diverse grassland
- 22 ha of Ecotone;
- 32.6 km of new permissive routes, comprising 27 new permissive routes, including 21 permissive paths and 6 bridleways; and
- Biodiversity Net Gain comprising:
  - Habitat units +60.70%;
  - Hedgerow units +26.46%; and
  - Watercourse units +11.05%.

8.2 NORTHEAST QUADRANT (FIGURE 8)

97 Two new datasets relating to the impact of climate change on flooding from the Environment Agency became available post-PIER (Trent and Tributaries 100-year plus Climate Change event, and the Flood Map for Planning Present Day Extents), which show a 1 in 100 chance flood extent for rivers. Using this and existing flooding data, all proposals for solar PV were removed from flood zones which reduced the section of solar around Moorhouse Beck (9-SR25, 9-OR29, 9-OR30) and in a field near Castlehill, Carlton on Trent (9-SR19), and eliminated the field near Cromwell (9-SR10) in the south, and eliminated the field near Cromwell (9-SR10) in the south. This resulted in the removal of a large cable area 9-OR12.

98 Around Moorhouse, north facing solar PV fields were removed (9-SR26). North facing fields have a low solar yield and render the land more technically difficult to construct.

99 A 60 m cable corridor has been defined avoiding physical constraints such as pylons for overhead lines, resulting in a large portion of land around Ossington and Cromwell being removed.

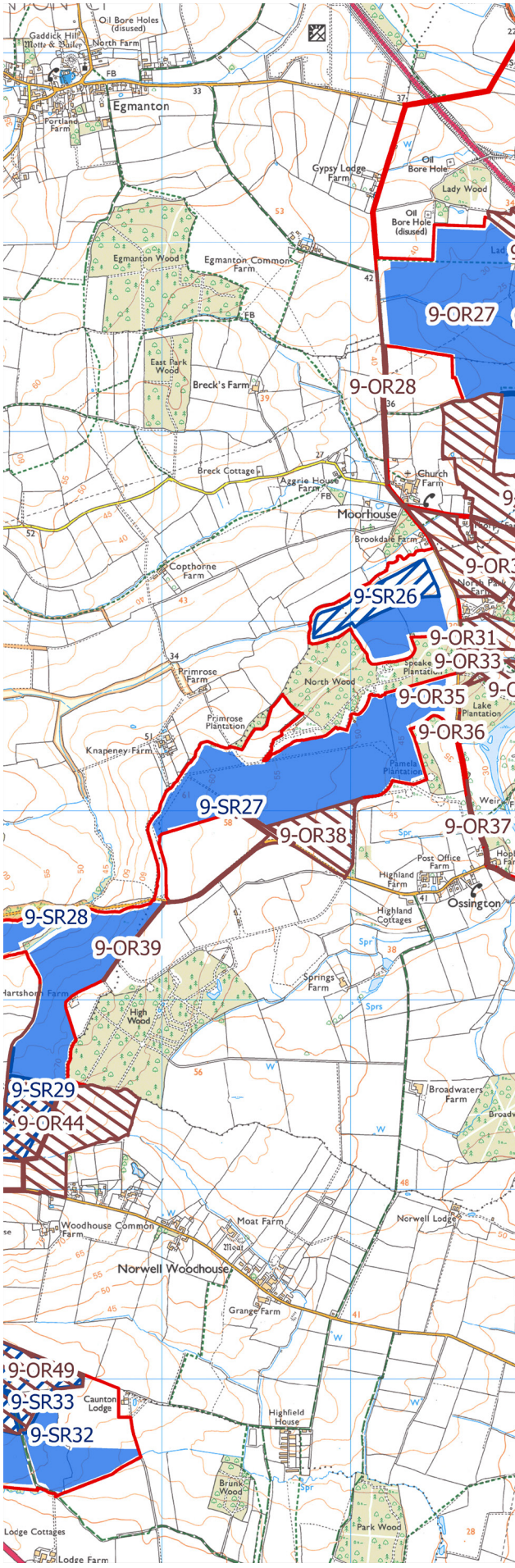
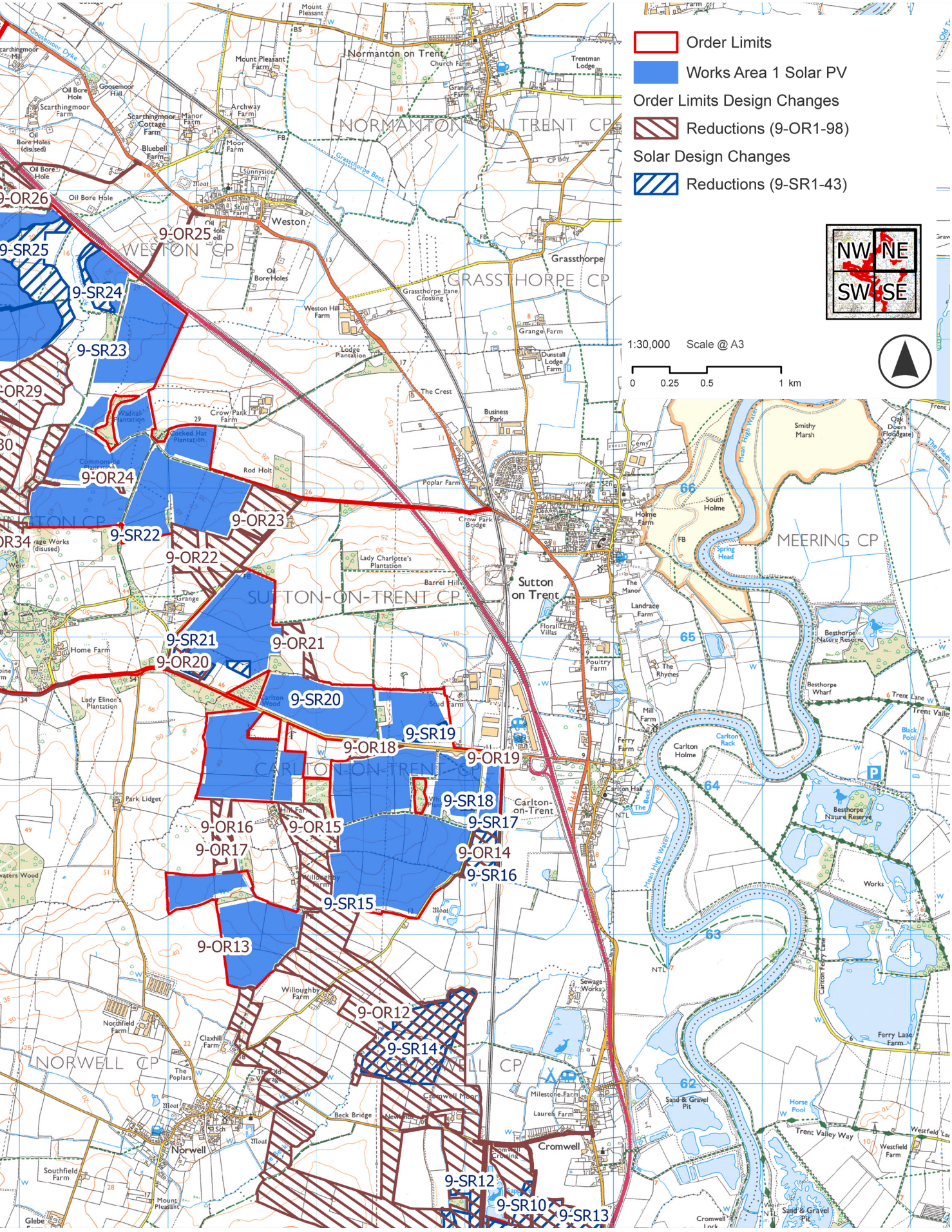


Figure 8: PEIR to Environmental Statemen



t design changes: Northeast Quadrant

8.3 NORTHWEST QUADRANT (FIGURE 9)

100 Removal of solar around Caunton Lodge (9-SR32, 9SR33) due to its high potential for underground archaeology. Further solar PV reductions can be seen north of Norwell Woodhouse (9-SR29 and 9-OR44) to ensure consistency with the design principles and avoid steeper slopes on land that is not preferable, which was now achievable due to the increases in panel efficiency. Solar areas east of Kersall (9-SR30 and 9SR31) were removed to improve residential visual amenity.

101 A 60 m cable corridor has been defined avoiding physical constraints such as pylons for overhead lines.

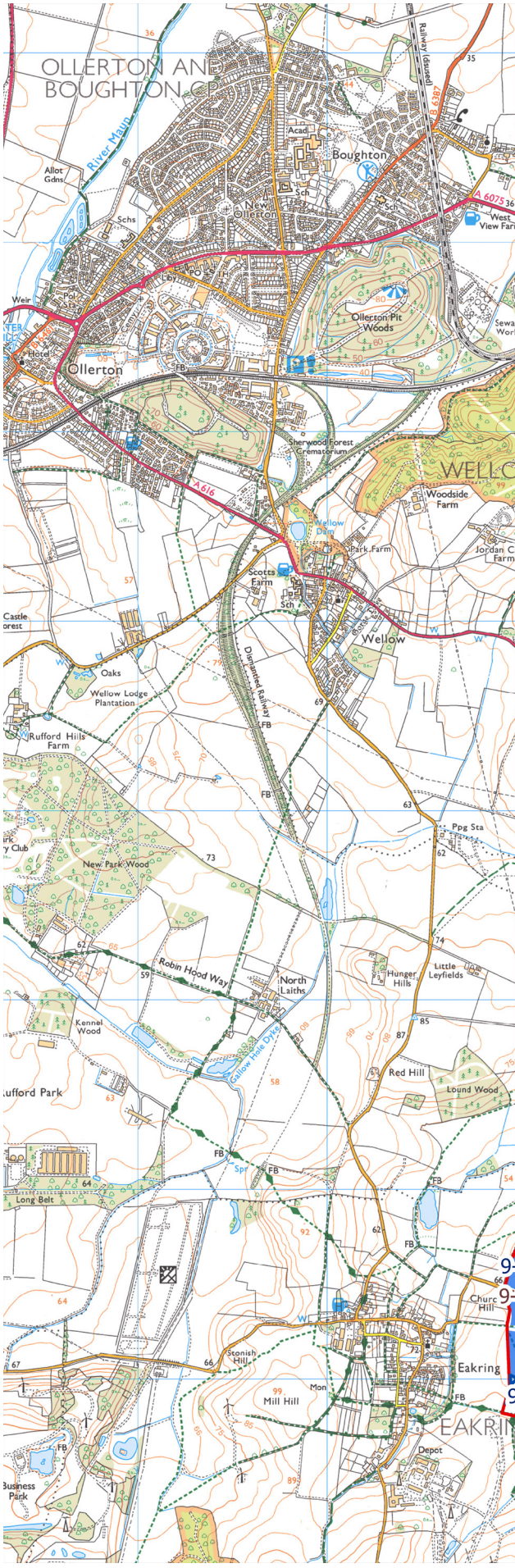
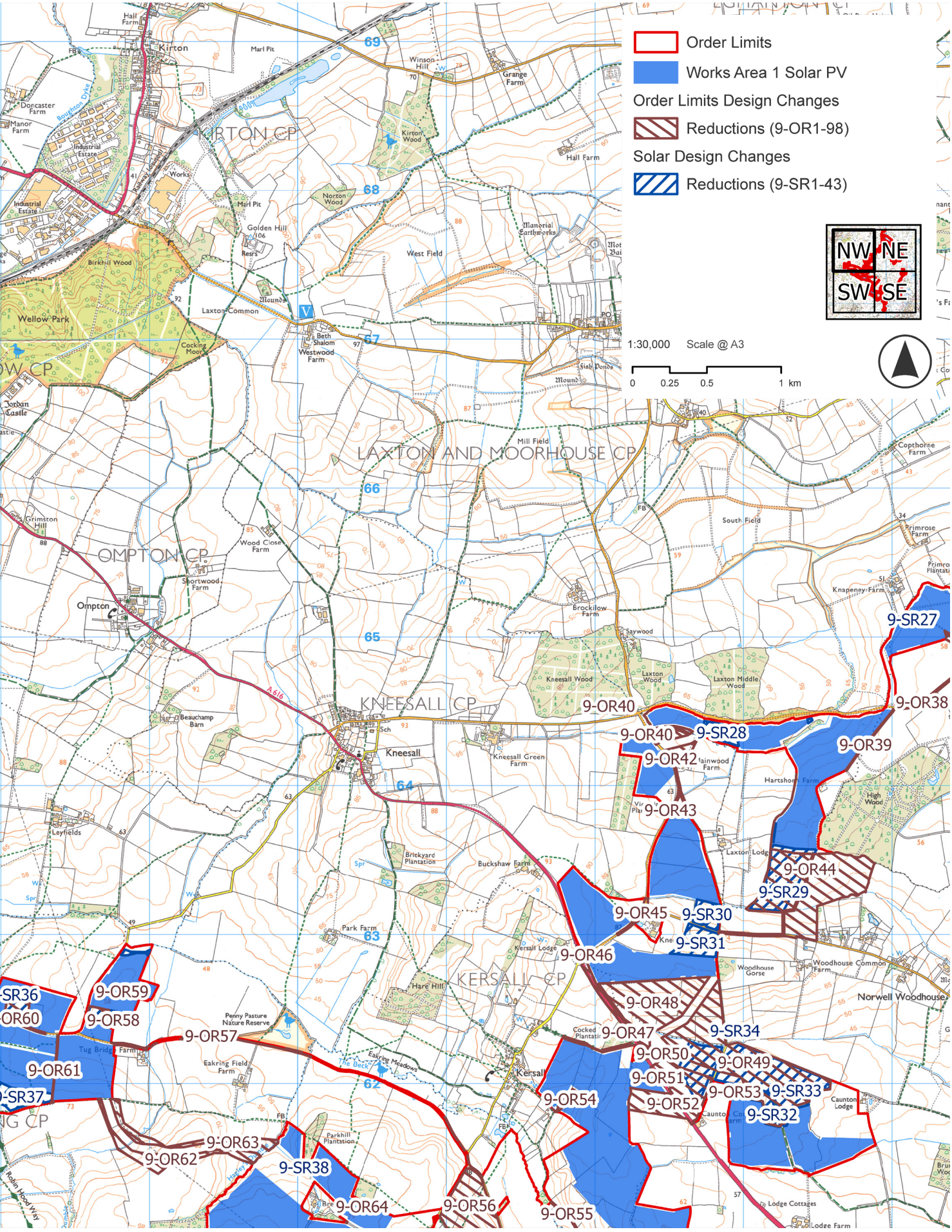


Figure 9: PEIR to Environmental Statemen



t design changes: Northwest Quadrant

8.4 SOUTHEAST QUADRANT (FIGURE 10)

102 The southeastern area of the project from Kelham up to Cromwell was modified and the latest iteration excludes solar PV, cable and substation options. This is as a result of a number of technical constraints, primarily associated with flood risk and underground archaeology. These areas include from 9-SR1 to 9-SR13.

103 Two new datasets relating to the impact of climate change on flooding from the Environment Agency became available post-PIER (Trent and Tributaries 100-year plus Climate Change event, and the Flood Map for Planning Present Day Extents) which show a 1 in 100 chance flood extent for rivers. Using this and existing flooding data, all solar was removed from flood zones 2 and 3.

104 After removing all solar PV from flood zones 2 and 3 and extensive high potential for underground archaeology being present in the same area, only a handful of carved out fields remained. These fields were removed as the small pockets of development area remaining within them after the removal of flood risk and archaeology areas rendered them economically unviable. Additionally, the railway crossing for the cable would have added cost, time and complexity to avoid potential impacts on existing Network Rail infrastructure. The cost of cabling to these pockets of solar outweighed the gain and this allowed for a logical block of solar area to be removed, thus requiring no further design disaggregation than was already the case.

105 The end result was the entire section of land to the south and west of Cromwell, and east of the East Coast Main Line being removed.

106 Whilst infrastructure in this area has been removed, parcels of land containing mitigation enhancement and permissive routes are retained. Some mitigation areas have been removed to allow land to remain in agriculture as less mitigation land is required following the loss in area of solar PV.

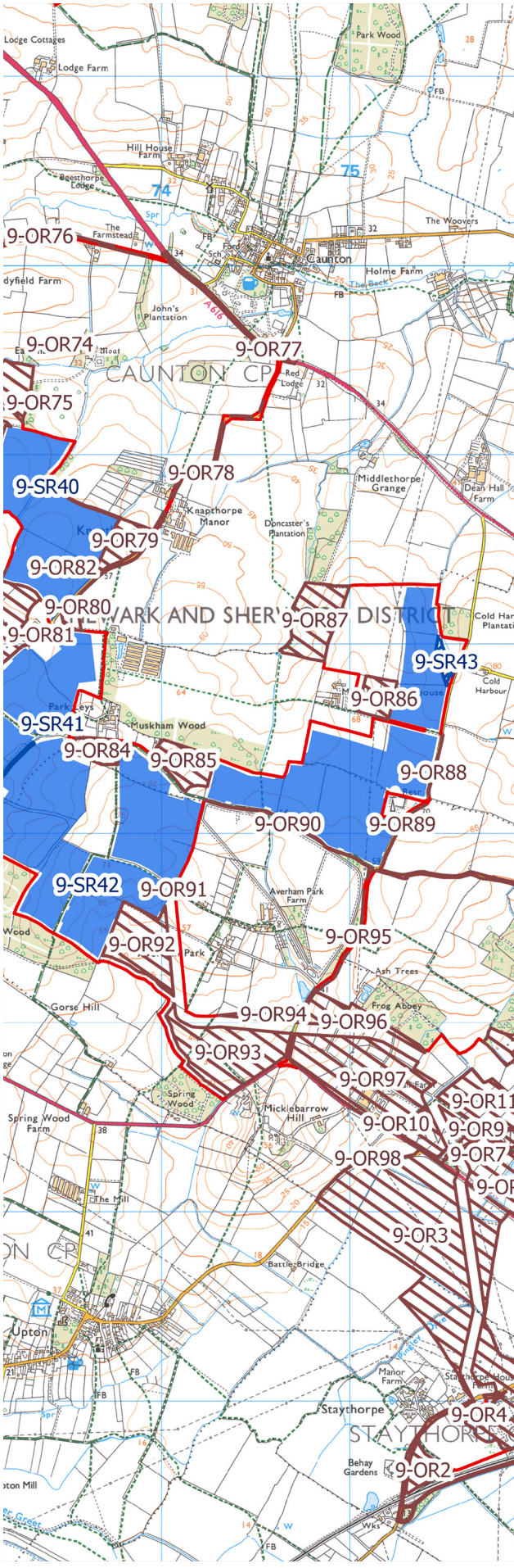
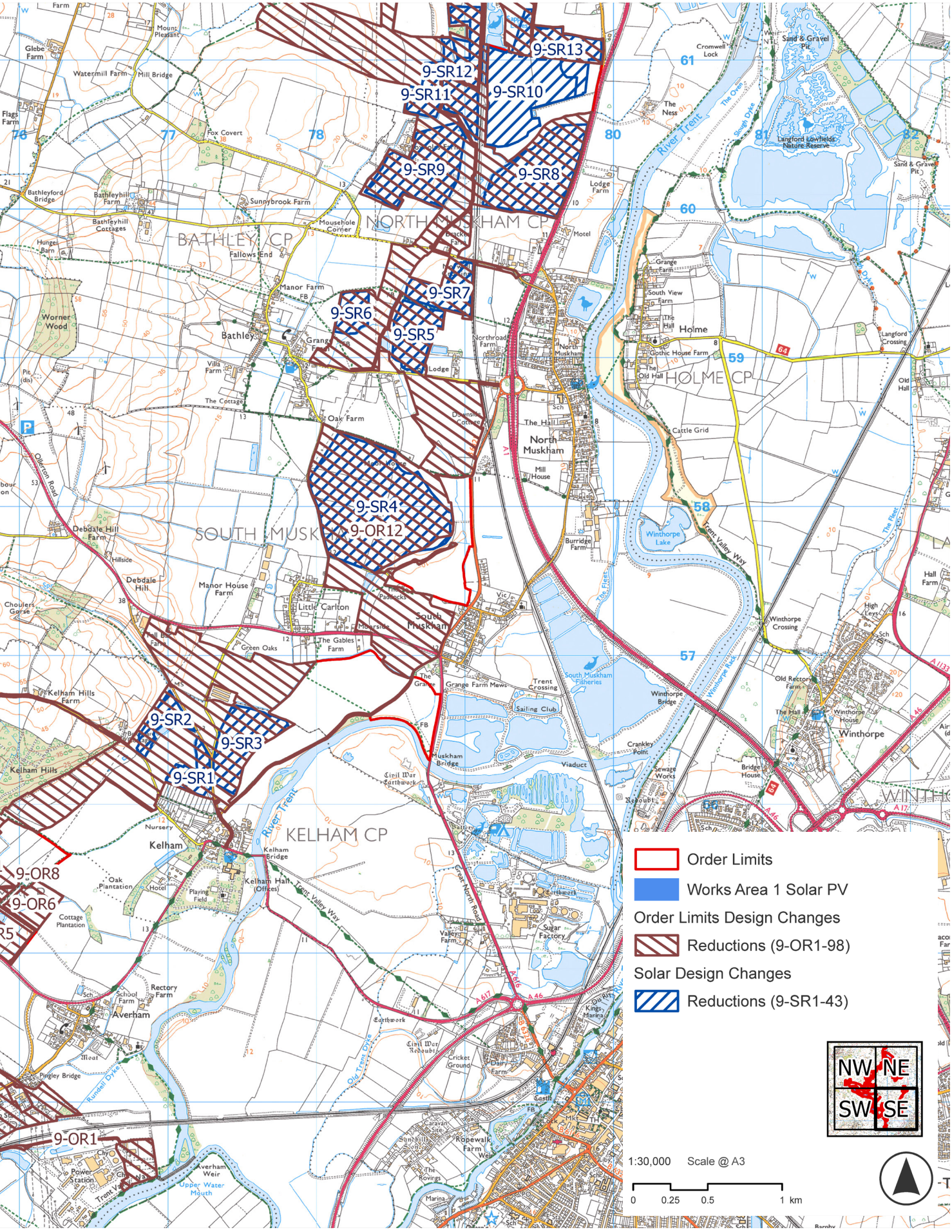


Figure 10: PEIR to Environmental Statem



ent design changes: Southeast Quadrant

8.5 SOUTHWEST QUADRANT (FIGURE 11)

107 No changes to the solar areas were made in this section.

108 A 60 m cable corridor was defined avoiding physical constraints such as overhead lines, combined with the reduction in cable route optionality through 9-OR80, 9-OR81, and 9-OR82. Other former cable areas removed include 9-OR72-9-OR75).

8.6 POST-CONSENT DELIVERY

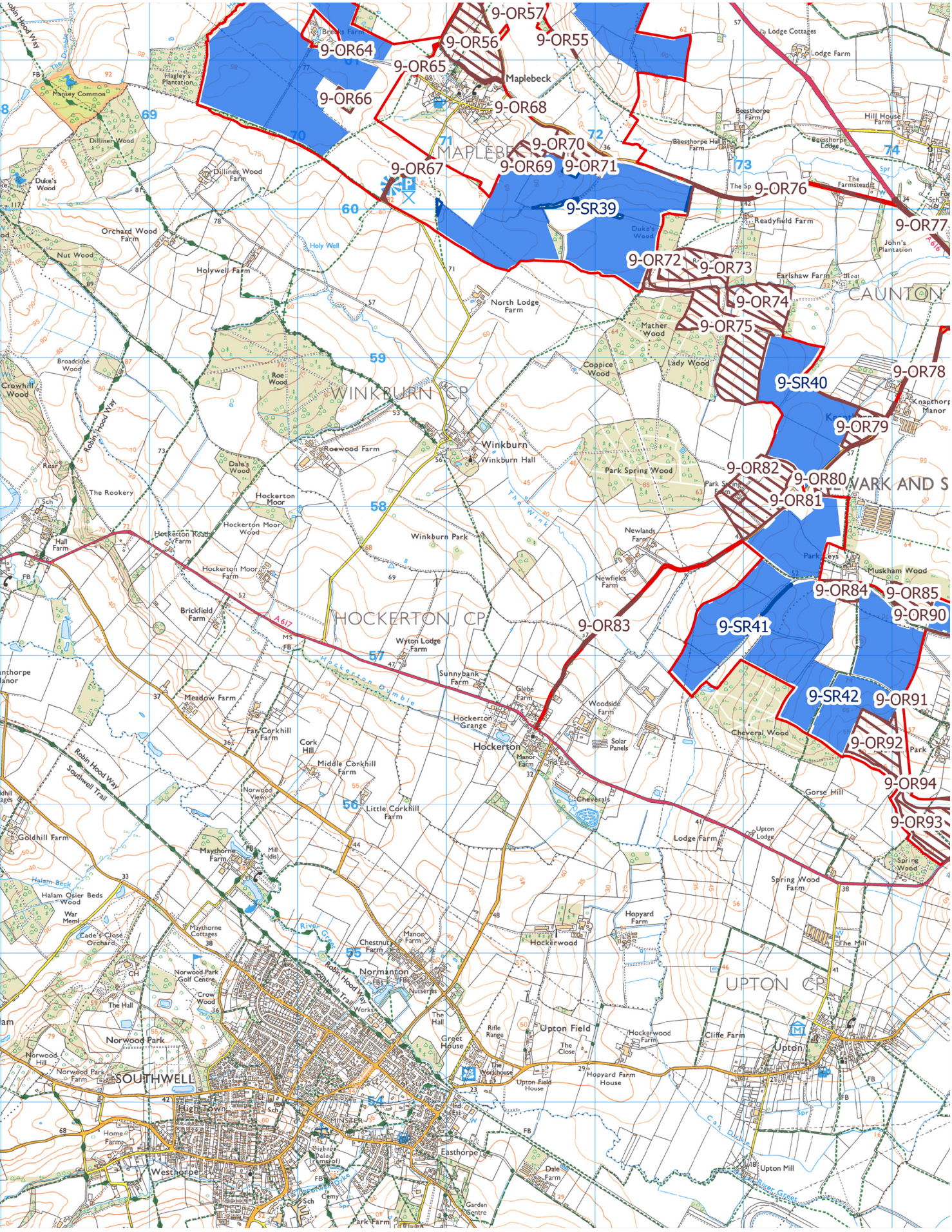
109 The detailed design for the Development would be delivered post-consent, pursuant to the discharge of DCO Requirements.

8.7 SUMMARY

110 As noted in consultation comments (see Section 4.1.2), the Development differs from the layouts of some other large solar proposals in the UK in that it is not one area of contiguous fields, but a number of islands of land connected by fields which will be used for underground cabling and biodiversity enhancement. To minimise cost and maximise operational efficiency, the Development would be located as close as possible to the Staythorpe substation and aggregated into a single area, and this would therefore be a preference. However, other, principally environmental, factors influence design as explained above. The culmination of consideration of these factors leads to the proposed layout.

111 By applying the approach set out in Section 4.3 to identify potentially developable land, and then the evolution process set out in Section 4.4 to optimise the layout of components of the solar park within this, a wider area overall area has been included (as indicated, for example, by the furthest distance between two points within the Order Limits, which is c. 15.5 km). This has allowed the selection of land that leads to lower overall environmental impact than would be the case if all solar areas were aggregated together.

Figure 11: PEIR to Environmental Statem



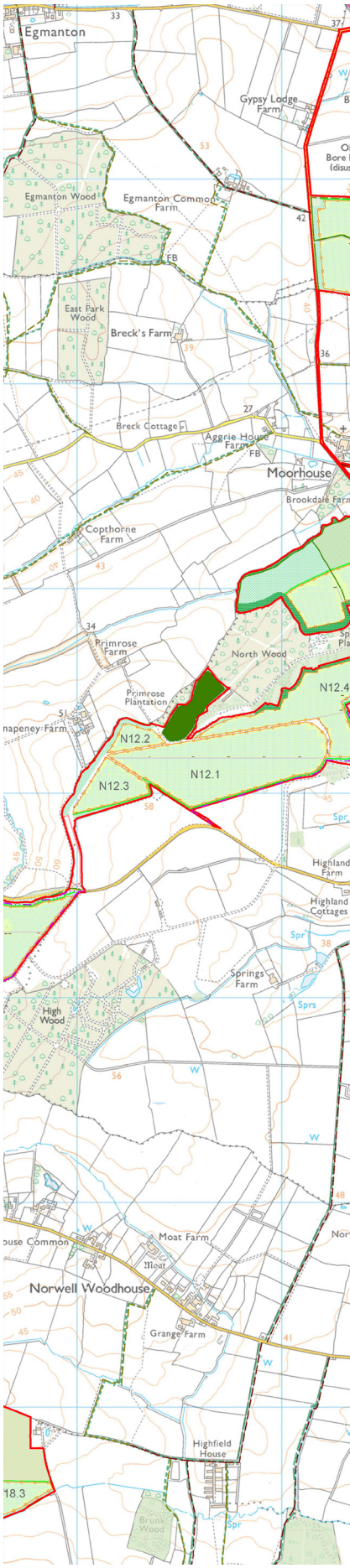
ent design changes: Southwest Quadrant

8.8 LANDSCAPE AND ENVIRONMENTAL DESIGN

112 The landscape and environmental design aims and objectives are provided within the Landscape and Ecological Management Plan (LEMP). The LEMP describes the measures required to implement, manage, monitor and remediate habitats during the lifetime of the Development. The aim of these actions is to ensure that, as far as practicable, habitats are created and enhanced in accordance with the conclusions of the ES and the aspirations of BNG. In addressing this aim, a range of overarching objectives are summarised in **Table 2**:

Table 2: Design response to overarching design principles

Objective	Rationale
Mitigate and compensate for the loss of habitats, including those on which wildlife depend.	Reduce the effects of habitat loss.
Enhance retained habitats to a better condition, extent and connectivity, including their ability to support wildlife.	Provide an overall net gain in biodiversity.
Create new habitats in keeping with the local environment.	Provide an overall net gain in biodiversity.
Increase the resilience of habitats to the effects of climate change.	Provide long-term stability and opportunities for wildlife.
Screen elements of the Development from key receptors.	Reduce the visual impact of the Development.
Soften the 'hard edges' of the Development.	Reduce the visual impact of the Development.
Improve the amenity value of the land.	Increase opportunities for access and education.
Reduce flood risk.	Reduce the effects of flooding on local residents.
Improve water quality.	Improve the quality of water in the catchment to benefit people and the environment.



8.8.1 LANDSCAPE

114 The below list defines the key landscape design concepts which have guided the preparation of the landscape proposals:

- Protection of retained habitats, where possible, which are

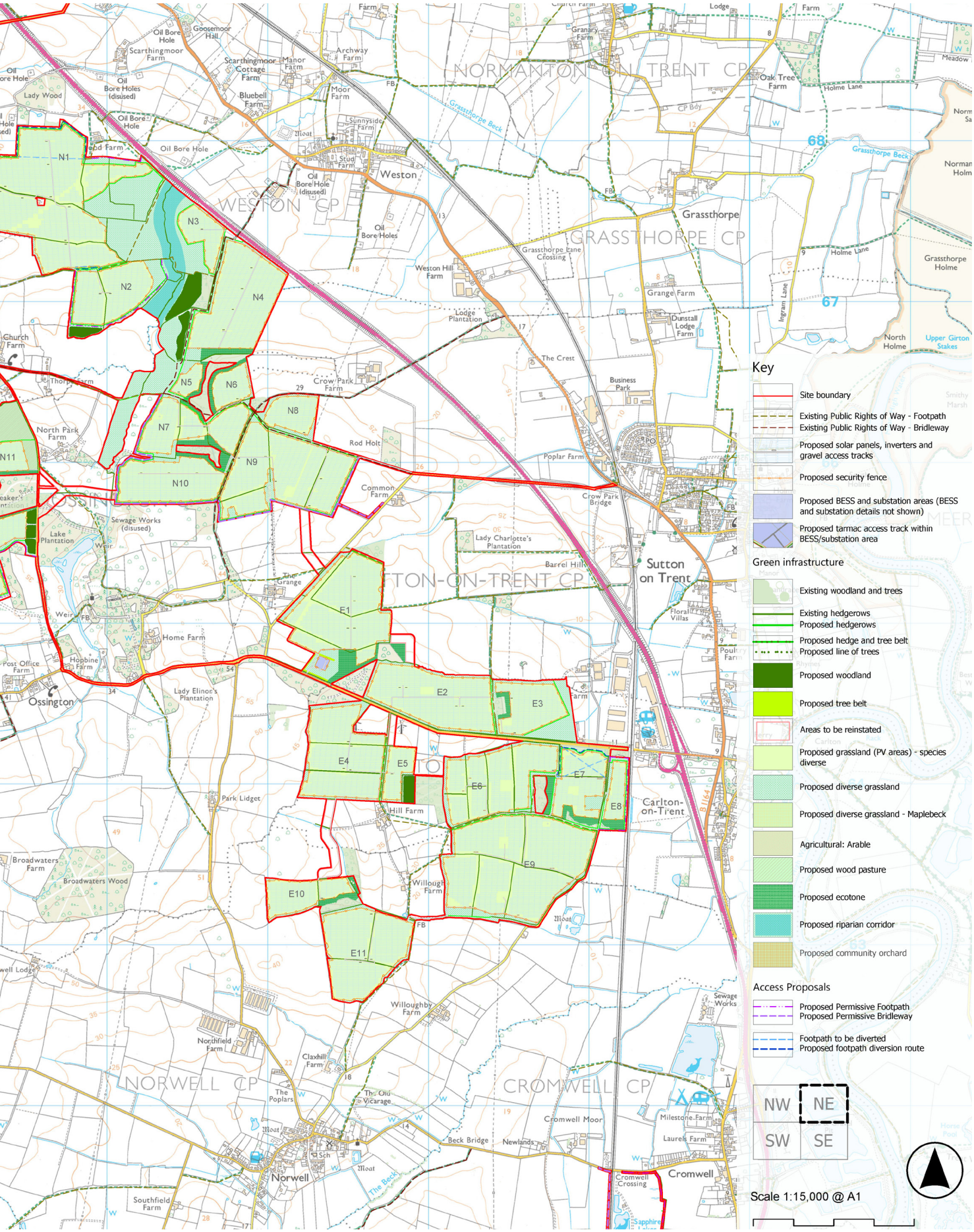


Figure 12: Masterplan (Northeast)

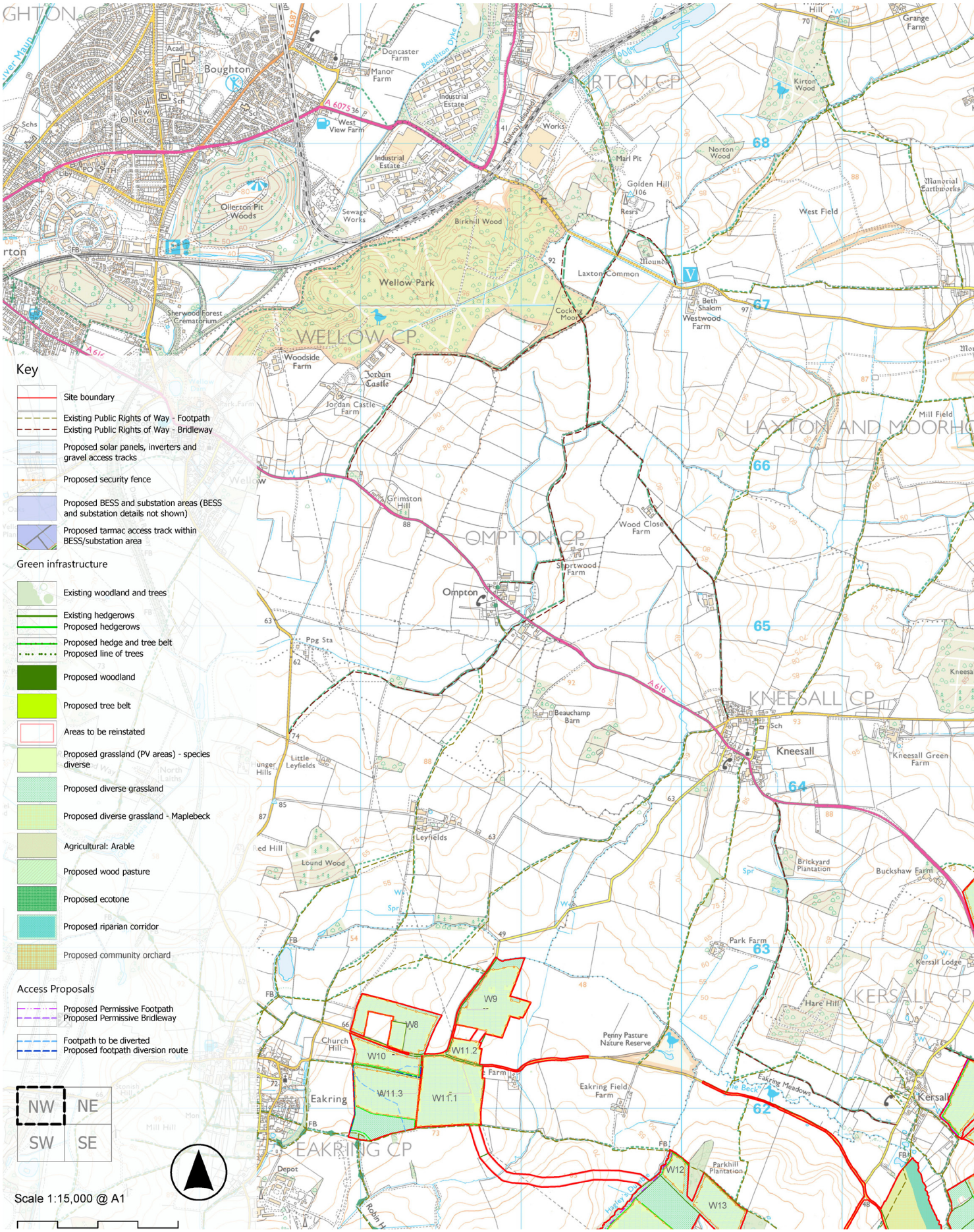
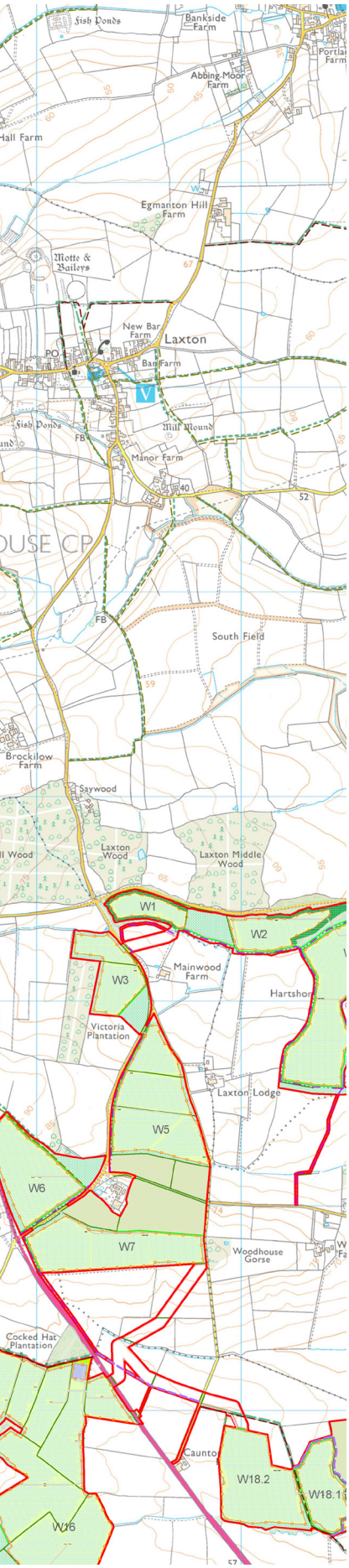


Figure 13: Masterplan (Northwest)



of ecological and nature conservation interest, and the enhancement and creation of ecologically valuable habitats and features;

- Suitable buffers around the root protection areas of each tree and hedgerow that are to be retained;
- Strategic landscape interventions to reinforce and enhance Green Infrastructure, such as new structural landscape planting including native hedgerow, treelines/belts and woodland;
- Retention and enhancement of the existing components of landscape character, including field pattern;
- Creation of suitable habitats to promote the wildlife the site already supports;
- Strengthen existing landscape features such as hedgerows, to reduce visual effects and reinforce these landscape elements which make an important contribution to landscape character;
- Creation of Community Orchards to engage and promote community involvement;
- Provide mitigation of the visual impact of the Development when viewed by sensitive visual receptors.

8.8.2 ECOLOGY

115 A review of England's wildlife sites and ecological networks established the principles by which their resilience and coherence could be improved:

- More – increase the diversity of habitats;
- Bigger – increase the extent of habitats;
- Better – improve the value or condition of habitats, including reducing the pressures on wildlife by improving the wider environment, such as through buffering wildlife sites; and
- Joined-up – improve connectivity between habitats.

116 The review focused on a national scale network of sites, but the principles are applicable to habitat management at the landscape scale of the Development and have influenced the design of the Masterplan and the scope of the LEMP.

117 The Nottinghamshire Biodiversity Opportunity Mapping Project has also influenced the design of the Masterplan and LEMP and the forthcoming Local Nature Recovery Strategy (LNRS) will be considered in future design iterations, whilst recognising that many aspects of the Development design will be fixed by the time of its publication.

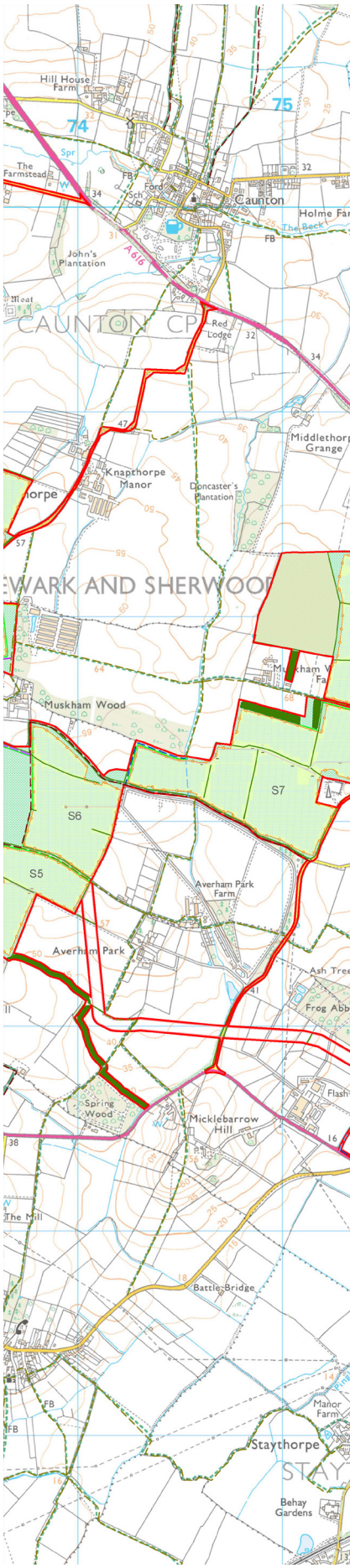
118 The LEMP also provides measures that will reduce risks to natural capital through nature recovery, including several of those identified in the recently published State of Natural Capital Report 2024 , such as the creation of species-rich farmland, woodland creation and improving water quality.

119 National Policy Statement for energy (EN-01)[16] includes provisions for developments to deliver biodiversity and wider environmental gains (e.g., access to greenspace), beyond those embodied in BNG. This LEMP also addresses the obligation to produce a biodiversity management strategy for the Development.

120 National Policy Statement for renewable energy infrastructure (EN-3)[17] identifies the potential of solar farms to increase the biodiversity value of a site beyond BNG, as demonstrated by the LEMP.

121 In 2020, the government committed to protecting 30% of the UK's land by 2030 (‘30by30’). Through the LEMP and BNG, the Development will contribute to this by protecting a large area from loss or damage to important biodiversity values through long-term ownership and long-term management agreements, as well as contributing to local policies such as the emerging LNRS.

122 Many of the habitats and species affected by the Development have specific guidance and action plans relating to their conservation management and are considered in the management prescriptions.



16 Department for Energy Security and Net Zero (2023). Overarching National Policy Statement for energy (EN-1). Available at: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1.

17 Department for Energy Security and Net Zero (2024). National Policy Statement for renewable energy infrastructure (EN-3). Available at: https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3.

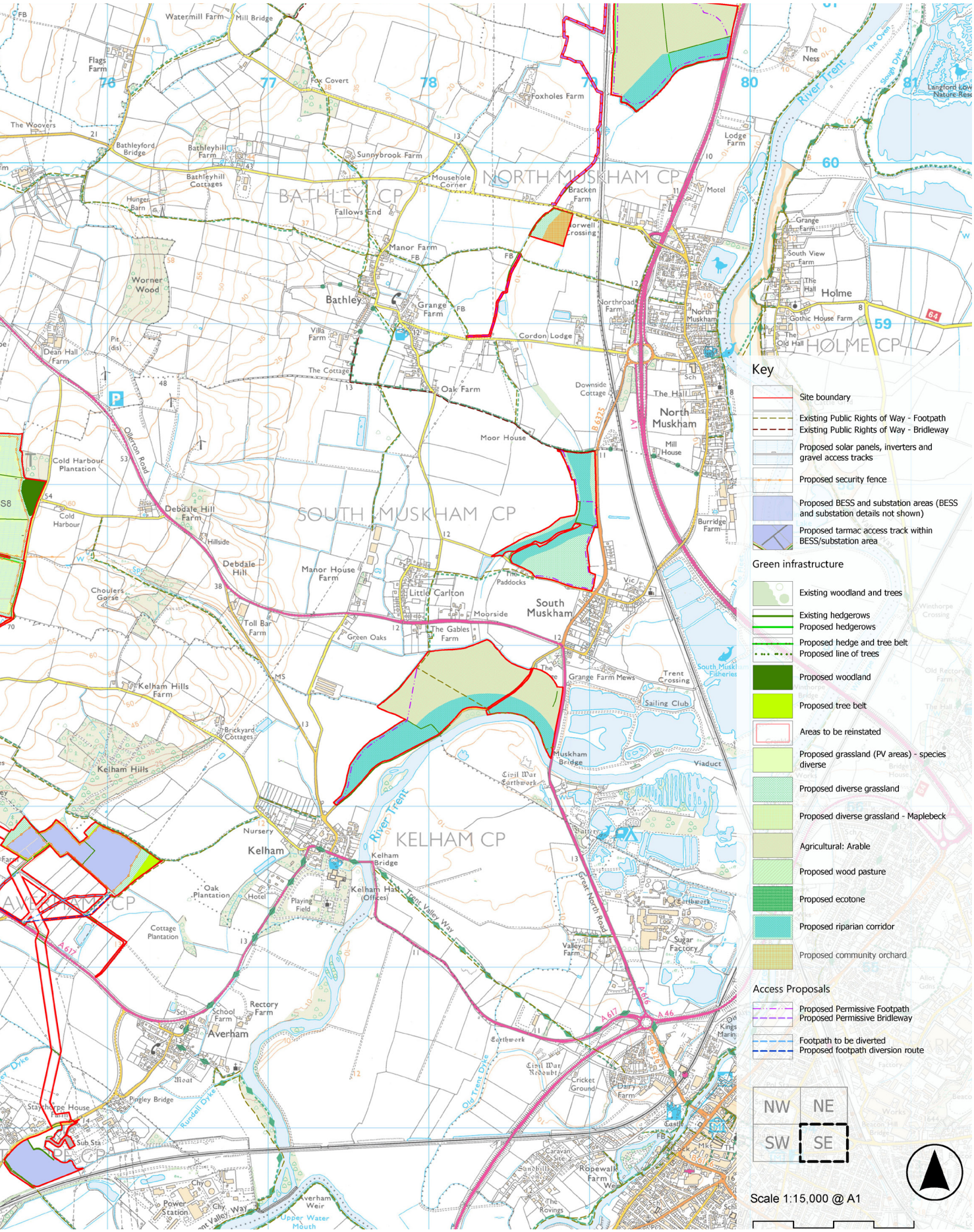


Figure 14: Masterplan (Southeast)

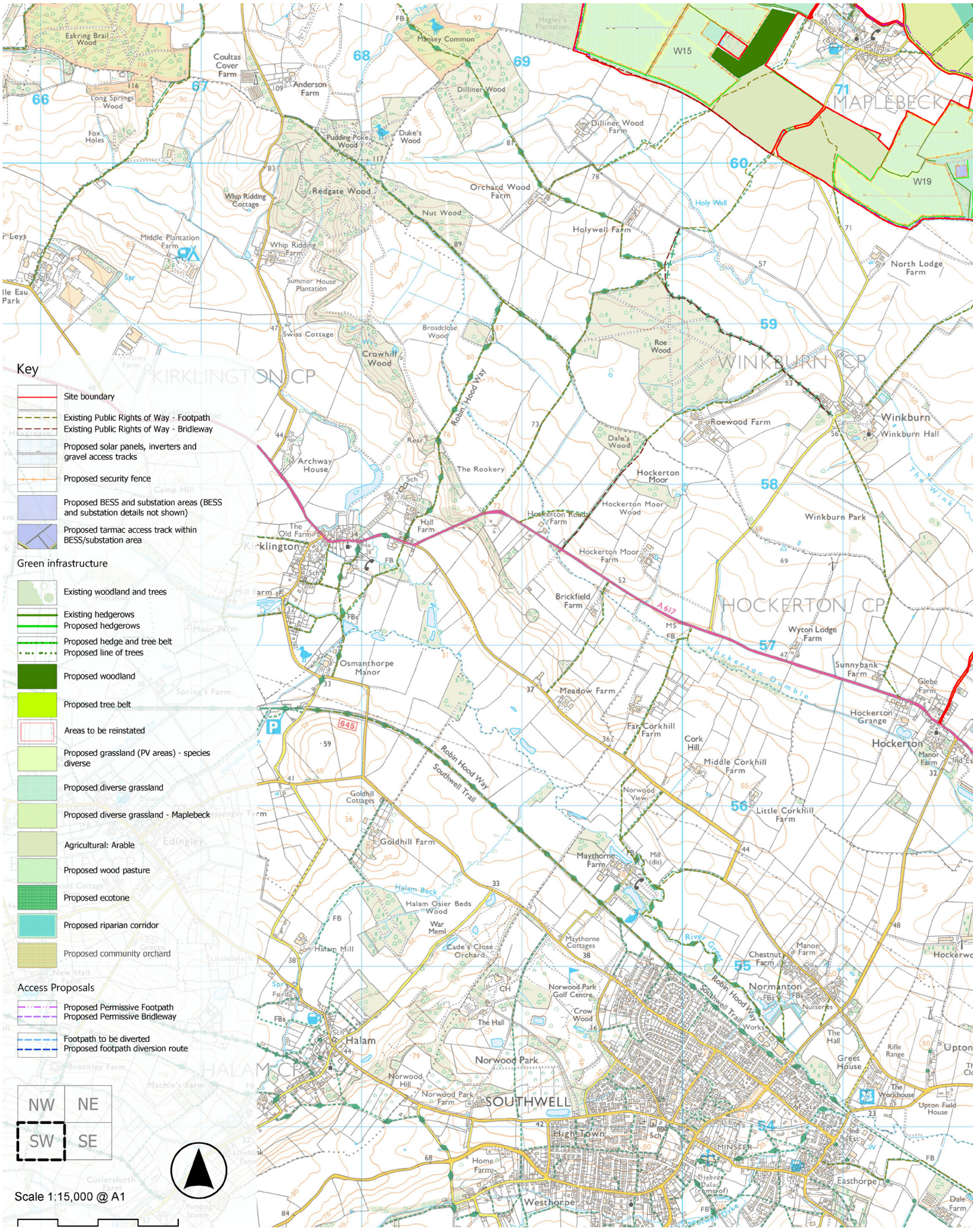
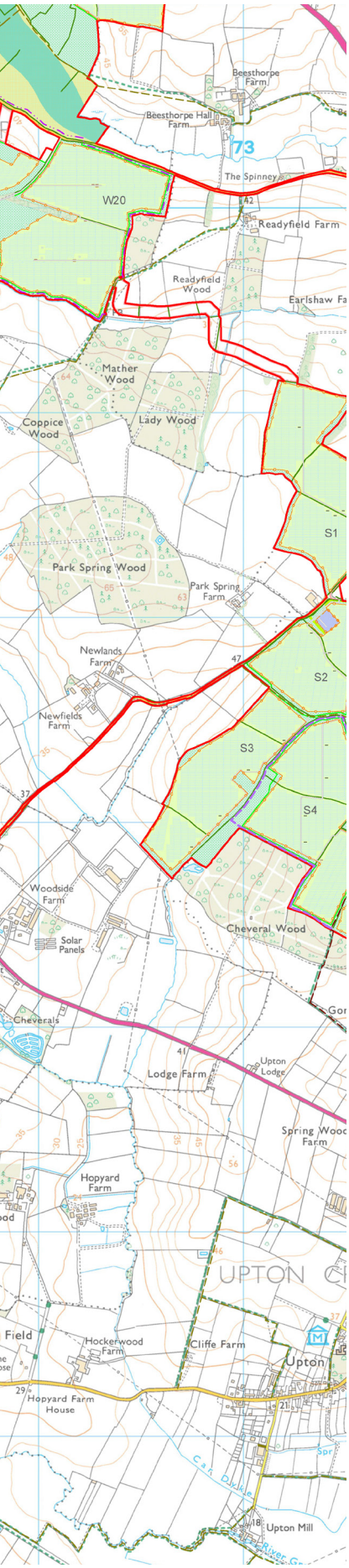


Figure 15: Masterplan (Southwest)



8.9 LANDSCAPE MASTERPLANS

123 The Landscape Masterplans for the Development are shown on Figures 12 to 15. The Masterplans provide an overview of the detail proposals presented within the LEMP.

Table 3: LEMP Habitats

LEMP Feature	Extent
Proposed Terrestrial Habitats	
Existing woodland and trees	11.69 ha
Proposed woodland	31.09 ha
Existing hedgerow	-
Proposed hedgerow	48.94 km
Proposed hedge and tree belt	
Proposed line of trees	3.06 km
Proposed tree belt	2.72 ha
Proposed grassland (PV areas) – species diverse	998.69 ha
Proposed community orchard	2.37 ha
Proposed wood pasture	8.51 ha
Proposed ecotone	23.13 ha
Proposed diverse grassland	351.05 ha
Proposed diverse grassland – Maplebeck	54.29 ha
Wildlife boxes and artificial refugia	
Agriculture	
Arable (Retained agricultural land – enhanced ecological management)	144.19 ha
Freshwater	
Riparian corridor (with scattered trees)	69.85 ha
Pond	2 new ponds 4 four existing ponds enhanced
Scrape	16 no.

8.9.1 MONITORING

124 Monitoring is essential to the successful establishment of the LEMP habitats. The timing, frequency and methods of monitoring will provide the necessary information to monitor compliance with objectives and influence management.

125 Monitoring reports will be provided to the Local Planning Authority (LPA). Any lessons learnt from this monitoring can then be reflected in a review of the management plan (to be agreed with the LPA), which should normally be made every five years. The management and remediation prescriptions in the LEMP may be subject to change over the lifetime of the Development to ensure that, as far as possible, the habitat types achieve the same or better condition than proposed.

9 CONCLUSION

126 The design of the Proposed Development has been developed in accordance with a clear design framework, based on the criteria for good design set out in EN-1. This has included the adoption of project level design principles to guide decision making and embed good design outcomes to the Proposed Development.

127 Project Principles have evolved throughout the design process, being informed and refined by stakeholder engagement, consultation feedback, technical studies and assessments. They have been used to steer and influence the design of the Development to avoid and reduce adverse impacts wherever possible, make the most of opportunities for enhancement and balance the need for flexibility and certainty within the DCO Application.

128 In addition to the generation of secure, low cost, decarbonised, clean, renewable energy, the Proposed Development would deliver a number of environmental, social and economic benefits. These include significant areas of new habitats that respect and enhance features within the landscape, including over 31.09ha of new native woodland comprising 64,500 trees, over 50km of new hedgerows and over 1400 hectares of species rich grassland delivering a Biodiversity Net Gain and improvements in ecological connectivity.

129 The Proposed Development would also provide benefits to the local community via an enhanced green infrastructure network including a better-connected footpath and bridleway network and access to open space and recreational spaces. These would include the provision of permissive paths and a new community orchard. If DCO consent is given, the design of the Proposed Development will be secured and implemented post-consent, in accordance with the Environmental Statement [EN010162/APP/6.2].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