



One Earth Solar Farm

Volume 7.0: Other Documents [EN010159]

Commitments Register

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Revision 02

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

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1. Commitments Register

- 1.1.1 **Table 1.1** lists the environmental mitigation measures to be adopted during the construction, operation and maintenance, and decommissioning phases of the Proposed Development, and identifies where that mitigation is secured in Schedule 2 Requirements of the **Draft DCO [EN010159/APP/3.1.2]**.
- 1.1.2 The DCO requirements, relevantly for the purposes of this document, secure these plans, the outlines of which are submitted with the application:
- > Construction Environmental Management Plan (CEMP);
 - > Decommissioning Environmental Management Plan (DEMP);
 - > Landscape Ecological Management Plan (LEMP);
 - > Biodiversity Net Gain (BNG) Strategy;
 - > Operational Environmental Management Plan;
 - > Soils Management Plan (SMP);
 - > Construction Traffic Management Plan (CTMP);
 - > Archaeological Mitigation Strategy;
 - > Public Rights of Way Management Plan (PRoW MP);
 - > Skills, Supply Chain and Employment Plan;
 - > Street, Rights of Way and Access Plan;
 - > Decommissioning Traffic Management Plan (secured as part of the DEMP); and
 - > Battery Safety Management Plan (BSMP).
- 1.1.3 Other control mechanisms include the **Works Plan [EN010159/APP/2.3]** and the requirement for approval of detailed design which secures the **Outline Design Parameters [EN010159/APP/5.9]** and the Height Parameter Plan part of the **Site layout plans [EN010159/APP/2.5]**.
- 1.1.4 This document has been updated at Deadline 1. The document references have not been updated from the original submission. Please refer to the **Guide to the Application [EN010159/APP/1.3]** for the list of current versions of documents.

Table 1.1 - One Earth Solar Farm Environmental Commitments Register

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C1	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Clearance or damage of habitat to facilitate construction – resulting in temporary or permanent reduction in habitat extent.	Habitats with a higher distinctiveness (in terms of Biodiversity Net Gain Assessment), such as woodland, mixed scrub, hedgerow, trees and ponds, will be avoided and retained wherever possible, and will be subject to biodiversity enhancement where appropriate	N/A	Construction Operation Decommissioning	DCO Requirements (Schedule 2): LEMP, CEMP, DEMP and BNG Strategy	Main Contractor
C2	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Impacts to biodiversity receptors at cable crossings	<p>The cabling route will pass under the River Trent by use of Trenchless Crossing to minimise the effects on this main river. Trenchless compounds will be located a minimum of 16m from the bank top, and drilling will occur a minimum of 5m below the river bed to avoid impacts of electro-magnetic fields (EMF) and heat from cables on riparian fauna.</p> <p>The drill profile will be designed to ensure risk of drilling fluid breakout is negligible.</p> <p>The same measures will be applied to cable crossings of wet ditches and watercourses except Trenchless crossing compounds will be located a minimum of 10m from the bank top, and drilling will occur a minimum of 2.5m below the bed. Trenchless crossings of hedgerows along the route of transmission cables will be located a minimum of 3 m away from the hedgerow bottom.</p>	N/A	Detailed Design Construction	DCO Requirements (Schedule 2): LEMP, CEMP, and BNG Strategy	Main Designer Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C3	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Clearance or damage of habitat to facilitate construction – resulting in temporary or permanent reduction in habitat extent.	Semi-natural habitats along the Fledborough Viaduct (Fledborough to Harby dismantled railway Local Wildlife Site (LWS)) will be retained and protected to maintain connectivity throughout the landscape. This will be achieved through installation of fencing/hoarding to protect sensitive habitat features during construction and a stand-off distance of no less than 5m to solar PV panels and associated infrastructure.	N/A	Construction	DCO Requirements (Schedule 2): CEMP, LEMP	Main Contractor
C4	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7] ES Volume 2, Chapter 8: Land and Soils [EN010159/APP/6.8] ES Volume 2, Chapter 13: Air Quality [EN010159/APP/6.13] ES Volume 2, Chapter 15: Noise and Vibration [EN010159/APP/6.15]	Construction, operation and decommissioning impacts from pollutant loss, dust, noise and vibration.	Minimum 5m buffers will be maintained or created habitats of medium distinctiveness (in terms of BNG). Watercourses will have a minimum buffer of 8m, ponds 10m, and a 16m buffer to the River Trent.	N/A	Construction Operation Decommissioning	DCO Requirements (Schedule 2): LEMP, CEMP, DEMP and BNG Strategy	Designer The Applicant Main Contractor
C5	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Clearance or damage of habitat to facilitate construction – resulting in temporary or permanent reduction in habitat extent.	Existing trees and hedgerows will be retained as far as possible and protected in accordance with best practice (BS 5837), where unavoidable, features of low distinctiveness and classified as poor in condition (using BNG Condition Assessment criteria) will be selected over habitats of medium or high distinctiveness or classified as moderate or good condition	N/A	Construction Decommissioning	DCO Requirements (Schedule 2): LEMP, CEMP, DEMP and BNG Strategy	Main Contractor

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C6	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Loss of vegetation for the construction of access tracks	Where new access requirements are unavoidable, habitats of low distinctiveness and poor condition will be selected with a maximum width of 6m removed for internal tracks and approximately 15m for bell mouths alongside the public highway. Vegetation and visibility splays will be maintained to a height of 0.9m and be allowed to regrow following construction.	N/A	Construction	DCO Requirements (Schedule 2): LEMP, CEMP, BNG Strategy	Main Contractor
C7	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	Impacts associated with watercourse crossings	The crossing of wet ditches will be avoided wherever possible. Where unavoidable, they will be designed to ensure the maintenance of connectivity for aquatic fauna (fish) and semi-aquatic fauna (water vole and otter). They will be delivered using clear span bridges, avoiding impacts to the channel and its banks.	N/A	Construction	DCO Requirements (Schedule 2): LEMP, CEMP, BNG Strategy	Designer Main Contractor
C8	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	ES Volume 2	Environmental impacts associated with construction activities	Working hours will be limited to 07:00 until 19:00 in the construction period and 08:00 until 18:00 during the operational period to avoid the need for artificial lighting, other than at the trenchless crossing of the River Trent, where 24 hour working may be required for a short period when drilling. Where necessary, e.g. emergency requirements, lighting will be designed in line with principles set out in guidance from the Institution of Lighting Professionals and the Bat Conservation Trust to avoid impacts on bats and other light averse animals.	N/A	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor



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C9	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Vegetation loss resulting from the installation of fencing	Security fencing will be installed throughout the Site, around solar PV fields and supporting infrastructure. They will be constructed of wire mesh and wooden posts and designed to be stock proof, with a minimum height of 2m. There will be ground level holes/gates at strategic locations, large enough to allow movement of badgers, hedgehogs and foxes. Strategic locations will be adjacent to habitat parcels of medium or high distinctiveness (woodland, mixed scrub, ponds) and on or close to established mammal runs. A minimum of one hole per 150m of fencing will be created, with a higher frequency around suitable habitats and identified badger sett locations	Specific locations will be identified during the pre-construction surveys	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor

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C10	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts to unidentified badger setts during construction	Pre-construction surveys will be conducted during the winter period to search for any new, previously unidentified, badger setts within, or adjacent to the Order Limits. Where found, a buffer of up to 30m will be established using hazard tape to prevent accidental disturbance during construction activities. Setts located close to the Proposed Development will be monitored prior to works using cameras at entrances to establish the presence of badgers and levels of activity. The buffer may be reduced dependent on the proposed construction activity (level of noise or vibration it may cause) and the type of sett (occasionally used outlier or main sett). Where disturbance or destruction of the sett is unavoidable (e.g. a new sett within the footprint of a substation location), a licence from Natural England (NE) will be required to close the sett and create a replacement.	A suitably qualified ecologist will supervise vegetation clearance and search for setts as vegetation is removed, allowing access to previously unsurveyed areas.	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor
C11	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts to bat roosts in proximity to the Proposed Development	Pre-construction surveys will be conducted to assess trees within, and adjacent to, the Order Limits for potential roost features for bats (woodpecker holes, tear outs, etc). Where found, a buffer of 15m will be implemented to avoid disturbance during the construction period. If this is not possible, trees will be inspected using an endoscope either from the ground or by aerial access (ladder or rope and harness). Features will be classified as either PRF I (supporting individual bats of low conservation value), PRF M (supporting multiple bats of high conservation value) or negligible (little to no value to roosting bats).	PRF I features will receive a single summer inspection (May to August inclusive) and PRF M features will receive three inspection visits during the summer and autumn period (May to September), and negligible features will require no further inspection. If bats, or evidence of bats (droppings) is found, the detailed scheme design e.g. buffers, standoff distances, siting of lighting columns, may require amendment to mitigate for potential adverse impacts. A Natural England (NE) licence may be obtained to derogate from the legislation.	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor

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C12	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Impacts to lamprey populations during construction	Lamprey populations will be monitored during construction, for no more than 5 years, to determine any potential effects of EMF.	This will be coordinated with the Environment Agency and, potentially, other operators of transmission cables running beneath the River Trent	Construction	DCO Requirements (Schedule 2): LEMP	Main Contractor
C13	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Impacts to animals during construction works	Construction areas will be fenced using either hoarding or Heras fencing to prevent animals from entering active works, thereby protecting them from accidental injury or killing.	N/A	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor
C14	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential environmental impact resulting from the mishandling of hazardous material	Good housekeeping measures will be implemented throughout the construction period, including the safe storage of hazardous chemicals, carrying and use of spill kits, storage of equipment when not in use (overnight), covering of excavations overnight (to prevent animals from falling in and becoming trapped), and storage of heavy plant off-site or in allocated areas.	N/A	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor
C15	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential seasonal impacts to species and habitats during construction	Vegetation clearance will be timed to avoid the main bird nesting season (March to August inclusive), and periods where reptiles and amphibians are active (climate dependent) to avoid injury or killing. If found, nests will be monitored to confirm occupation (nest building, egg incubation or with young) to determine the requirement for a suitable stand-off distance to be implemented.	Where this is not possible, habitats will be inspected prior to works by an Ecological Clerk of Works (ECoW) to search for potential bird nests and features suitable to support sheltering herptiles. Where appropriate, a suitably qualified ecologist will supervise for the duration of vegetation clearance works.	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor

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C16	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential loss of bat commuting and foraging habitats.	Creation and enhancement will include species-rich grassland, created within fields which currently support arable crops or species-poor grassland and enhancement of existing hedgerows, through reduced cutting and supplemental planting to improve structure and species diversity. Habitats will begin to be enhanced and created 12 months prior to first installation of solar PV panels. Delivery of habitats within working areas will be provided on a rolling programme as localised construction finishes (e.g. on a field-by-field basis).	N/A	Pre-construction Construction	DCO Requirements (Schedule 2): LEMP, BNG Strategy	Main Contractor
C17	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential loss of skylark breeding habitat	Species-rich grassland devoid of solar panels and other above ground infrastructure will be provided to compensate for the loss of skylark breeding habitat. If necessary, skylark plots (two per pair potentially displaced due to development) will be established in the grassland. 243ha of species -rich grassland will be created, with skylark plots established in the 86ha that are further than 50m from a field boundary. In addition, adjacent solar PV panel fields will be under sown with species-rich grassland, further increasing the availability of foraging habitat. Species-rich grassland devoid of above ground infrastructure will be created 12 months before the installation of solar PV panels with seed bed preparation and sowing taking place in autumn and establishment management taking place in the following summer before it is required as compensatory habitat.	Skylark monitoring will be conducted to assess the efficacy of mitigation during construction and operation. Sampling locations used during baseline work will be incorporated for direct comparisons, alongside the assessment of solar PV and grassland mitigation fields.	Construction Operation	DCO Requirements (Schedule 2): LEMP, BNG Strategy	Main Contractor

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C18	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential loss of ecological habitats for bird species	<p>Beetle banks will be created within solar PV fields and species-rich grassland mitigation areas. They will be constructed to be:</p> <ul style="list-style-type: none"> • 0.4m high and 1.5–2m wide. • Each field between 20ha and 28.9ha will have one beetle bank (unless in the flood plain), and those larger than 29ha will have three. • They will be positioned to run along solar panel arrays or alongside access tracks. • The banks will be between 140 to 450m in length and will be constructed in spring or autumn and sown with a species-rich grassland sward to create a diverse structure. 	N/A	Construction	DCO Requirements (Schedule 2): LEMP	Main Contractor
C19	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts to skylark populations during construction	A minimum of 50 habitat piles will be created within solar PV panel fields and species-rich grassland/skylark mitigation areas. They will be strategically located close to scrub and woodland habitats and will incorporate ditch and pond bankside habitat. They will be created from logs piled into a shallow hole up to 30cm deep and covering an area of 2 x 3-4m and up to a height of 1-1.5m above ground level. These will be created outside of the design flood extent.	N/A	Construction	DCO Requirements (Schedule 2): LEMP	Main Contractor

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C20	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts to skylark populations during construction	Gabion baskets/cages will be used to create habitat for invertebrates, amphibians and reptiles (minimum of 25). They will be filled using a range of materials, including large and small rocks/pebbles, stacked logs, bamboo, bricks and ceramic pipes. They will be provided in a variety of sizes; a minimum of 1m wide and high, and up to 20m long, located in both solar PV panel fields and species-rich grassland/skylark mitigation fields. Some will be located in the centre of fields, and others along drainages ditches and woodland edge boundaries.	N/A	Construction	DCO Requirements (Schedule 2): LEMP	Main Contractor
C21	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	Volume 6, ES Chapter 7 (Hydrology EN010159/APP/6.7)	Impacts to drainage as a result of the Proposed Development	Drainage swales and basins will form part of the Sustainable Drainage System (SuDS) for the Proposed Development. The location and size will be determined in response to detailed infrastructure design to avoid flooding in areas of high flood risk. Basins will be designed to hold areas of permanent water (ponds) in a way that will not compromise their primary function (minimum of three ponds). These features will be plug planted and seeded with a range of native aquatic plants and emergent vegetation. A SuDS feature will be created within the proposed coastal and floodplain grazing marsh lying adjacent to the west of the River Trent. It would take the form of a drainage ditch.	N/A	Construction Operation	DCO Requirements (Schedule 2): LEMP, CEMP, BNG Strategy, Flood Risk Assessment and Drainage Strategy Report	Designer Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<p>Additional water features (minimum of 25), in the form of 'scrapes' will be created throughout the Site, primarily in areas of low lying land which are more likely to hold water over the winter period, and close to existing ponds and SuDS. In each of the locations, two to three scrapes will be created (where practicable) with one larger, one medium and one small, allowing a range of conditions.</p> <p>The larger scrape will:</p> <ul style="list-style-type: none"> reach a maximum depth of 1m, with a steep bank at one end and a shallow bank at the other cover approximately 20m² but of varying shapes (both linear and round). The surface will be left rough and will naturally colonise. 				
C22	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	Impacts to drainage ditches as a result of the Proposed Development	Ongoing management of drainage ditches will involve the clearance of any silt build-up as required (outside of the main bird breeding season), with the aim of clearing no more than one third of each ditch in each year, and from one bank/side only. Bankside vegetation will be cut every other year (in autumn), alternating from one bank to the opposite bank, maintaining vegetation cover all year round.		Operation	DCO Requirements (Schedule 2): LEMP	Main Contractor
C23	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11] ES Volume 2, Chapter 16: Human Health [EN010159/APP/6.16]	Potential impacts to American mink resulting from the construction and operation of the Proposed Development	The scheme will seek to partner with the Greater Lincolnshire Nature Partnership, Waterlife Recovery Trust or other relevant stakeholder organisation to set up and deliver an American mink control project within the ditch network of the Site and the wider landscape.	This will be led by the stakeholder group, with funding (part or full) by the Applicant, with the aim of reducing predation pressures on water vole populations present.	Operation	DCO Requirements (Schedule 2): LEMP	The Applicant Main Contractor

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C24	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts to bat and bird roosting and nesting locations during construction and operation of the Proposed Development	<p>Bat and bird boxes will be installed (50 of each - including at least 3 barn owl boxes) within mature trees throughout the Site to increase roosting and nesting opportunities for bats and birds.</p> <p>They will be installed on the south-west or south-eastern aspect of a tree trunk, at a minimum of 3m from ground level, ensuring there is a clear entry to the box with no branches or foliage which might block the entrance.</p>	N/A	Construction Operation	DCO Requirements (Schedule 2): LEMP	Main Contractor
C25	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts to ecological habitats during construction	Scattered scrub will be planted to extend scrub and grassland mosaic habitats along the Fledborough Viaduct. Species will include gorse, dogwood, blackthorn and buckthorn, with natural colonisation of bramble, providing suitable food plants and habitat for green and brown hairstreak caterpillars.	N/A	Construction Operation	DCO Requirements (Schedule 2): LEMP, BNG Strategy	Main Contractor
C26	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts to ecological habitats during construction	Two otter holts will be constructed; one within the bank of a substantial ditch either side of the River Trent, east and west. The holts will be constructed of locally sourced logs and branches, partially buried and covered in brash to create camouflage and reduce potential for disturbance.	N/A	Construction	DCO Requirements (Schedule 2): LEMP	Main Contractor
C27	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]	Potential impacts and loss of hedgerow during construction.	Hedgerow creation will include a range of native species typical of the region, such as hawthorn, blackthorn, hazel, privet and guelder-rose, with supplementary planting ('gapping up') of species-poor and defunct hedgerows.	N/A	Construction	DCO Requirements (Schedule 2): LEMP, BNG Strategy	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<p>The target width and height of all hedgerows will be 3m x 3m, with the height being extended up to 4m where overshadowing will not be an issue.</p> <p>Where temporary access is required during construction, hedgerow will be planted on completion of the works to reinstate and enhance their former structure.</p> <p>The length of existing hedgerow is 64km, of which 25.5km is defunct and will require supplemental planting, a further 13km will be created, particularly within large, open fields in areas both to the east and west of the River Trent.</p>				
C28	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]	Potential impacts and loss of trees during construction.	<p>Trees will be planted individually and linearly, creating tree lines, and within existing and newly created hedgerows. Trees of a variety of nursery stock sizes will be planted to provide difference in age structure.</p> <p>A range of native species typical of the region will be selected to provide a variety of conditions for multiple flora (fungi and epiphytes) and fauna, with a range of wood types (soft and hard to encourage varying rot rate and cavity features) and longevity.</p> <p>Proposed tree planting locations typically form boundaries around proposed solar PV fields.</p> <p>Additional tree planting, will occur within three mitigation (species-rich grassland) fields in the area to the east of the River Trent.</p>	N/A	Construction Operation	DCO Requirements (Schedule 2): LEMP, BNG Strategy	Main Contractor

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C29	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts and loss of species-rich grassland during construction.	<p>Species-rich grassland will be created under and around solar panels and other infrastructure, and within all fields within the Site that are identified for enhancement only. A range of seed mixes will be used to ensure successful establishment within the conditions of a particular area. Seed mixes will be selected to target creation of two Priority Habitats: 'Coastal and floodplain grazing marsh' and 'Lowland meadows', with coastal floodplain grazing marsh targeted either side of the River Trent, increasing the extent of existing habitat to the south (on the western bank), and lowland meadow between solar PV panels and within mitigation fields.</p> <p>A shade tolerant seed mix, incorporating woodland species, will be selected for grassland adjacent to existing and newly created hedgerows, around areas of tree planting and underneath solar PV panels.</p> <p>Grassland habitats will be managed to ensure that target conditions are achieved, through:</p> <ul style="list-style-type: none"> • mowing (outside of the main bird breeding season), treatment of weeds and dominating species, and reseeded at regular intervals where required. • Cutting regimes will be phased to ensure a range of sward heights at any one time • Should it be possible, conservation grazing will be implemented to maintain the sward. 	N/A	Construction Operation	DCO Requirements (Schedule 2): LEMP, BNG Strategy	Main Contractor

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C30	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts and loss of field margins grassland during construction.	<p>Field margins (4m wide) along one edge of each field supporting solar PV will be seeded with mixes in line with Countryside Stewardship prescriptions AB8 Flower-rich margins (targeting pollinators in the summer), AB16 Autumn sown bumblebird mix and AB9 Winter bird food (provisioning for farmland bird species in long and/or cold winters), alternated by season.</p> <p>In locations where hedgerows will be allowed to grow to 4m tall mixes will be tailored with fumitory and chickweed that will benefit turtle dove. Riparian seed mixes, including dense tussocky grasses, common reed, and reed canary grass, will be used along draining ditches and banks, incorporating a 2m strip either side of the bank top.</p> <p>Grassland habitats will be managed to ensure that target conditions are achieved, through:</p> <ul style="list-style-type: none"> • mowing (outside of the main bird breeding season), treatment of weeds and dominating species, and reseeded at regular intervals where required. • Cutting regimes will be phased to ensure a range of sward heights at any one time 	N/A	Construction Operation	DCO Requirements (Schedule 2): LEMP, BNG Strategy	Main Contractor
C31	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts and loss of vegetation and habitat grassland during construction.	Narrow strips of woodland will be created along the margins of some solar PV fields in the west of the Site where screening is required.	N/A	Construction Operation	DCO Requirements (Schedule 2): LEMP, BNG Strategy	Main Contractor

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				<p>Tree planting will be irregular to create both open and more closed areas between trees and will incorporate a range of native species typical of the region and a variety of nursery stock sizes to provide difference in age structure.</p> <p>Scrub species will be planted between trees to establish an understorey. A shade tolerant seed mix will also be used to encourage a diverse woodland ground flora to develop. Supplemental planting of tree and scrub species will occur annually in the first five years to replace failed individuals and will continue to create a diversity in age class.</p> <p>At least one of the proposed ponds/scrapes will be created within and at the edge of newly created woodland parcels.</p>				
C32	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impacts and loss of vegetation and habitat grassland during construction.	<p>Land that is identified for mitigation and compensation purposes (e.g. grassland for skylarks) in fields where no construction works are proposed will have habitat establishment works begun at least 3 months ahead of construction activity.</p> <p>Tree planting and hedgerow planting will take place over the winters of each of the three-year construction programme. The aims will be to:</p> <p>Gap up and plant standards in one third of the defunct hedgerows each winter</p> <p>Plant one third of new hedgerows (including standards) each winter</p>	N/A	Detailed Design Construction	DCO Requirements (Schedule 2): LEMP, CEMP, BNG Strategy	Main Contractor

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				Take existing hedgerows into positive management for biodiversity at least 3 months ahead of construction activity commencing (other than at access points and other areas where vegetation management will be needed to aid delivery).				
C33	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	ES Volume 2, Chapter 15: Noise and Vibration [EN010159/APP/6.15]	Potential impacts to bat activity during construction and operation of the Proposed Development	Monitoring of bat activity using static acoustic devices will be conducted at the same locations as baseline monitoring (once during construction and in years 1, 3, 5 and 10 post construction).	Reports will be produced to be made publicly available for the development of bat mitigation strategies for future solar schemes in the UK and beyond.	Construction Operation	DCO Requirements (Schedule 2): CEMP (within a Biodiversity Management Plan (BMP) section), LEMP	Main Contractor
C34	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Potential impact to skylark during construction and operation resulting from habitat change/loss	Skylark monitoring will be conducted to assess the efficacy of mitigation and compensation during construction and operation. Sampling of both developed and undeveloped areas will be undertaken to record breeding densities and usage (i.e. for breeding, feeding etc.). In years 1, 2, 3, 5, 10 and 15, the results will be used to inform any adaptive management measures required through the LEMP.	Reports will be produced to be made publicly available for the development of skylark mitigation strategies for future solar schemes in the UK and beyond.	Construction Operation	DCO Requirements (Schedule 2): CEMP (within a Biodiversity Management Plan (BMP) section), LEMP	Main Contractor
C35	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	-	Biodiversity enhancements	Biodiversity Net Gain (BNG) will be provided for area, hedgerow and watercourse units as measured with the statutory biodiversity metric.	Monitoring will be secured through a habitat management and monitoring plan in-line with DEFRA requirements for significant habitat delivery.	Operation	DCO Requirements (Schedule): LEMP, BNG Strategy	Main Contractor
C36	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Potential impacts to watercourses during construction.	No machinery or spoil/materials would be stored within the identified flood extent, to ensure no impact to contractors, or deviation in flow routes due to the proposed works. The oCEMP will outline any temporary measures that will be put in place to control surface water runoff.	N/A	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C37	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Potential impacts to watercourses during construction.	<p>Construction works should take into account watercourse features and include:</p> <ul style="list-style-type: none"> Proposed surface water drainage outfalls from areas of significant hardstanding (such as the sub-station and battery storage areas) Bridging over watercourses to facilitate access. Any openings will be sized accordingly to ensure there would be no constraint to flows. 	-	Pre-construction Construction	DCO Requirements (Schedule 2): Flood Risk Assessment and Drainage Strategy	Main Contractor
C38	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Potential impacts to waterbodies resulting from construction activity	Suitable offsets (a minimum of 10m from water bodies, ordinary watercourses such as field drains/ditches; and 16m from the River Trent) will be provided from the top of bank of all main rivers and ordinary watercourses to provide access for maintenance and ecological corridors.	N/A	Construction	DCO Requirements (Schedule 2): , CEMP, Flood Risk Assessment and Drainage Strategy	Main Contractor
C39	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Impacts associated with flood depths upon sensitive equipment as part of the Proposed Development	<p>The majority of sensitive equipment (all substations and battery storage, and some inverters) will be located outside of the design flood extents, ensuring they remain operational even in times of flood.</p> <p>Where inverters are to be located within flood extents, they will be raised above the design flood level on raised platforms, providing a freeboard of 300mm.</p> <p>With regards to the solar arrays, the maximum height the panels can be raised to is 1.8m (i.e. between ground level and the base of the panel itself).</p>	N/A	Detailed Design Construction	<p>Work Plans (DCO Schedule 1 (Article 3(2)))</p> <p>Outline Design Parameters</p>	<p>Designer</p> <p>Main Contractor</p>

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<p>With the exception of some localised areas, the panels are raised above the design flood levels, with 300mm freeboard provided to the base of the panel itself.</p> <p>In localised areas this freeboard is not achievable and either a lesser freeboard is provided or the base of the panels will experience flooding. This is illustrated in ES Volume 7, Figure 7.17 Summary of Freeboard Allowance and Panel Flood Depths [EN010159/APP/6.7] and the Flood Risk Assessment, Figure 3-10 Summary of Freeboard Allowance and Panel Flood Depths for Design Fluvial Event [EN010159/APP/6.21].</p>				
C40	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Impacts associated with flood depths upon sensitive equipment as part of the Proposed Development	Sensitive equipment in the form of sub-stations and battery storage will be located outside of the pluvial flood extents, ensuring they remain operational even in times of flood.	N/A	Detailed Design Pre-construction Construction	Work Plans (DCO Schedule 1 (Article 3(2)))	Designer Main Contractor
C41	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]		Potential impacts to surface water drainage	<p>The following measures will be implemented to ensure that any impacts of the solar panels are minimised:</p> <p>Disturbance to existing vegetation during construction will be minimised (see ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]);</p> <p>Any disturbed vegetation will be re-established to maintain good ground cover across the Order Limits (see ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]);</p> <p>Fencing will be provided where required to avoid any disturbance to the vegetation by livestock or similar.</p>	Regular inspections and maintenance will be undertaken to ensure that vegetation cover is adequate	Construction Operation	DCO Requirements(Schedule 2): LEMP, CEMP, BSMP	Designer Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<p>Strategic SuDS features such as filter drains, swales and basins/scrapes are incorporated within the solar array areas to encourage infiltration to the ground and also provide ecological and biodiversity benefits.</p> <p>For the larger areas of hardstanding The SuDS features listed below will be incorporated to provide water quantity, water quality, and biodiversity benefits:</p> <p>Permeable Surfaces, Swales, Filter Drains and Detention Basins</p> <p>Should a fire occur at the BESS and sub-station areas and the fire suppression system be activated, a penstock valve downstream of the proposed detention basins will be automatically triggered to isolate potentially contaminated discharges. Should this occur, contaminated water would be tankered away and would not discharge to any watercourse.</p> <p>Furthermore, the proposed BESS facilities and SuDS features will be lined to prevent the potential for contaminated fire water to infiltrate to the ground.</p>				
C42	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Impacts associated with flood depths upon sensitive equipment as part of the Proposed Development	<p>No machinery or spoil/materials would be stored within the identified flood extent, to ensure no impact on contractors, or deviation in flow routes due to the proposed works.</p> <p>Any open green SuDS features (such as swales and detention basins) constructed as part of the Proposed Development will remain following decommissioning.</p>	N/A	Construction Decommissioning	DCO Requirements (Schedule 2): CEMP, DEMP	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C43	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Impacts associated with piling activities as part of the Proposed Development	If required, a piling risk assessment will be undertaken before the start of construction works. This will minimise impacts on groundwater as a result of piling activities.	N/A	Pre-construction	DCO Requirements (Schedule 2): CEMP	Main Contractor
C44	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]		Impacts to public water and drainage utilities	Controls are anticipated to include a requirement for the Applicant to obtain approval from the utility owner of works that are within proximity to their assets. Bespoke stand-off distances will be applied to the strategic supply mains of between 3m and 6m. Stand-offs from these assets will be free from construction, structures and haul and access roads.	N/A	Detailed Design Construction	DCO Schedule 14 of the Draft DCO [3.1] (Protective Provisions) DCO Requirements (Schedule 2): CEMP	Designer Main Contractor
C45	ES Volume 2, Chapter 8: Land and Soils [EN010159/APP/6.8]	-	Potential impacts resulting from contaminated land during construction	Based on the findings of ES Volume 3, Appendix 8.2: Preliminary Risk Assessment [EN010159/APP/6.21] , possible contaminant linkages were identified associated with risks to site users from contamination at the site of the former High Marnham Power Station (including the historical landfill site at that location) and potential risks associated with ground gases from the landfill at High Marnham Power Station. Intrusive site investigation work will be undertaken during the construction phase, prior to any works.	N/A	Pre-construction	DCO Requirements (Schedule 2): Ground Conditions	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C46	ES Volume 2, Chapter 8: Land and Soils [EN010159/APP/6.8]	-	Potential construction impacts to land and soils receptors	<p>At the start of the construction phase, the areas of agricultural land required for the temporary construction compounds and access tracks will be stripped of topsoil, a suitable membrane will be spread, and stone or matting will be laid down. The topsoil will be removed and matting laid across the temporary Construction Compound locations, onto which stone will be spread. This prevents intermixing of soil with the temporary stone surface.</p> <p>The topsoil removed during the construction process will be placed temporarily in a low-level bund or bunds on land outside of the area of the temporary construction compounds. Topsoil mounds will be shaped to repel water and if they will be in place for more than 6 months they will be sown with a low maintenance grass seed mix, in accordance with the measures detailed in the oSMP (Outline Soil Management Plan [EN010159/APP/7.10]).</p> <p>Where vehicle movements are required over soils, these will be managed by measures detailed in the oSMP to prevent damage to soil structure.</p> <p>A Water Management Plan will be provided as part of the CEMP that will provide greater detail regarding the mitigation to be implemented to protect the water environment during construction.</p> <p>The land will be returned to the landowner(s) after decommissioning.</p>	<p>The activities undertaken during the construction phase will be audited against the requirements detailed in the oSMP. This work will be completed by an appropriately qualified person to ensure adherence.</p> <p>The Water Management Plan (WMP) will include details of pre, during and post-construction water quality monitoring.</p>	Construction	DCO Requirements (Schedule 2): OEMP, CEMP, SMP, LEMP	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C47	ES Volume 2, Chapter 8: Land and Soils [EN010159/APP/6.8]	-	Potential operation and maintenance impacts to land and soils receptors.	<p>Measures will be put in place to mitigate against erosion, procedures to prevent disturbance of contaminated land, and emergency procedures to manage accidental spillages and leaks in order to minimise any risk to land, soil and groundwater.</p> <p>The procedures for managing firewater associated with any incidents at the location of the BESS include measures for preventing the release of polluted water, where water is used as the suppressant; incorporating an appropriate drainage design to collect firewater used in cooling adjacent units; and provision of sufficient capacity to ensure that there is no runoff of firewater.</p> <p>Measures to manage any potential impacts to soil and agricultural land during the operation and maintenance phase includes the identification of areas that may be more susceptible to damage, the handling and movement of soils, and maintaining the physical properties of the soil.</p> <p>Maintenance will be subject to periodic visits, including replacement of damaged parts or cleaning and maintenance of the Solar PV panels. Established tracks will be used during these activities and therefore any impacts will be minimised. The cleaning of Solar PV panels will be undertaken with water only (no chemicals will be used).</p>	The operation and maintenance phase of works will be audited by an appropriately qualified person against the requirements detailed in the oSMP .	Operation	DCO Requirements (Schedule 2): OEMP, SMP, BSMP	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<p>Where practicable, the timing of works will be managed carefully to consider weather conditions. Movement of maintenance vehicles during operation and maintenance will be limited and will follow access tracks that have been established during the construction phase.</p> <p>During the operational phase soil from some areas will continue to be managed in segregated stockpiles (for example soil from the substation, BESS and access tracks, which will remain in situ until decommissioning of the solar farm).</p>				
C48	ES Volume 2, Chapter 8: Land and Soils [EN010159/APP/6.8]	-	Potential impacts to land and soils receptors associated with decommissioning	<p>Measures within the oOEMP and oSMP will mitigate against erosion, procedures to prevent disturbance of contaminated land, and emergency procedures to manage accidental spillages and leaks in order to minimise any risk to the soil and groundwater during the decommissioning phase.</p> <p>Measures to manage the potential impact of firewater associated with the BESS will remain in place during the decommissioning phase, until no longer necessary.</p> <p>Land will be restored to its pre-construction condition at the end of the lifetime of the Proposed Development. The land will be returned to the landowners after decommissioning. Established tracks will be used during the decommissioning phase.</p>	The decommissioning phase of works will be audited by an appropriately qualified person against the measures detailed in the oSMP.	Decommissioning	DCO Requirements (Schedule 2): CEMP, DEMP, BSMP, SMP	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<p>Where practicable, the timing of works during decommissioning will be managed carefully to consider weather conditions.</p> <p>During the decommissioning phase, all concrete, hardstanding areas, foundations for the infrastructure and any internal tracks will be removed. It is assumed that all the below ground cables will be left in situ.</p> <p>The location of power conversion stations, access tracks, BESS, principal construction compounds, satellite construction compounds and substations will be restored using soil that has been retained on-site in managed bunds; or with new topsoil that will be brought to the Site. All areas will be restored to their original ALC grade.</p>				
C49	ES Volume 2, Chapter 8: Land and Soils [EN010159/APP/6.8]	ES Volume 2, Chapter 12: Transport and Access [EN010159/APP/6.12]	Potential impacts to soil and agricultural land from construction material movement	Access routes for the importation of construction materials, plant and equipment will be determined in advance of construction works, to avoid inappropriate trafficking of soil.	Construction vehicle movements will be monitored.	Construction	DCO Requirements (Schedule 2): CTMP	Main Contractor
C50	ES Volume 2, Chapter 9: Buried Heritage [EN010159/APP/6.9]	-	Potential impacts to heritage assets during construction	As avoidance measure, appropriate setbacks have been incorporated into the design of the Proposed Development, around Designated Heritage Assets (Scheduled Monuments) and selected villages:	An Archaeological Clerk of Works (ACoW) will be appointed for the Construction Phase who will be reviewing and monitoring all works on Site. Requirements will be set out in the Archaeological Mitigation Strategy and compliance with measures regularly recorded via an appropriate method to be determined in the CEMP.	Detailed Design Pre-construction Construction	Work Plans (DCO Schedule 1 (Article 3(2)) CEMP, LEMP, Archaeological Mitigation Strategy	Designer The Applicant Main Contractor



ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<ul style="list-style-type: none">No development is proposed on or directly adjacent to the two Scheduled Monuments in the vicinity of the Order Limits (the Roman Vexillation Fortress Scheduled Monument and Whimpton Moor Scheduled Monument). Substantial 50 m setbacks around these designated heritage assets are incorporated into the design;North Clifton (approximately 100m to Work No. 1);South Clifton- (approximately 500m to Work No. 1);To the south of Newton-on-Trent (approximately 100m to Work No. 1);To the north, south and west of the Church of St Gregory in Fledborough (approximately 160m to Work No. 1);To the east and west of Ragnall (approximately 150m to Work No. 1);West of Thorney (approximately 800m to Work No. 1); andThe area north of High Marnham (National High Marnham Substation) is proposed only for the cable routing for the Grid Connection, but no further development is expected in the area. <p>The Archaeological Mitigation Strategy will provide a framework for the following measures:</p>				



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				<p>Areas of Archaeological Constraint (AAC) will be identified prior to construction in consultation with the Archaeological Advisory Teams to the Local Planning Authorities (LPAs) and Historic England. In these areas, the mounting structure for solar arrays will involve micro-siting of piles, in order to avoid specific archaeological features and/or it will be supported by concrete footings rather than piles, avoiding ground intrusive impact.</p> <p>Where preservation in situ is the preferred strategy, the AAC will be demarcated by fencing to avoid accidental entry and disturbance of archaeological remains during the construction, operation, maintenance and decommissioning of the Proposed Development.</p> <p>Each AAC Site will be defined to include a reasonable buffer to avoid impacts to the buried archaeological remains or extant earthworks.</p> <p>Where no appropriate design measure can be applied to the management of the archaeological resource, mitigation measures will be applied, including but not limited to:</p>				

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				<ul style="list-style-type: none"> A programme of archaeological mitigation through record, such as strip and map and sample, or detailed excavation, to a level commensurate with the significance of the asset, will be implemented for archaeological remains within the footprint of the Proposed Development prior to the construction works. A programme of archaeological mitigation field work and recording may be undertaken during the construction works. Where non-intrusive trenching methods are proposed for cable routes, the CEMP(s) will include a detailed strategy for the monitoring and will include a contingency for archaeological intervention/mitigation in the event that unplanned activities threaten the preservation of known buried heritage remains. <p>Any indirect impact arising from the trenchless crossing ground excavation will be assessed and mitigated accordingly. Any proposed archaeological protection and mitigation measures will be set out in the Mitigation Strategy.</p>				
C51	ES Volume 2, Chapter 9: Buried Heritage [EN010159/APP/6.9]	-	Potential impacts on buried heritage assets during operation and maintenance	Any area of buried heritage value, including but not limited to AAC, will be protected during operation and maintenance.	N/A	Operation	DCO Requirements (Schedule 2): OEMP	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C52	ES Volume 2, Chapter 9: Buried Heritage [EN010159/APP/6.9]	-	Potential impacts to archaeological receptors during construction	<p>The following industry-wide recognised archaeological mitigation measures will be included in the Archaeological Mitigation Strategy:</p> <ul style="list-style-type: none"> Archaeological Excavation or Strip, Map and Record Excavation; and Archaeological Watching brief. <p>A proportionate and targeted post-consent archaeological evaluation will be considered where appropriate, in consultation with the Archaeological Advisors to the LPAs and Historic England to advise on buried heritage constraints and mitigation on specific areas.</p> <p>All archaeological mitigation works will be undertaken by an appropriately experienced and competent Archaeological Contractor.</p>	N/A	Detailed Design Construction	DCO Requirements (Schedule 2): Archaeological Mitigation Strategy, CEMP	Main Contractor
C53	ES Volume 2, Chapter 10: Cultural Heritage [EN010159/APP/6.10]	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]	Potential impacts to designated heritage assets	<p>Substantial setbacks and removal of developable land is proposed at:</p> <ul style="list-style-type: none"> Around North Clifton / South Clifton to ensure that the Proposed Development does not interrupt the connection between the settlements afforded by gaps and glimpsed views; No development is proposed on the part of the Whimpton Moor Scheduled Monument that is within the Site and most of this Scheduled Monument is excluded from the site boundary; 	N/A	Detailed Design Construction	<p>Work Plans (DCO Schedule 1 (Article 3(2)))</p> <p>DCO Requirements (Schedule 2): LEMP</p>	<p>Designer</p> <p>Main Contractor</p>

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<ul style="list-style-type: none"> Setbacks incorporated around Whimpton Moor Scheduled Monument which have been based on an understanding of the topography; Setbacks incorporated in Fledborough to the north, south and west of the Church of St Gregory (Grade I listed). Setbacks incorporated to east and west of Ragnall to reduce visual presence of development in settings of heritage assets here; Substantial setbacks and removal of developable land to the south of Newton on Trent and to west of Thorney to reduce visual impact and likely significant effects on settings of heritage assets in these locations. Tree and native vegetation planting (c.3m in height and 2-3m in width) to be included at sensitive edges of the Site to manage potential visual (and to some extent experiential) likely significant effects of the Proposed Development, including potential for glint and glare, within the settings of heritage assets. 				
C54	ES Volume 2, Chapter 10: Cultural Heritage [EN010159/APP/6.10]	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]	Potential visual heritage impacts associated with the Proposed Development	Existing tree and vegetation is to be strengthened and managed to heights of c.3m and width of 2.3m.	N/A	Construction Operation	DCO Requirements (Schedule 2): LEMP, OEMP, Outline Design Parameters	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
		ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]		Control of lighting and noise during operational phase to minimise intrusion in the context of heritage assets.				
C55	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]	ES Volume 2, Chapter 10: Cultural Heritage [EN010159/APP/6.10]	Potential landscape and visual impacts associated with the Proposed Development	<p>The siting of all features within the existing vegetation structure is to retain the scale and pattern of the landscape;</p> <p>Appraisal of the setting of local villages and the integration corresponding offsets to minimise, wherever possible, impacts on their character. This has included:</p> <ul style="list-style-type: none"> The removal of all land from between North Clifton and South Clifton; Embedding offsets from Ragnall in the order of 200m east of Main Street and utilisation of existing landform to the west to screen visibility of Work Area 1; Integration of offsets from Fledborough, including 130m from the Access Road to Fledborough and retention of a clear view corridor extending for over 700m between residential properties within the village and Fledborough Viaduct, requiring the removal of over 46 acres from Work Area 1 and inclusion in Work Area 8; and The removal of land west of Thorney from the Order limits, avoiding visual impact on residential receptors and changes to the character of the village. 	N/A	Detailed Design Construction	DCO Requirements (Schedule 2): Outline Design Parameters	Designer Main Contractor

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C56	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	Impacts to species and habitats during construction of the Proposed Development	<p>New planting proposed across the Order Limits has also been included to mitigate adverse effects and provide enhancement associated with other environmental topics such as:</p> <ul style="list-style-type: none"> new hedgerows, that include some evergreen species; offsets occupied by Work Number 8; and the reinstatement of coastal grazing marsh on the eastern bank of the River Trent. 	N/A	<p>Construction</p> <p>Detailed design</p>	<p>DCO Requirements (Schedule 2): LEMP</p> <p>Work Plans (DCO Schedule 1 (Article 3(2)))</p>	Main Contractor
C57	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	Impacts to species and habitats during construction of the Proposed Development	<p>All works have been integrated into the existing landscape pattern, as far as possible, minimising vegetation loss and embedding minimum offsets from existing features, namely:</p> <ul style="list-style-type: none"> Hedgerows: 5m Woodlands: 25m Waterbodies: 10m Watercourses: 10m 	N/A	<p>Construction</p> <p>Detailed design</p>	<p>DCO Requirements (Schedule 2): CEMP, Outline Design Parameters</p> <p>Work Plans (DCO Schedule 1 (Article 3(2)))</p>	Main Contractor
C58	ES Volume 2, Chapter 11: Landscape and Visual [EN010159/APP/6.11]	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	Impacts to vegetation during construction of the Proposed Development	<p>Access points, as secured in Work Area 7, have been located to minimise vegetation removal. Where access points necessitate the removal of vegetation for visibility splays it is proposed that such vegetation is coppiced, rather than removed.</p>	N/A	<p>Detailed Design</p> <p>Construction</p>	<p>DCO Requirements (Schedule 2): Outline Design Parameters, LEMP (and associated Vegetation Removal Plans) and Street, Rights of Way and Access Plan</p> <p>Work Plans (DCO Schedule 1 (Article 3(2)))</p>	Main Contractor
C59	ES Volume 2, Chapter 12: Transport and Access [EN010159/APP/6.12]	-	Potential impacts to the local highway network during construction	<p>Basic construction traffic management measures will include:</p> <ul style="list-style-type: none"> Provision of signage; Access junction design in accordance with LCC or NCC standards; The use of a Travel Plan; Police escorts for the transport of ALL components from the port of Entry; 	N/A	<p>Construction</p>	<p>Part 3 of the dDCO (Streets)</p> <p>DCO Requirements (Schedule 2): CTMP</p>	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<ul style="list-style-type: none"> A 'Wear & Tear' agreement; and Road cleaning within 500m of the proposed site access junctions. 				
C60	ES Volume 2, Chapter 12: Transport and Access [EN010159/APP/6.12]	-	Potential transport impacts associated with decommissioning activities	Transport and access matters will be properly addressed at decommissioning, it is proposed that the DTMP is based upon the measures contained in the oCTMP.	N/A	Decommissioning	DCO Requirements (Schedule 2): CTMP, DTMP secured as part of the DEMP	Main Contractor
C61	ES Volume 2, Chapter 12: Transport and Access [EN010159/APP/6.12]	-	Potential impacts to transport and access associated with construction and decommissioning	<p>The Principal Contractor will ensure that speed limits are always adhered to, and speed limit signage will be installed. This will also be emphasised in weekly toolbox talks.</p> <p>Users of the PRoWs will be separated from construction traffic using barriers (where permitted and appropriate). Crossing points will be provided where required, with path users having right of way and diversions will be provided where necessary.</p> <p>Appropriate and compliant temporary road signage would be provided to assist at these crossings for the benefit of all users.</p> <p>Discussions with local equestrian groups will be held during the construction period to keep riders informed of works and activities. These discussions will also allow the contractors to tailor their toolbox talks to specific equestrian issues.</p>	N/A	Construction Decommissioning	DCO Requirements (Schedule 2): CTMP, DEMP, PRoW MP Part 3 of the dDCO (Streets)	Main Contractor
C62	ES Volume 2, Chapter 12: Transport and Access [EN010159/APP/6.12]	-	Potential impacts to equestrian users of local ProW networks during construction and decommissioning	<p>The following actions will be included in the Site training for all HGV staff regarding horses:</p> <p>On seeing riders approaching, drivers must slow down and stop, minimising the sound of air brakes, if possible;</p>	N/A	Construction Decommissioning	DCO Requirements (Schedule 2): CTMP, DTMP secured as part of the DEMP	Main Contractor

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				<p>If the horse still shows signs of nervousness while approaching the vehicle, the engine should be shut down (if it is safe to do so).</p> <p>The vehicle should not move off until the riders are well clear of the back of the HGV.</p> <p>If drivers are wishing to overtake riders, please approach slowly or even stop to give riders time to find a gateway or lay by where they can take refuge and create sufficient space between the horse and the vehicle. Because of the position of their eyes, horses are very aware of things coming up behind them.</p> <p>All drivers delivering to the Site must be patient.</p>				
C63	ES Volume 2, Chapter 13: Air Quality [EN010159/APP/6.13]	-	Potential impacts associated with dust emissions during construction and decommissioning phases.	The minimisation of emissions and sources of air pollution during the construction and decommissioning works will be secured by good design and best practice measures to ensure that adverse impacts to air quality are avoided, reduced or mitigated.	N/A	Construction Decommissioning	DCO Requirements (Schedule 2): CEMP, DEMP	Main Contractor
C64	ES Volume 2, Chapter 13: Air Quality [EN010159/APP/6.13]	-	Potential air pollutant emissions during operation	During operation the Proposed Development incorporates measures to minimise emissions during maintenance.	N/A	Operation	DCO Requirements (Schedule 2): OEMP	Main Contractor
C65	ES Volume 2, Chapter 13: Air Quality [EN010159/APP/6.13]	-	Potential air quality impacts from fire at the proposed Battery Energy Storage System	An Outline Battery Safety Management Plan [EN010159/APP/7.11] (oBSMP) details measures in the event of unplanned emissions at the BESS site resulting from fire. With these measures in place, there are not expected to be any significant effects from unplanned emissions from the BESS.	N/A	Operation Decommissioning	DCO Requirements (Schedule 2): BSMP	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C66	ES Volume 2, Chapter 14: Carbon and Climate Change [EN010159/APP/6.14]	-	Impacts during construction associated with GHG emissions.	Best-practice working measures will be taken to reduce environmental impacts, including GHG emissions, as well as measures to minimise the creation of waste and to maximise the use of materials with lower embodied GHG emissions. Measures will be taken to consolidate the delivery of materials on-Site and promote sustainable methods of construction workers to get to the Site, including the mandate for the cessation of construction plant when not in use.	N/A	Construction	DCO Requirements (Schedule 2): CTMP, Code of Construction Practice (as part of the CEMP)	Main Contractor
C67	ES Volume 2, Chapter 14: Carbon and Climate Change [EN010159/APP/6.14]	-	Impacts during construction associated with GHG emissions.	The minimisation of traffic movements from staff during the construction phase will be outlined as part of the Staff Travel Plan and ongoing management procedures in the oCTMP.	N/A	Construction	DCO Requirements (Schedule 2): CTMP	Main Contractor
C68	ES Volume 2, Chapter 14: Carbon and Climate Change [EN010159/APP/6.14]	-	Impacts during decommissioning associated with GHG emissions.	Management procedures for the removal and treatment of materials on-Site during decommissioning and minimise traffic movements during decommissioning are committed to within the oDEMP.	N/A	Decommissioning	DCO Requirements (Schedule 2): DEMP	Main Contractor
C69	ES Volume 2, Chapter 14: Carbon and Climate Change [EN010159/APP/6.14]	-	Potential waste impacts associated with decommissioning	It is assumed that, for decommissioning, 100% of PV modules will be recycled.	N/A	Decommissioning	DCO Requirements (Schedule 2): DEMP	Main Contractor
C70	ES Volume 2, Chapter 15: Noise and Vibration [EN010159/APP/6.15]	-	Potential noise and vibration impacts during construction	The CEMP will include recommendations that represent good practice specific to the noise and vibration assessment, based on the assumed construction plant list and working methodologies. The trenchless crossing compounds for the cable across the River Trent will be located as far as is reasonably practicable, and not within 100m of noise sensitive receptors.	N/A	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C71	ES Volume 2, Chapter 15: Noise and Vibration [EN010159/APP/6.15]	-	Potential noise impacts during operation from Power Conversion Station (PCS)	Where practicable PCS units will not be located within 100m of residential dwellings and 50m of existing public rights of way. PCS units will not result in a night time noise level at residential receptors greater than 35dB(A).	N/A	Detailed design	DCO Requirements (Schedule 2, Operational Noise (16 (1) and (2)) DCO Requirements (Schedule 2): Outline Design Parameters	Main Contractor
C72	ES Volume 2, Chapter 15: Noise and Vibration [EN010159/APP/6.15]	-	Potential noise impacts during operation and decommissioning from the substation and BESS	The BESS equipment and substations will be located at a distance of at least 300m from residential properties and will result in a maximum rating level during night-time hours at residential properties of 35 dB(A). The technical specifications for the BESS and substation equipment is to include a noise report, to demonstrate that the design of the plant and equipment meets the 35 dB(A) noise limit.	N/A	Detailed Design Operation Decommissioning	DCO Requirements (Schedule 2, Operational Noise (16 (1) and (2)) DCO Requirements (Schedule 2): Outline Design Parameters, CEMP, OEMP, DEMP	The Applicant
C73	ES Volume 2, Chapter 16: Human Health [EN010159/APP/6.16]	ES Volume 2, Chapter 15: Noise and Vibration [EN010159/APP/6.15] ES Volume 2, Chapter 17: Socio-Economics [EN010159/APP/6.17] ES Volume 2, Chapter 13: Air Quality [EN010159/APP/6.13] ES Volume 2, Chapter 12: Transport and Access [EN010159/APP/6.12]	Potential impacts on people during construction	Management plans will minimise sources of environmental pollution, potential disruption during the construction works, maximise local employment and skills benefits, good design and best practice measures to ensure that adverse impacts to air quality, noise and traffic are avoided, reduced or mitigated.	N/A	Construction	DCO Requirements (Schedule 2): CEMP, CTMP, Skills, Supply Chain and Employment Plan, PRoW MP	Main Contractor
C74	ES Volume 2, Chapter 16: Human Health [EN010159/APP/6.16]	-	Potential human health impacts during operation	Embedded environmental measures include ecological enhancements and green infrastructure. There will be new permissive paths to enhance the existing PRoW network.	N/A	Operation	Work Plans (DCO Schedule 1 (Article 3(2)) DCO Requirements (Schedule 2): LEMP	The Applicant Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				The Applicant is also committed to the One Earth Community Fund to support local projects led by registered community groups, local charities, social enterprises and parish councils. This sits outside the DCO Application and is not secured by the DCO.				
C75	ES Volume 2, Chapter 16: Human Health [EN010159/APP/6.16]	-	Potential impacts to physical activity in the local vicinity as a result of the Proposed Development	A Community Liaison Officer will be appointed to lead discussions with local communities through the Community Liaison Group.	N/A	Construction Operation Decommissioning	DCO Requirements (Schedule 2): CEMP, DEMP, OEMP, Community Liaison Group.	The Applicant Main Contractor
C76	ES Volume 2, Chapter 17: Socio-Economics [EN010159/APP/6.17]	-	Employment	Opportunities for trades and associated supply chains, and employment opportunities during the construction, operation and decommissioning are secured within an Outline Skills, Supply Chain and Employment Plan.	N/A	Construction Operation Decommissioning	DCO Requirements (Schedule 2): Skills, Supply Chain and Employment Plan	Main Contractor
C77	ES Volume 2, Chapter 17: Socio-Economics [EN010159/APP/6.17]	ES Volume 2, Chapter 6: Biodiversity [EN010159/APP/6.6]	Potential impacts to local amenity and to permissive paths within the site	There will be 6.1 km of new permissive paths through the Site Local amenity enhancement will include provision of land for new grassland, wildflower meadow, hedgerow and tree planting;	N/A	Construction Operation	DCO Requirements (Schedule 2): Design, LEMP	Main Contractor
C78	ES Volume 2, Chapter 17: Socio-Economics [EN010159/APP/6.17]	-	Retention of skills resulting from the Proposed Development	The Applicant is committed to and working with local educational institutions to identify how the Proposed Development can support and provide suitable skilled training opportunities)	N/A	Construction Operation Decommissioning	DCO Requirements (Schedule 2): Skills, Supply Chain and Employment Plan	The Applicant Main Contractor
C79	ES Volume 1, Chapter 2: EIA Methodology EN010159/APP/6.2]	-	Potential impacts arising from the discovery of Unexploded Ordnance (UXO) during construction of the Proposed Development	A UXO Management Plan will be created to mitigate for the risk of encountering UXO before any intrusive works.	N/A	Construction	DCO Requirements (Schedule 2): CEMP	Main Contractor

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C80	ES Volume 1, Chapter 2: EIA Methodology EN010159/APP/6.2]		Potential impact of a extended outage	<p>The Applicant must provide notice to the relevant planning authority once any part of the authorised development stops generating electricity for a continuous period of 12 months for non-maintenance reasons ("Period of Extended Outage"). When giving such notice the Applicant must provide details of the steps it is taking to rectify the issue along with an expected timeframe for when generation is predicted to re-commence operation. The Applicant agrees to keep the relevant planning authorities updated following the Period of Extended Outage until the re-commencement of operation.</p> <p>In the event that the equipment/plant is still inoperative after an additional period of 24 months from the first Period of Extended Outage (resulting in a continuous period of 36 months of outage), subject to paragraph 2.13.3, the Applicant must submit a decommissioning environmental management plan to the relevant planning authority for that part of the authorised development and decommissioning of that part of the authorised development must take place in accordance with the approved plan.</p> <p>Paragraph 2.13.2 does not apply if:</p> <ul style="list-style-type: none"> it was a force majeure event; 	N/A	Operation	DCO Requirements (Schedule 2): OEMP	The Applicant Main Contractor

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
				<ul style="list-style-type: none"> the outage occurred as a result of National Grid undertaking any activities to High Marnham Substation and/or the transmission network; or the relevant planning authority agree otherwise (acting reasonably), including where the relevant planning authority agree otherwise following decommissioning commencing pursuant to an approved decommissioning environmental management plan. <p>For the purpose of paragraph 2.13.3 a 'force majeure event' means an event or circumstance which is beyond the reasonable control of the Applicant which will include but is not limited to an act of God, war, civil disturbance, statutory prohibition, disruption to or issues with supply chains, Government intervention, order or act of Government or local/public authority, acts of terrorism, fire, lightning, flood, adverse weather conditions, prevention of access to any site as a consequence of any local, regional or national restriction on movement in consequence of a health emergency, or otherwise to prevent the spread of any communicable disease, explosion, accident, theft, vandalism or national strike action.</p>				

ID	Primary Topic and Location	Secondary Topic and Location	Effect	Commitment	Monitoring	Phase	Commitment Securing Mechanism	Delivery and Responsibility
C81	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Potential impacts to hydrology during construction and operation.	If at detailed design, it is confirmed that potable water demand at the construction or operational stage is in excess of 20m ³ /day, then a Water Resource Assessment will be produced in consultation within Anglian Water.	N/A	Construction Operation	DCO Requirements (Schedule 2): CEMP, OEMP	The Applicant
C82	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]	-	Potential impacts to hydrology during operation.	The location and details of any proposed culverts is to be confirmed at detailed design and their design progressed in consultation with the Environment Agency, Lead Local Flood Authority and Internal Drainage Board as necessary.	N/A	Operation	DCO Requirements (Schedule 2): CEMP, OEMP	The Applicant
C83	ES Volume 2, Chapter 18: Cumulative Effects [EN010159/APP/6.18]	-	Potential Cumulative Effects	The Applicant is committed to working with other developers to reduce potential cumulative impacts where possible or practicable.	N/A	Construction	DCO Requirements (Schedule 2): CEMP, CTMP	The Applicant
C84	ES Volume 2, Chapter 7: Hydrology and Hydrogeology [EN010159/APP/6.7]		Potential impacts to hydrology during construction.	A hydrogeological risk assessment will be produced for river/watercourse crossings prior to detailed design and suggest this is secured through requirement.	N/A	Construction	DCO Requirements (Schedule 2): CEMP	The Applicant



one earth
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