

# Cottam Solar Project

## Outline Ecological Protection and Mitigation Strategy

Prepared by: Clarkson and Woods Ltd.  
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## Issue Sheet

Report Prepared for: Cottam Solar Project Ltd.

### Outline Ecological Protection and Mitigation Strategy

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## 0 Introduction

- 0.1.1 This Outline Ecological Protection and Mitigation Strategy (EPMS) sets out the ecological protection measures for undertaking construction works associated with the proposed Cottam Solar Project in Lincolnshire and Nottinghamshire, hereafter referred to as the Scheme, with the extent of project being referred to as the Order Limits.
- 0.1.2 This Plan specifically deals with the protection of habitats and species during the construction phase, to include the construction of the Photovoltaic (PV) Modules (and associated access tracks and substations), Battery Energy Storage System (BESS) and installation of cabling within the Cable Route Corridor. Information relating to the management of other environmental issues such as traffic movements, compound location, site welfare, working hours, services and noise has been provided separately within the Outline Construction Environmental Management Plan (CEMP) [APP/C7.1] which should be read alongside this document.
- 0.1.3 As this is an Outline EPMS, a final version will be submitted to and approved by the relevant planning authorities pursuant to a Requirement in the Development Consent Order (DCO) prior to construction of the Scheme.
- 0.1.4 This EPMS has been informed by extensive baseline ecological surveys carried out to support the Scheme and seeks to address the needs for ecological protection and mitigation within the construction phase identified within the impact assessment of Chapter 9 of the Environmental Statement [APP/C6.2.9].
- 0.1.5 The purpose of this Outline EPMS is to:
- Plainly identify known risks to protected and notable species, and to preserving the integrity and/or the function of habitats within the construction phase.
  - Enable the implementation of the mitigation outlined in Chapter 9 of the Environmental Statement.
  - Identify ecologically sensitive areas and indicate where protective buffers/fencing is required.
  - Clearly set out when and where ecological supervision will be required.
  - Identify roles and responsibilities for undertaking this protective/mitigation work during the construction phase.
- 0.1.6 This Outline EPMS follows the guidelines set out within the Biodiversity – Code of Practice for Planning and Development, British Standard 42020:2013.
- 0.1.7 A separate Landscape and Ecological Management Plan (LEMP) [APP/C7.3] has also been prepared for the Scheme, which covers the continued protection, management and enhancement of the ecological receptors, as well as habitat creation prescriptions.

## **0.2 Responsible Personnel & Lines of Communication**

0.2.1 Since this document is an Outline document, roles and responsibilities are not final at this stage. It will be the Applicant's responsibility to ensure that this document is complied with by the Principal Contractor.

## **0.3 Site Manager(s)**

0.3.1 The Applicant will be responsible for ensuring that a Site Manager is appointed to each of the PV, BESS and Cable Installation teams and that this document has been provided to them. It will be the responsibility of the Site Manager(s) to ensure adequate communication of the applicable prescriptions set out within this EPMS to construction staff and ensure sufficient liaison and forward planning with the Ecological Clerk(s) of Works (ECoWs).

## **0.4 Ecological Clerk of Works**

0.4.1 An Ecological Clerk of Works will be appointed to each of the PV, BESS and Cable Installation teams and will comprise a suitably qualified ecologist with at least five years' relevant experience. The ECoW(s) will assist and advise the Applicant and the Site Manager(s) in their adherence to the requirements of this EPMS.

0.4.2 Typically, a permanent on-site presence is not required. Instead, an appropriately qualified ecologist will attend at pre-arranged and timetabled work stages as set out in this document, as well as being available via an 'on-call' basis throughout the construction phase. This will rely on adequate regular and ad-hoc communication between the Site Manager(s) and the ECoW(s). This will enable any rearranged or changed timetables to be accommodated, as well as a prompt response for dealing with any potential habitat or protected species protection and legal compliance issues that could arise during the course of development.

0.4.3 The ECoW will be contacted as early as possible in the unlikely event that any activities on site contravene the measures prescribed in the EPMS, for instance, should there be any unforeseen, but essential requirement to enter any of the Biodiversity Protection Zones. The ECoW will be consulted prior any such action being carried unless in emergency situations.

## 0.5 Contact Details

	Company	Primary Contact	Address	Contact Details
Main Contractor	TBC	TBC	TBC	Email: TBC Telephone: TBC
ECoW	Clarkson & Woods Ltd	Harry Fox	Overbrook Business Centre, Poolbridge Road, Blackford, Somerset BS28 4PA	Email: harry.fox@clarksonwoods.co.uk Telephone: 01934 712500
Wildlife Rescue Centre	Mansfield Wildlife Rescue	TBC	Shire Rd, Pleasley Vale, Mansfield NG19 8FJ	Telephone: 01623810625
Pollution Incident Contact	Environment Agency	TBC	TBC	Telephone: 0800 807060

## 0.6 Designated Sites

0.6.1 The following Local Wildlife Sites occur within, or in close proximity to, the Order Limits and are of principal concern within this document. Refer to Method Statements 1-3 and 11.

- Willingham to Fillingham Road Verges Local Wildlife Site (LWS)
- Upton Grange Lane Road Verges LWS
- Cow Pasture Lane Drains LWS

## 0.7 Habitats

0.7.1 The following habitats occur within the Order Limits and are of principal concern within this document. All Method Statements refer.

- Woodland
- Hedgerows and Trees
- Grassland (including Arable Field Margins)
- Ditches and Watercourses (including River Till and River Trent and their tributaries)
- Ponds

## 0.8 Species and Species Groups

0.8.1 The following species occur within the Order Limits and are of principal concern within this document.

- Badger – See Method Statement 8

- Bats – See Method Statements 4 - 6.
- Otter - See Method Statements 3, 5 and 6
- Water Vole - See Method Statements 3, 5 and 6
- Polecat - See Method Statements 3, 5 and 6
- Hedgehog - See Method Statements 3, 5 and 6
- Harvest Mouse - See Method Statements 3, 5 and 6
- Brown Hare - See Method Statements 3, 5 and 6
- Reptiles - See Method Statements 3, 5 and 6
- Amphibians - See Method Statements 3, 5 and 6
- Breeding Birds (Including Ground Nesting Birds of Open Habitats) - See Method Statements 5, 6 and 9
- Overwintering Birds - See Method Statements 5, 6 and 10
- Invertebrates - See Method Statements 3, 5 and 6
- Freshwater fish - See Method Statements 3, 5 and 6
- Invasive Species - See Method Statements 3, 5 and 6



## **1 Method Statement 1: Toolbox Talks**

### **1.1 Objectives**

1.1.1 Toolbox Talks are important for communicating the location and nature of the legally protected and sensitive ecological features that are present within the Sites to all site staff and visitors. Toolbox Talks also set out the responsibilities of all site staff in avoiding and minimising harm to protected species and habitats, and will outline the relevant ecological legislation.

### **1.2 Toolbox Talks**

1.2.1 Prior to the commencement of works at any of the four PV/BESS Sites, or cable route installation, a toolbox talk will be provided by the ECoW to the Site Manager and contractors. The toolbox talk will include details of the EPMS and will highlight the whereabouts and sensitivity of the various ecological features present within each Site. The talk will establish the role of the ECoW and site personnel during works, and what to do if protected species/ecological constraints are found during works.

1.2.2 In the event a change in Site Management personnel occurs during construction or a pause in works of more than period of more than 30 consecutive days occurs, a toolbox talk will need to be provided again by the appointed ECoW. The Site Manager should inform the ECoW of any forthcoming management changes or breaks in the construction programme. The Site Manager will be responsible for relaying information within the toolbox talks to all subsequent site staff during their initial site inductions.

1.2.3 The ECoW will provide the Site Manager with paper materials and mapping which can be used to illustrate the whereabouts and nature of ecological features within site inductions.

1.2.4 The various Method Statements in this document contain further information to be included within toolbox talks specific to certain species or operations.

## 2 Method Statement 2: Installation of Biodiversity Protection (Buffer) Fencing

### 2.1 Objectives

- 2.1.1 The majority of the Scheme's valuable ecological features are contained within field boundaries. As such, it is essential that Biodiversity Protection Fencing (BPF) is installed at the onset of the construction phase to ensure damage and degradation to these features does not occur.
- 2.1.2 Installation of BPF contributes to the protection of **all designated sites, important habitats and protected species** listed in Section 3.

### 2.2 Toolbox Talk

- 2.2.1 Prior to the commencement of works at any of the four PV/BESS Sites, or cable route installation, a toolbox talk will be provided by the ECoW to the Site Manager and contractors. The toolbox talk will include details of the EPMS and the requirements for BPF contained below, highlighting ecological features within each Site. The talk will establish the role of the ECoW and site personnel during works, and what to do if protected species/ecological constraints is found during works.
- 2.2.2 In the event a change in Site Management personnel occurs during construction or a pause in works of more than period of more than 30 consecutive days occurs, the toolbox talk will need to be provided again by the appointed ECoW. The Site Manager will be responsible for relaying information within the toolbox talk to all subsequent site staff during their initial site inductions.

### 2.3 PV and BESS Sites

- 2.3.1 The design of the Scheme is such that buffer zones of between 5 and 50m from field each of the boundaries have been incorporated into the layout of the PV modules, access tracks, inverters, substations and battery energy storage infrastructure. The buffer widths correspond to the ecological value of each boundary and/or its sensitivity to potential impacts. Therefore, construction-phase biodiversity protection fencing should be installed in line with these buffer extents.
- 2.3.2 The locations and widths of all buffer zones are illustrated in Appendix 9.11 of Chapter 9 of the Environmental Statement [APP/C6.3.9.11]. BPF will be installed as a priority during the mobilisation and preparation tasks in the construction phase. This will either comprise temporary Heras'-style fencing, or the final location of the operational security fence to serve the dual purposes of construction-phase protection and ongoing security. Security fencing will comprise 2m tall deer-proof fencing installed on wooden posts.
- 2.3.3 BPF will also be used to protect all individual in-field mature trees as set out in the Tree Protection Plan. Tree protection fencing will be installed in accordance

with British Standard 5837:2012 Trees in relation to design, demolition and construction.

- 2.3.4 The location of all BPF will be agreed and confirmed between the ECoW and Site Manager(s) prior to commencement of installation to ensure clarity on all buffer zone width, access and fencing specification requirements. This will minimise the chance of any ad-hoc call-outs of the ECoW being required during the installation.
- 2.3.5 All installed BPF will be inspected by an ECoW during and/or on completion of installation to ensure it complies with the correct specification and is installed in the correct locations.
- 2.3.6 The fencing will be subject to regular checks by the ECoW as per Method Statement 11; however, it will be the responsibility of the Site Manager(s) to ensure the fence is appropriately maintained throughout the construction phase.
- 2.3.7 During construction, no site personnel or machinery shall enter the Buffer Zones by crossing the BPF and no equipment will be stored therein. The only exceptions will be where access for essential/unavoidable operations have been agreed to in advance with the ECoW.
- 2.3.8 For reference, the BPF will be installed according to the following criteria which were used to determine buffer zone widths:
- 5m minimum from species-poor hedgerows with no associated ditch.
  - 8m minimum from either a species-rich hedgerow, a field boundary containing a tree with 'low' potential for roosting bats, or a field boundary/hedgerow with a ditch of any kind.
  - 10m minimum from an 'outlier' badger sett, any field boundary with a ditch/watercourse with signs of either otters or water vole, or a boundary containing a tree with 'moderate' potential for roosting bats.
  - 12m minimum from any boundary containing a tree with 'high' potential for roosting bats.
  - 20m minimum from a 'subsidiary' or 'annexe' badger sett, moderate-sized watercourses (e.g. becks, dykes and streams), ponds (not positive for GCN eDNA) or woodland.
  - 30m minimum from a 'main' badger sett, ancient woodland or major watercourses (e.g. rivers).
  - 50m minimum from ponds testing positive for GCN eDNA.
  - Other, bespoke buffers will be agreed around bat roosts and the nesting sites of Schedule 1 birds, as appropriate.

## 2.4 Cable Installation

- 2.4.1 The cable installation work involves the open cutting of a trench to receive cable ducts and jointing bays through which cables are pulled into place. In order to facilitate this, a temporary haul route will be implemented alongside the cable

route, together with intermittent site compounds and set-down areas and the opening of temporary accesses from nearby roadways. Where certain physical obstacles are present, or features of high ecological, heritage or landscape importance are present, Horizontal Directional Drilling (HDD) will be utilised to avoid damage. A schedule of crossings has been produced [APP/C7.17] to show which features will be crossed through open cut techniques or HDD. Where open cut trenching is involved, gaps through boundaries/habitats will measure up to 6.5m wide in order to accommodate a haul route and trench.

- 2.4.2 In terms of Biodiversity Protection Fencing, it is necessary to minimise habitat impacts as far as possible, so that only the minimum length of habitat is removed at boundary crossings due to receive open cut trenches. To this end, fencing will be installed comprising two short lengths of Heras-style fencing (each approximately 2-4 panels, depending on the presence/width of boundary habitats as directed by the ECoW) installed at right angles on either side of the boundary feature to stop any encroachment beyond the 6.5m gap width (see Figure 1 below).



**Figure 1. Indicative Layout of Protection Fencing at Habitat Crossings**

- 2.4.3 The location of all BPF will be agreed and confirmed between the ECoW and Site Manager(s) prior to commencement of installation at each crossing to ensure clarity on all fencing specification requirements.
- 2.4.4 All installed BPF will be inspected by an ECoW during and/or on completion of installation to ensure it complies with the correct specification and is installed in the correct locations. It will be the responsibility of the Site Manager(s) to ensure the fence is appropriately maintained throughout the construction phase.
- 2.4.5 During construction, no site personnel or machinery shall cross beyond the BPF nor shall any equipment be stored thereon.

## 3 Method Statement 3: Pollution Prevention Measures

### 3.1 Objectives

- 3.1.1 The majority of the Scheme's valuable ecological features are contained within field boundaries, particularly **hedgerows, ditches and watercourses**. Other habitats are also located within the Sites, including **ponds, woodland, unmanaged grassland and scrub**. Additionally, in Cottam 1 and along the Cable Route, three Local Wildlife Sites (**Willingham to Fillingham Road Verges LWS, Upton Grange Lane Road Verges LWS and Cow Pasture Lane Drains LWS**) are located which either comprise ditches or road verges supporting diverse ranges of flora and fauna. Species groups at particular risk from pollution events are **freshwater fish, terrestrial and aquatic invertebrates, amphibians, otters and water voles**.
- 3.1.2 Potential pollution events include the release of chemicals (including oils, fuels and cleaning agents), sediments (including mud, soil and silt) and dust (especially during dry weather). These pollutants can be released either in their own right or through excessive surface water runoff (e.g. during periods of prolonged rain, flooding or disruption of water courses/pipework).
- 3.1.3 The installation of BPF as set out in Method Statement 2 (MS2) is considered to significantly reduce the likelihood of pollution events occurring through implementing a suitably wide offset between construction activities and sensitive habitats. However, the following additional pollution prevention measures will be adopted to aid further risk reduction.
- 3.1.4 All measures apply to both the PV, BESS and cable installation elements of the Scheme.
- 3.1.5 This Method Statement should be read in conjunction with the Construction Environmental Management Plan (CEMP) [APP/C7.1] produced for the Scheme which details general (i.e. not ecology-specific) pollution protection measures.

### 3.2 Toolbox Talk

- 3.2.1 Prior to the commencement of works at any of the four PV/BESS Sites, or cable route installation, a toolbox talk will be provided by the ECoW to the Site Manager and contractors. The toolbox talk will include details of the EPMS, the sensitivity of ecological features to impacts from pollution, and the requirements for prevention measures contained below. Highly sensitive ecological habitats will be discussed and the need for any proportionate risk reduction measures. The talk will establish the role of the ECoW and site personnel during works, and what to do if protected species/ecological constraints is found during works.
- 3.2.2 In the event a change in Site Management personnel occurs during construction or a pause in works of more than period of more than 30 consecutive days occurs, the toolbox talk will need to be provided again by the appointed ECoW.

The Site Manager will be responsible for relaying information within the toolbox talk to all subsequent site staff during their initial site inductions.

### **3.3 Working During Prolonged Wet Weather**

3.3.1 Work during periods of prolonged wet weather shall be avoided wherever possible to avoid churning of soils and the release of sediments and/or excessive surface water runoff. The ECoW should be consulted should heavy rain on at least three consecutive days be forecast or occur in order to determine whether works should pause or be relocated to less sensitive areas, depending on construction progress and the location/proximity of particular sensitive ecological features.

3.3.2 The CEMP [APP/C7.1] contains several measures which specifically deal with the mitigation of potential water runoff and sediment capture.

### **3.4 Working During Prolonged Dry Weather**

3.4.1 Working during extended dry periods risks dust deposition onto retained sensitive ecological features, including those beyond the Order Limits. As such, the Site Manager(s) should consider the use of sprayed water to dampen earthworks and/or access routes as required in order to control this risk. The ECoW should also be consulted in order to advise on any particular ecological features which should be avoided entirely during such times, for example ponds, Local Wildlife Sites and major watercourses in proximity to the working areas.

### **3.5 Minimisation of Water and Sediment Runoff**

3.5.1 The CEMP [APP/C7.1] contains several measures which specifically deal with the mitigation of potential water runoff and sediment capture.

### **3.6 Use and Storage of Chemicals, Fuels and Oils**

3.6.1 The CEMP [APP/C7.1] contains several measures which specifically deal with the mitigation of potential water runoff and sediment capture. These measures specifically deal with the minimisation of risk of chemical and contaminant release through their safe usage and storage, and use of spill kits etc. As a rule, all refuelling and washing of plant/vehicles, and storage of all potential contaminants should occur at least 20m from all Biodiversity Protection Fencing.

### **3.7 Compliance with Guidance for Pollution Prevention**

3.7.1 The Site Manager(s) will ensure construction complies with the following Guidance for Pollution Prevention (GPP) as prepared by Defra and the Environment Agency:

- GPP 2: Above ground oil storage tanks
- GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer
- GPP 5: Works and maintenance in or near water
- GPP 8: Safe storage and disposal of used Oils

- GPP 13: Vehicle washing and cleaning
- GPP 19: Vehicles: Service and Repair
- GPP 20: Dewatering underground ducts and chambers
- GPP 21: Pollution incidence response planning
- GPP 22: Dealing with Spills; and
- GPP 26: Safe storage – drums and intermediate bulk containers

## 4 Method Statement 4: Construction Phase Lighting

### 4.1 Objectives

- 4.1.1 Artificial lighting has the potential to adversely impact wildlife, including **freshwater fish, aquatic and terrestrial invertebrates, small mammals** and **bats**, and is not restricted to nocturnal species.
- 4.1.2 Lighting may potentially be utilised during construction across the Scheme, although night-time working will not be employed apart from specific activities including delivery of abnormal loads and Horizontal Directional Drilling.

### 4.2 General Mitigation Measures

- 4.2.1 Artificial working-area lighting will be prohibited between sunset and sunrise from the months of March and October inclusive during the construction phase of all elements of the Scheme. This will limit the potential for adverse impacts on the above species groups during the times of the year when they are most active and therefore sensitive.
- 4.2.2 No artificial lighting will be employed during works to cross any watercourses, such as the Rivers Till and Trent and their tributaries. This includes all cable installation works and Horizontal Directional Drilling operations.
- 4.2.3 Between the months of November and February inclusive, where lighting is considered essential, luminaires will be positioned to ensure that light is directed onto the area of works only with as minimal light spillage onto the hedgerows/woodland as possible. The use of LED lighting and cowls, hoods and other similar screens will be adopted. Any working-area lighting requirements will be discussed and reviewed with the ECoW.
- 4.2.4 Any unavoidable artificial lighting during the hours of darkness required within the period March to October inclusive will only be permitted following consultation with the ECoW in order to determine the severity of potential impacts and appropriate mitigation steps, including agreed hours of operation and numbers/specification of luminaires.
- 4.2.5 Security lighting may be installed on temporary site compounds and permanent structures, although this will be limited to the minimum number of luminaires required. Security luminaires will be motion-sensitive and set on a short (<2 minute) timer and oriented to reduce upward light spill as far as possible (i.e. horizontally oriented).



## 5 Method Statement 5: Permanent Habitat Removal (PV and BESS Sites) - including Avoidance of Impacts on Protected Species

### 5.1 Objectives

- 5.1.1 Habitat removal will be necessary in a limited number of locations, for example to permit construction/operational access and the installation of the Cable Route.
- 5.1.2 Many habitats within the Order Limits support protected species, are part of Local Wildlife Sites or are protected/important in their own right. Consequently, their removal - whether temporary or permanent - will require precautionary measures to mitigate the impacts of their loss and/or the potential for unlawful or detrimental impacts on the species they support.
- 5.1.3 Habitats which are of particular value include: **hedgerows, ditches** (dry or wet), **woodland** or **copses**, individual **trees, scrub, grassland, streams, rivers** and **ponds**.

### 5.2 General Precautionary Approach to Habitat Removal Works

- 5.2.1 The Site Manager(s) shall be responsible for liaising with the ECoW in order to agree locations and timings of advance inspections and clearance attendance, including all species-specific measures set out below, as necessary.
- 5.2.2 Habitat clearances, for example (but not limited to) the small sections of hedgerow required for new construction accesses and cable installation within the Cable Route Corridor, will be undertaken during the months of March to October inclusive. This will avoid the principal hibernation season for species groups such as **reptiles** and **amphibians** and so avoid unlawful harm to these species. Should this not be possible, further precautions will be necessary, such as the possibility of taking any hibernating animals discovered during clearance into care over the winter, or translocation to suitable nearby receptor habitat or specially created hibernaculum.
- 5.2.3 Wherever the above habitats listed in bold are to be affected, an ECoW should be present and have undertaken an inspection in advance to ensure legal compliance and avoid undue harm to species potentially present.
- 5.2.4 Habitat clearances will be conducted under an ECoW-led ecological watching brief in order to ensure species such as nesting **birds, reptiles, amphibians** and **small mammals** are not harmed. Depending upon the nature and density of the vegetation, this inspection may include a combination of a fingertip inspection of vegetation and early morning 'watching' of habitat for evidence of bird nesting behaviour. Further species-specific information is given in the sections below. The vegetation may also need to be cleared a small amount at a time to allow the ECoW to search the area thoroughly.
- 5.2.5 Habitat removal at wet ditches should observe good practice guidance on the use of temporary dams and sediment traps. The input of a hydrological engineer is

advisable in order to minimise drainage disruption and localised flooding. All permanently breached ditches should remain interconnected via the use of culverts or clear-span crossings.

### 5.3 Tree and Building Inspections for Roosting Bats and Nesting Birds

5.3.1 No works involving the removal of mature or semi-mature trees, or directly affecting any buildings, are anticipated. However, in the event that construction works require trees or buildings to be impacted, altered or removed, these should be thoroughly inspected by a suitably qualified (and licensed, in the case of bats) ecologist in advance.

5.3.2 Depending on the nature of proposals and the potential for roosting bats, further surveys may be recommended. In the event that a bat roost is discovered, a licence from Natural England may be required in order to proceed lawfully and ensure compensation for roost losses is carried out.

5.3.3 In the event that active bird nests are recorded, works may need to temporarily cease or be delayed until nesting is completed. Losses of nesting opportunities should be compensated as advised by the ECoW.

### 5.4 Nesting Bird Checks

5.4.1 Where clearance of **hedgerow, ditch, scrub, trees, woodland** and **tussocky** grassland is unavoidable between the months of March and August inclusive, a nesting bird check will be required. This will consist of visual inspection of the habitat to be affected by an ecologist to look for signs of nesting behaviour or nests themselves. Such inspections will likely need to be carried out in the early morning prior to construction activities commencing on site for the day.

5.4.2 Where any active bird nests are found, a buffer zone of at least 10m (actual distance dependent upon species and nest location, as advised) will be created around the nest, the buffer maintained and not disturbed until the nest is no longer in use. Depending upon the location protective fencing may be appropriate. The ecologist will be able to advise on the anticipated date of fledging based upon the status of the nest. Regular inspections of the nest site by an ECoW around the anticipated date of fledging will be necessary to ensure works can continue once the birds have fledged.

5.4.3 This advice applies to species nesting in woody vegetation which includes the majority of British birds. However, specific advice on precautions for ground nesting birds which may be present within arable or pasture habitats where the majority of the PV arrays, BESS and Cable Corridor are situated is contained in Method Statement 9, and precautions for large flocks over overwintering birds in Method Statement 10.

### 5.5 Badgers

5.5.1 See Method Statement 8 for specific measures relating to Badgers.

## 5.6 Otters and Water Voles

- 5.6.1 Particular attention will be paid to any habitat removal works affecting or within 30m of a watercourse for the potential presence of otters and water voles.
- 5.6.2 All applicable habitat removal works will be preceded by an inspection of habitat at least 50m upstream and 50m downstream of the clearance extent to look for signs of these species and their sheltering sites. The inspection will be carried out one month in advance of works commencing by a suitably qualified ecologist.
- 5.6.3 In the event that burrows, holts or likely sheltering sites are found, the ECoW will discuss this with the Site Manager(s) and efforts to alter the location of the clearance to avoid direct impacts will be made in the first instance.
- 5.6.4 Should impacts upon holts, burrows or sheltering sites be unavoidable, it will be necessary to delay commencement until a licence from Natural England is obtained. Licences will be contingent on seasonal timing restrictions, sensitive working methods and habitat compensation.
- 5.6.5 Culverted or overbridged ditches and watercourses should be designed to permit the continued passage of water voles and otters. The advice of the ECoW should be sought in this instance.

## 5.7 Non native Invasive Species

- 5.7.1 No non-native invasive species have been recorded within the Order Limits to date during baseline ecological surveys. However, it is possible that plant species such as Japanese knotweed and Himalayan balsam may occur locally, especially within **ditches** and **watercourses**.
- 5.7.2 The ECoW will actively look for non-native invasive species during all supervision and survey work and report their presence to the Site Manager(s) as appropriate.
- 5.7.3 The potential presence of non-native invasive species will form part of the Ecological Toolbox Talk and will help site staff to identify some of these species so that early reporting and any remediation can take place.
- 5.7.4 As it is an offence to release into the wild or cause to grow any non-native invasive species, works will be altered to avoid them in the first instance, if discovered. If this is not possible, remediation and eradication work carried out by a specialist company/consultant would be required as all parts of such plants are considered contaminated waste under the Environmental Protection Act 1990. Until this occurs, the area will be clearly marked out and delineated with protective fencing, so as to not contribute to its spread locally.
- 5.7.5 Contractors will be briefed on the presence and identification of non-native species, including Himalayan Balsam/Japanese Knotweed, during the toolbox talk (see Method Statement 1).
- 5.7.6 The Environment Agency has produced a Code of Practice for the Management, Destruction and Disposal of Japanese Knotweed (May 2001), which gives guidance to developers.

## 5.8 Reptiles and Amphibians

- 5.8.1 Habitat clearance areas will also be thoroughly inspected by hand before and during works for widespread reptile and amphibians species such as toads and slow worms in order to remove any animals as the clearance works progress. Any amphibians, reptiles or other animals will be hand released in suitable nearby retained habitat as determined by the ECoW.
- 5.8.2 The locations to be used for the creation of reptile hibernacula (See the LEMP [APP/C7.3]) will be chosen for their proximity to and connectivity with nearby habitat suitable for reptiles, including tussocky grassland (including that which is proposed within the maintenance scheme – see the LEMP), scrub and hedgerows.
- 5.8.3 In order to avoid inadvertent mortality of reptiles during this process, the creation works will not take place within the winter months (November to February inclusive) or during temperatures below 8C and all areas of the habitat mentioned above will be hand searched and removed with hand tools only once reasonable likelihood or absence of reptiles has been established. All such habitat creation work should be carried out by individuals with experience of identifying reptiles and their habitat.

## 5.9 Small Mammals -Including Polecat, Hedgehog, Brown Hare and Harvest Mouse

- 5.9.1 As it is an offence to cause harm to wild mammals, the ECoW will carry out a fingertip search of all habitat to be removed before and during the clearance operation as appropriate. Any burrows discovered will either be avoided if at all possible through alteration of the location of works, or if unavoidable, be destructively searched by hand and in a methodical manner in order to ensure no animals are trapped underground or harmed. Any animals discovered during works will be relocated by hand, where collection is possible, to a suitable undisturbed location to be determined by the ECoW. Any injured animals should be taken to the nearest wildlife rescue service as given at the front of this document.

## 6 Method Statement 6: Temporary Habitat Removal and Reinstatement (Cable Route Corridor) - including Avoidance of Impacts on Protected Species

### 6.1 Objectives

- 6.1.1 The installation of export cables within the Cable Route Corridor will involve the temporary removal and reinstatement of habitats such as **grassland**, **hedgerows** and **ditches**. These habitats are of value in themselves, but also have the potential to support protected species such as **nesting birds**, **reptiles**, **amphibians** and **water voles**.
- 6.1.2 All precautions contained within Method Statement 5 should be followed in carrying out habitat removal works in relation to the Cable Route Corridor. Further steps set out below will be followed to ensure adequate habitat reinstatement. It is anticipated that the working width during cable route construction will measure approximately 30m in width, comprising a haul route and the cable trench itself, with additional soil storage, intermittent jointing bays and set down areas/compounds. Habitat removal is anticipated to occur in all these locations, however temporary trackway matting or other temporary removable surfaces would aid the minimisation of habitat losses.
- 6.1.3 All habitat reinstatement works will be designed with input and site-specific knowledge from the ECoW and monitored for success by them thereafter.

### 6.2 Grassland

- 6.2.1 Grassland occupies a large proportion of the Cable Route Corridor. Wherever possible, turf should be stripped and set aside during initial trench cutting for eventual replacement, where cable installation works are anticipated to be of a short enough duration for the turf to be successfully replaced.
- 6.2.2 Where this is not a viable option, backfilled trenches and disturbed ground will be prepared (topsoil application, rolled and harrowed as necessary) and grassland will be re-seeded over it. An appropriate seed mix will be used which will be in keeping with, or of greater diversity than, the habitat type and species assemblage as recorded during baseline habitat surveys.
- 6.2.3 All such habitat creation work should be carried out by suitably qualified or experienced landscaping contractors or ecologists.

### 6.3 Hedgerows

- 6.3.1 Hedgerow sections to be cleared should be translocated wherever possible. This will involve the removal of hedgerow plants to include their rootballs, to be set aside until they can be replanted in the original location. Translocation is likely only to be successful when undertaken during the autumn and winter months when plants are most dormant, and when duration of trenching at a particular location is short enough to allow plants to survive being removed for this period.

6.3.2 Where translocation is not possible, hedgerows will be replanted using whips of the same species as was removed, with the addition of a proportion of other locally appropriate species to increase diversity. Planting should be undertaken in the first planting season (autumn or winter) following removal to ensure a high degree of success and be planted with tree guards to protect against herbivore browsing.

6.3.3 All such habitat creation work should be carried out by suitably qualified or experienced landscaping contractors or ecologists.

## 6.4 Ditches

6.4.1 Minor agricultural field drains and ditches will be subject to open cut trenching unless otherwise identified as being of particular ecological importance as to require Horizontal Directional Drilling techniques. The majority of these ditches are only seasonally wet and are of relatively lower ecological value. Wherever possible, and where the duration of works at a particular location allows, any aquatic or marginal plants should be collected for later replanting to minimise the recovery of the habitat after completion of works.

6.4.2 All ditch impacting works should follow good practice guidance on the use of sediment/silt traps and temporary dams to minimise the risk of drainage disruption, sediment release and local flooding.

6.4.3 All such habitat creation work should be carried out by suitably qualified or experienced landscaping contractors or ecologists.

## 6.5 Arable

6.5.1 Arable fields occupy the vast majority of land within the cable route corridor and are of little ecological value, therefore no specific reinstatement protocol is required.

## 7 Method Statement 7: Precautionary Horizontal Directional Drilling (HDD) Methodology

### 7.1 Objectives

7.1.1 The use of HDD techniques during cable installation will avoid direct habitat damage and degradation. However, there still remains the risk of damage through improper siting of entry/exit pits and the potential for excessive vibration to cause disturbance to species such as **freshwater fish** or release of sediments which could harm **watercourses** and **aquatic invertebrates** among other species.

### 7.2 Precautionary Approach to HDD Works

7.2.1 The Site Manager will be responsible for liaising with the ECoW to agree timings and locations of HDD operations to ensure attendance at each event.

7.2.2 The ECoW will advise on the most appropriate locations for entry and exit pits as well as associated access and set down areas in order to avoid impacts on retained habitats of ecological value such as arable field margins, hedgerows and diverse grassland. The ECoW may undertake hand searches of habitat to be removed as necessary.

7.2.3 Where HDD is used under the Rivers Till and Trent and their tributaries, the ECoW will discuss the risk of causing excessive vibration and the release of sediments with the operatives and engineers overseeing HDD works to ensure an adequate depth is used. In these locations, the ECoW will monitor the water column for sediment release during all stages of HDD work. Drilling may need to temporarily cease until depths and working methods can be adequately readjusted. Advice from the Environment Agency or a specialist hydrological engineer may be required in order to help contain sediments during works, including the use of silt traps.

7.2.4 Entry and exit pits should be covered overnight to avoid trapping species such as badgers and other small mammals (see Method Statement 8).

## 8 Method Statement 8: Specific Measures for Avoidance of Impacts on Badgers

### 8.1 Objectives

8.1.1 Multiple **badger** setts have been identified within and adjacent to the Order Limits. Badgers are also likely to use the land within the Order Limits for foraging and dispersal in various locations. Badgers are legally protected from disturbance and harm, as well as interference with their setts. Measures given here will ensure that development works proceed lawfully.

### 8.2 Pre-commencement Survey

8.2.1 As badgers can excavate new setts in a relatively short time, an update survey for badger setts of land within the Order Limits will be necessary. This will specifically focus on all habitats potentially suitable for sett excavation by badgers on within the Order Limits, in particular **hedgerows, field margins, scrub, tussocky grassland** and **woodland** or **groups of trees**. The survey will pay close attention to locations of these habitats which are the subject of habitat loss or land use change under the works plans. The locations of new hedgerow gaps for construction access or cable trenching will be particularly key, but also locations where landscaping, access tracks, fencing, and other infrastructure will be installed within a 30m radius of suitable habitats.

8.2.2 The survey will be carried out by an appropriately experienced ecologist (ECoW) who is an associate or full member of CIEEM with prior experience of surveying for badgers.

8.2.3 The survey will be carried out no more than 1 month prior to the commencement of construction activities within a particular Site (e.g. Cottam 3a) or section of Cable Route Corridor. The Site Manager(s) will liaise with the ECoW to ensure that this survey is completed in good time ahead of works in a particular location.

8.2.4 The survey will look for evidence of badger activity within the site, including setts, paths, hairs, footprints or faeces and record the location of and type of all setts at the site, as well as their activity status. Where necessary, should any new setts be identified the BPF as detailed in Method Statement 2 will be adapted to incorporate a revised buffer zone around the identified entrances. Typically, 'outlying' setts require a minimum 10m buffer, while 'subsidiary' and 'annexe' setts require a minimum 20m buffer and 'main' setts require a minimum 30m buffer.

8.2.5 The results of the survey will be communicated to the Site Manager(s) with any necessary recommendations for revised buffers or precautionary working methods and supervision.

### 8.3 Toolbox Talk

8.3.1 Prior to the commencement of works at any of the four PV/BESS Sites, or cable route installation, a toolbox talk will be provided by the ECoW to the Site Manager and



contractors. The toolbox talk will include details on the potential for encountering badger setts and other mammal burrows during works to suitable habitats, along with information on their legal obligations and what to do if a sett or burrow is discovered. The talk will establish the role of the ECoW and site personnel during works.

- 8.3.2 In the event a change in Site Management personnel occurs during construction or a pause in works of more than period of more than 30 consecutive days occurs, the toolbox talk will need to be provided again by the appointed ECoW. The Site Manager will be responsible for relaying information within the toolbox talk to all subsequent site staff during their initial site inductions.

#### **8.4 Licensed Sett Closure**

- 8.4.1 Any newly-discovered sett should ideally be avoided by construction works if at all possible, under the advice of the ECoW.
- 8.4.2 In the event that an active sett is to be unavoidably impacted by construction activities, a licence from Natural England would likely be necessary to temporarily or permanently close the sett. Works to badger setts can only be undertaken between July and November inclusive due to the possibility of dependent young being underground at other times of year. Outside of this licence period no works affecting the sett would be permitted and a buffer zone free of potentially disturbing activities (i.e. noise, damage or vibration), as informed by the ECoW, would be required. Work in other parts of the site, however, can continue as advised by the ECoW. It can take up to six weeks for a licence application to be determined by Natural England, depending on the licence type applied for.

#### **8.5 Precautionary Approach to Excavations Left Overnight**

- 8.5.1 It is likely that badgers (and other mammals) will move around within the Order Limits during the construction phase considering the arable habitats present. Therefore, any pits or trenches dug during the construction phase (particularly during the cable installation works and use of HDD entry/exit pits) must have a means of escape placed in them overnight for trapped badgers to use, or be covered overnight if possible. Examples include rough sawn planks or earth ramps. Similarly, all open ducting and pipework left within any pits or trenches must be temporarily capped off overnight. The use of these measures will be periodically checked by the ECoW and will be the responsibility of the Site Manager(s) to implement otherwise unlawful harm to badgers and wild mammals may result.

## 9 Method Statement 9: Avoidance of Impacts on Ground Nesting Birds of Open Habitats

9.1.1 **Skylark, yellow wagtail, grey partridge, quail and lapwing** are all species of ground nesting birds that have been recorded within the Order Limits and which occupy open habitats such as **arable** and **pasture grassland**. As development operations will occupy large areas of these habitats, precautions will be necessary to avoid unlawful impacts on the birds and their nests.

### 9.2 Nesting Bird Checks

9.2.1 Between the months of March and August inclusive, when undertaking development works within arable or pasture fields, nesting bird checks should be carried out to ensure no nests are at risk of harm. As the species concerned are dependent on long, unbroken sightlines of between 75m and 200m for predator avoidance, they are unlikely to be present within close proximity to existing development activities. Therefore, nesting bird checks are most important when development activities progress into previously undeveloped fields during the nesting season. In order to minimise disruption to development activities, close communication on the development programme between the Site Manager(s) and the ECoW is essential. Habitat degradation and dissuasion techniques may be employed in advance of the nesting season (and maintained up until the onset of development activities) in order to reduce the requirement for nesting bird checks.

9.2.2 In the event a nest is discovered, its location shall be mapped and shared with the Site Manager(s) and the location will be avoided, and a buffer radius of at least 50m observed, to be advised by the ECoW (depending on species). The nest location will be revisited around the time of predicted fledging (derived from the status of the nest upon discovery) to confirm fledging and inactivity, enabling development activities to resume.

## **10 Method Statement 10: Avoidance of Impacts on Overwintering Birds**

### **10.1 Objectives**

10.1.1 Flocks of overwintering birds such as fieldfare, redwing, pink-footed geese, golden plover and other wildfowl have been recorded within the Order Limits during the winter months. Due to the numbers of birds within such flocks, unnecessary disturbance to them and displacement can be energetically costly and have an adverse impact on the local population. Precautions are given below to minimise this risk.

### **10.2 Precautionary Approach to Works**

10.2.1 During the winter months of November to February inclusive, any significant commencement or re-commencement of development works within fields will be immediately preceded (in the morning) by an inspection for the presence of flocks of overwintering birds. The aim will be to ensure that flocks of overwintering birds are not subject to displacement and disturbance stresses at this vulnerable time of year. As these flocks move about within the landscape on a daily basis, it should be possible to postpone mobilisation into undeveloped fields which are occupied by them by approximately one day to avoid impacts.

10.2.2 The inspections should be carried out by a suitability qualified ecologist. The Site Manager(s) will be responsible for liaising with the ECoW in advance of mobilisation into previously undeveloped fields during the winter months.

## **11 Method Statement 11: Construction-Phase Monitoring**

### **11.1 Objectives**

11.1.1 To ensure satisfactory achievement of all Method Statements and compliance with all relevant DCO Requirements, ecological legislation and policy, periodic monitoring of construction activities and protective measures will be undertaken.

### **11.2 Monitoring**

11.2.1 Regular inspections of the Site(s) and immediate surroundings will be undertaken by a member of construction contractor staff to monitor the integrity of the BPF fencing as well as for any signs of silt deposition, dust deposition, flooding, runoff and litter arising from the Site which could impact off-site habitats. This inspection will be recorded within a logbook to be made available to the LPA upon request. Remedial action which may be required as soon as an issue is identified may include temporarily ceasing work, arranging litter picking, additional site hoarding, increased water spraying, and increased waste collection.

11.2.2 Every month during the construction phase, the ECoW will inspect the Site to ensure the compliance with the EPMS. This will include checking the following:

- Correct installation of BPF;
- Safeguarding of retained habitats;
- Hedgerow and watercourse condition;
- Adherence to lighting restrictions; and
- Status of badger activity within the Site.

11.2.3 Following inspections the ECoW will discuss monitoring outcomes with the Site Manager(s) and provide a written proforma of findings identifying any remedial actions and timescales for actions to be implemented.

11.2.4 The ECoW will also be available on an “on call” basis during the construction period.

### **11.3 Reporting**

11.3.1 A quarterly report will be issued by the ECoW to the Local Planning Authority. The report will include a detailed log of monitoring activities by the Site Environmental Manager and ECoW. It will detail any breaches of the EPMS and the remedial steps taken.