
Priory Farm Solar Array

on behalf of Axis PED

Landscape and Ecology Management Plan



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1 INTRODUCTION

1.1 Background and Report Purpose

1.1.1 This Landscape and Ecology Management Plan (LEMP) sets out habitat protection and enhancement measures for the consented Priory Farm Solar Array (planning reference: APP/X1925/V/23/3323321) at Great Wymondley, Hertfordshire ('the Site').

1.1.2 This report has been produced to discharge **Condition 9: Production of a Landscape and Ecological Management Plan**, which states:

"No development shall take place until a landscape and ecological management plan (LEMP) has been submitted to, and approved in writing by, the local planning authority. The development shall be carried out in accordance with the approved LEMP."

To Include:

- i) Description and evaluation of features to be managed.*
- ii) Ecological trends and constraints on the site that might influence management.*
- iii) The aims and objectives of management.*
- iv) Appropriate management options for achieving aims and objectives.*
- v) Prescriptions for management action.*
- vi) A work schedule, including an annual work plan capable of being rolled forward over five-year periods to a minimum period of 30 years from the date of first export of electricity to the grid.*
- vii) Details of the organisation responsible for implementation of the plan.*
- viii) Ongoing monitoring and remedial measures.*
- ix) Details of species selected to achieve target habitat conditions as identified in the biodiversity metric 4.0 and stated and marked on plans.*
- x) Measures to safeguard wildlife, in accordance with paragraphs 4.7.1-4.7.46 of the Ecological Assessment Report ref AxisL-043—1480.*
- xi) Details of the legal and funding mechanisms by which the long-term implementation of the plan will be secured.*
- xii) The means by which contingencies and/or remedial action will be identified, agreed and implemented in order that the development delivers the biodiversity objectives of the approved scheme.*

1.1.3 This document also details ecological management practices to be adopted with the aim of developing and maintaining wildlife habitats to provide a net gain for local biodiversity. It is considered the implementation of this LEMP will allow the Site to achieve the objectives stated within the biodiversity net gain assessment.

1.1.4 The Site is located east of Great Wymondley, Hertfordshire at approximate site central grid reference TL 22483 28448. The Site is split into a north parcel and a southern parcel, bisected by Graveley Lane. Current land use of both parcels is cultivated arable land with fields often bounded by a mixture of defunct and intact, species rich and species poor hedgerows. The southern parcel is bounded by the A1(M) motorway to the east. The northern parcel also has two blocks of mixed woodland adjacent the Site.

1.1.5 Habitat enhancement measures and ongoing management practices are proposed in line with guidance produced by BRE guidance Biodiversity Guidance for Solar Developments (BRE,

2014) that will enhance and safeguard key habitats for the benefit of wildlife, and enhance the ecological value of land currently under agricultural use.

- 1.1.6 BRE guidance Biodiversity Guidance for Solar Developments (BRE, 2014)¹ states that; *'with appropriate land management, solar farms have the potential to support wildlife and contribute to national biodiversity targets. Indeed, solar farms may have several additional advantages in that they are secure sites with little disturbance from humans and machinery once construction is complete. Recent research suggests biodiversity gains on solar farms can be significant'*.
- 1.1.7 The site-specific approach provided within this report provides recommendations for long-term management of the land to conserve and improve landscape habitat connectivity with the wider landscape for wildlife through protecting and enhancing potentially important wildlife corridors and habitats. This will contribute to the establishment of coherent ecological networks, supporting the biodiversity net-gain targets of the National Planning Policy Framework (2023).
- 1.1.8 This LEMP applies only to the main solar site, with temporary works such as cable routing excluded from the scope of this document.
- 1.1.9 Details within this LEMP relating to mammal gates and bird / bat box positions will take precedence over any previously submitted materials to the planning authority (such as the scheme's Landscape Plan).
- 1.1.10 This LEMP is a working document and should be subject to regular review and updates throughout the lifetime of the development, subject to various factors including monitoring results and the condition of habitats on Site.
- 1.1.11 The LEMP has been produced in accordance with the BS 42020:2013 Biodiversity – Code of practice for planning and development.

1.2 LEMP Aims and Objectives

Management Aims

- To maintain and enhance potential foraging areas in open habitats for badgers, bats, reptiles, birds and invertebrates;
- To maintain and increase potential bat and bird roost/ nest sites;
- To maintain and increase potential sheltering sites for reptiles and amphibians; and
- To achieve the relevant habitat type and condition as outlined in the Biodiversity Net Gain Metric Calculator within the stated timeframes.

Management Objectives

- To maintain existing hedgerows;

¹ BRE (2014). Biodiversity Guidance for Solar Developments. Eds G E Parker and L Greene.

- To infill/plant up gaps in existing hedgerows;
- To establish and maintain wide species-rich grassland buffers between core hedgerows and solar panels;
- To ensure ecological corridors are maintained to increase foraging and commuting potential;
- To maximise the biodiversity value of proposed and existing habitats for potential reptiles and mammals;
- To ensure that both existing and newly created habitats are managed appropriately to provide long-term biodiversity benefits for wildlife;
- To monitor the success of the management plan by undertaking monitoring of habitats and species; and
- To implement remedial measures if Management Objectives are not being met.

1.3 LEMP Management Responsibilities

- 1.3.1 AGR Solar 4 Limited will be responsible for the financial and practical delivery of the measures detailed within this LEMP.
- 1.3.2 The management and maintenance of the habitats within the Site, as set out in the LEMP will be the responsibility of the AGR Solar 4 Limited, working in conjunction with the landowner ("Owner") and/or appointed management organisation, at the instruction of AGR Solar 4 Limited.
- 1.3.3 All works associated with the implementation of the LEMP will be undertaken by experienced contractors and / or under the watch of a suitably qualified (and where required, licenced) ecologist.
- 1.3.4 AGR Solar 4 Limited shall be responsible for the cost of implementing the LEMP including the cost of carrying out any management, monitoring, or other such activities, as detailed within this document.
- 1.3.5 In the event of a change of ownership, responsibilities held by AGR Solar 4 will transfer to the new owners.
- 1.3.6 This LEMP is valid for a minimum of a 30-year period from the date of the first export of electricity to the grid. A Site management schedule is shown in section 7.0, from initial grassland creation to ongoing annual management activities such as partial hedgerow cuts.
- 1.3.7 AGR Solar 4 Limited and appointed contractors are expected to identify hazards associated with maintenance operations proposed and undertake a full Risk Assessment which will be recorded and retained for reference.
- 1.3.8 All works should be undertaken in accordance with the latest guidance on safe working practices, including information from the recognised industry bodies, the local authority and the government Health and Safety Executive.

1.4 Ecological Trends and Constraints

- 1.4.1 As the main solar Site will be fenced off from the public, minimal damaging activities are expected to occur and management activities across much of the Site are likely to be restricted by the perimeter fencing and solar panel placements. Public access through the 12m wide species rich grassland buffers zones in the north of the Site would be provided through permissive footpath links. These would be waymarked to ensure the public remain to the permissive route.
- 1.4.2 Climate change resulting in warmer and drier summers or more extreme weather events could in future potentially affect habitats on and adjacent to the Site (e.g. influencing water supplies and requiring additional watering of landscape planting).
- 1.4.3 The Site is located in semi-rural area, and there is the potential for Invasive non-native species spread to the Site from adjacent or nearby land. Reflecting this risk, remedial measures are identified within the LEMP.

2 ECOLOGICAL BASELINE AND BIODIVERSITY NET GAIN

2.1 Baseline

- 2.1.1 This LEMP should be read in conjunction with the Drawing Numbers 3004-01-020 to 3004-01-023 DoC12 Soft Landscape Proposals and Drawing No. 3004-01-026 DoC12 Landscape Details. Detailed descriptions of habitats and species can be found in the *Ecological Assessment Report* (Avian Ecology Limited, 2021²), hereafter referred to as the Scheme EAR.
- 2.1.2 The Site is not located within any statutory designated site, however four local nature reserves (LNR) and three sites of special scientific interest (SSSI) are located within 5km of the Site, the nearest of which is Purwell Meadows LNR, located 1.4km north west of the Site. The cable route crosses Wymondley Transforming Station Local Wildlife Site (LWS), while a further 16 LWS are located within 2km of the Site.
- 2.1.3 The Site currently consists of a series of arable fields with three small areas of other neutral grassland in good condition likely created as part of a countryside stewardship scheme and a small area of less species diverse other neutral grassland in moderate condition.
- 2.1.4 Hedgerows were present as field boundaries throughout the Site, the majority of which were species poor, although some species rich hedgerows were present. Hedgerows were generally intact and well maintained.
- 2.1.5 The arable land forming the majority of the Site is considered to be of low ecological value. The boundary hedgerows and line of trees are of higher value and are likely to provide shelter, foraging and commuting habitat for a range of species typical of the local area.
- 2.1.6 Further details on the ecological baseline, including the presence of protected or notable habitats and species can be found within the Scheme EAR.

² Avian Ecology Ltd (2021) *Priory Farm Solar Array: Ecological Assessment Report V1.3*.

2.2 Biodiversity Net Gain Results

- 2.2.1 In order to assess the biodiversity impacts associated with the proposed development the Natural England Biodiversity Net Gain Metric Calculator 4.0 was utilised. Based on the information provided within the landscape proposals, the calculation results show that the proposed development will result in a clear biodiversity net gain of 201.65% in Habitat Units, and 102.29% in Hedgerow Units, as shown in the headline results below, extracted from the full Metric spreadsheet. The provision of bird and bat boxes and log piles also provide a biodiversity benefit which is not included in the Net Gain Calculation process.

Biodiversity Net Gain Metric Calculator 4.0 Headline Results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	386.20
	Hedgerow units	26.14
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	201.65%
	Hedgerow units	102.29%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

3 ECOLOGICAL MITIGATION MEASURES

3.1 Designated Sites and Habitats

- 3.1.1 The layout of the proposed development has been designed to maintain a 12m stand-off buffer from the boundary habitats of Site, with adjacent habitats to be protected by perimeter security fencing which will be erected before construction starts to prevent the encroachment of construction works beyond the Site boundary.
- 3.1.2 Standard measures to ensure runoff control and pollution prevention will be implemented; these measures will safeguard retained habitats within and surrounding the Site.
- 3.1.3 Hedgerows will be retained on Site and along with mature trees and woodland around the construction area, will be protected in-line with BS 5837:2012 *Trees in relation to design, demolition and construction*.
- 3.1.4 There will be clear delineation of working areas and access routes for vehicles entering the Site and instructions on these will be given to all site construction staff, delivery drivers and subcontractors.
- 3.1.5 During the operation of the solar farm over time, dirt and dust can accumulate on the glass surface of the module, reducing its power output. Periodic cleaning of PV modules where required will be a very low disturbance activity undertaken with a soft brush and using clean water. No chemicals should be used.

3.2 Birds

- 3.2.1 The planting of new woodland and hedgerows will increase opportunities for foraging birds and increase nesting opportunities for generalist bird species across the Site. The loss of arable land to make way for the solar farm may displace ground nesting species such as skylark, but this has been mitigated for offsite. Full details can be found in the *Skylark Mitigation Strategy* (Avian Ecology Limited, 2024³).
- 3.2.2 Site clearance works should be undertaken outside of the breeding bird season in so far as reasonably practical. The breeding bird season is generally considered to be 01st March to 31st August inclusive. Where this cannot be avoided, a suitably experienced ecologist will be appointed to undertake a pre-site clearance survey to identify the presence of any wild bird nests being built or in use (including those of ground nesting birds such as skylark and lapwing). Only once the appointed ecologist is satisfied that an offence under Part 1 of the Wildlife and Countryside Act 1981 (as amended) will not occur, may works proceed.
- 3.2.3 If a nesting species is identified, a suitable work exclusion zone will be established around the nest site and a Breeding Bird Protection Plan will be required, in line with best practice guidance and in consultation with the advising ecologist.
- 3.2.4 During operation, disturbance will be minimal and limited to intermittent maintenance activities. However, it is recommended that the cleaning of panels is undertaken outside of the breeding bird season in so far as reasonably practical to minimise disturbance to nesting birds.

3.3 Badger

- 3.3.1 No evidence of badger presence has been observed within the Site. Once constructed, the proposed development (with panels raised off the ground) will not sever potential commuting routes used by badgers, with linear features such as hedgerows to be retained and protected as part of the proposed development.
- 3.3.2 Fencing will be raised, or mammal gates installed at suitable intervals along the perimeter fence to allow the continued movement of badgers and other small mammals throughout the Site and across the wider environment. These should be spaced along the perimeter fencing and sited close to existing linear corridors such as hedgerows or on pathways regularly used by badger. Examples of mammal gates suitable for use by badger, along with proposed locations for mammal gates are presented in **Annex 3**. The exact locations of mammal gates should be guided by the ecologist onsite.
- 3.3.3 A pre-construction badger survey will be undertaken immediately prior to works commencing to check for active or any newly constructed setts (between the initial baseline survey and the construction start date) within at least 30m of construction areas.
- 3.3.4 If baseline conditions have altered and significant disturbance to badgers or their setts is considered likely during the proposed works, one or both of the following options will be incorporated:

³ Avian Ecology Ltd (2024) *Priory Farm Solar Array: Skylark Mitigation Strategy*.

- The development design will be amended to avoid works which may impact upon badgers and their setts (e.g. alteration of the configuration of panels and/or fencing); and/or,
- A development licence will be obtained from Natural England before construction commences.

3.3.5 Any excavations of trenches created during construction will be backfilled or covered overnight to prevent animal entrapment.

3.4 Bats

3.4.1 Protection of all mature trees, hedgerows and woodland on and adjacent to the Site or along access routes will safeguard potential roost sites and maintain foraging and commuting opportunities. The planting of new woodland, hedgerow and grassland will serve to strengthen and enhance these opportunities for bats across the Site.

3.4.2 If any trees are required to be impacted suitable checks for roosting bats will be undertaken in advance of any removal. If bats are confirmed to be roosting within any tree to be impacted by proposed works, the data gathered would be used to inform potential design amendments avoid or reduce impacts or, failing that support a licence application to Natural England to destroy/disturb the bat roost.

3.4.3 Works will be undertaken during daylight hours as far as possible in order to protect foraging / commuting bats. Any lighting required during construction and/or operation of the solar array facility will be used in a sensitive manner and directed away from field boundary habitats and habitats bordering the Site. This will be achieved in a number of ways, including the use of low-level lighting and use of hoods and careful selection of lighting (further information is provided in BCT guidance *Bats and Artificial Lighting at Night*⁴).

3.4.4 During operation, the solar farm will not be routinely lit. Any lighting associated with the infrastructure will be very localised and will only be used on occasion, for example if an engineer needs to carry out emergency visits to the Site at times when natural light levels are low. As the Site will not be routinely lit, trees with roost potential and foraging and commuting 'dark' corridors along hedgerows and trees lines will not be subject to any new illumination.

3.5 Amphibians and Reptiles

3.5.1 As a precautionary measure, Reasonable Avoidance Measures (RAMs) would be implemented during the construction phase to safeguard individual animals such as amphibians and reptiles during works if minor removal of suitable habitat is required, namely removal of hedgerows or clearance of grassland margins. Outline RAMs are provided at **Annex 1**.

3.5.2 Standard measures to ensure run off control and pollution prevention will be implemented to protect offsite aquatic and associated terrestrial habitats.

3.5.3 Total land take for solar farm developments is typically low (less than 5% footprint on the ground) and construction works are low impact; requiring limited disturbance for a temporary period of time. Overall, the proposed habitat retention and enhancements such as grassland and hedgerow creation will provide a net benefit for amphibians/ reptiles, by providing

⁴ Bat Conservation Trust. (2023). *and Artificial Lighting at Night: ILP Guidance Note GN08/23*.

extensive areas of undisturbed and enhanced terrestrial habitat for foraging, refuge, hibernation and dispersal.

3.6 Other Species

- 3.6.1 Security fencing located around the Site perimeter will have mammal gates positioned at several locations along the base of fences in order to allow other mammal species potentially present on Site such as brown hare and Western hedgehog to continue to use the habitats on Site during the operational period, thereby maintaining dispersal routes and opportunities to access relatively undisturbed habitat within the secured Site and connectivity in the wider landscape. For any area of habitat removal required, the outline RAMS provided in **Annex 1** will also serve to protect other species that may be present in the locality.
- 3.6.2 Otters and water voles are considered unlikely to be present on Site due to the low value of ditch habitats for either species. As a precautionary measure, if works are required to install or extend culverts to accommodate access tracks or fencing, a pre-construction survey for otter and water vole would be completed by a suitably experienced ecologist prior to the commencement of works to check for new signs of activity and/or newly created holts in the vicinity. Additionally, should any works be required which would affect ditches, these should be undertaken under RAMs.
- 3.6.3 The retention of hedgerows on Site will likely continue to provide habitat for a variety of invertebrate species associated with the field boundary features. The development of grassland beneath and surrounding the proposed solar development along with new native species planting and the cessation of agricultural chemical spraying will enhance the Site's potential to support a diverse invertebrate assemblage.

4 ECOLOGICAL ENHANCEMENT MEASURES

4.1 Habitat Creation

- 4.1.1 Management practices are proposed that will enhance the Site for the benefit of local wildlife. The design and long-term management of the land seeks to maintain and improve functionality through protecting and enhancing potentially important wildlife corridors i.e. through creation, enhancement and maintenance of native species hedgerows within and around the Site. Drawing Numbers 3004-01-020 to 3004-01-023 DoC12 Soft Landscape Proposals and Drawing No. 3004-01-026 DoC12 Landscape Details set out the landscape planting specifications.
- 4.1.2 All planting stock supplied shall be healthy and viable and comply with BS 3936: Parts 1 to 10 as relevant, and BS 4043, the National Plant Specification, published by the Horticultural Trades Association (HTA) as appropriate. Supplying nurseries will be registered under the HTA Nursery Certification Scheme. All plants will be packed and transported in accordance with the Code and Practice for Plant Handling as produced by Committee for Plant Supply and Establishment (CPSE).
- 4.1.3 All seeding shall be carried out in accordance with BS 4428:1989 Code of Practice for general landscape operations (excluding hard surfaces), or the most up to date and current British Standard and in accordance with seed supplier's technical advice.

- 4.1.4 It is advised that herbicides are not used on Site; however, if herbicides are required, the herbicide handbook (English Nature, 2003⁵) provides guidance on appropriate herbicide use in relation to nature conservation works.
- 4.1.5 Planting will not be carried out when the ground is waterlogged, frost bound or during periods of cold drying winds.
- 4.1.6 All bare-root planting stock will be kept covered until actually planted in order to minimise water-loss and prevent the roots from drying out. Bare root stock shall be planted while dormant (November-April) or alternatively cell or container grown stock shall be used.

Grass Seeding

- 4.1.7 Following construction of the solar panels and all infrastructure, all areas of bare earth within the site, including those areas in between temporary protective fencing and existing landscape features, will be sown with grass seed.
- 4.1.8 Between the security fencing and existing/proposed hedgerows a species rich grass and wildflower mix would be sown, such as the Emorsgate EM2 Standard General Purpose Meadow Mixture. Attenuation and detention basins will be sown with a wetland mixture such as Emorsgate EM8 Meadow Mixture for wetlands.
- 4.1.9 In areas surrounding the solar panels and within the security fence line a seed mix suitable for low intensity sheep grazing that has been specifically designed for solar farms would be sown. Cotswolds Seeds mix 20 'Herbal' Grazing Ley mix or similar would be suitable. Both mixes shall be sown in accordance with the landscape specification as set out in the Detailed landscape proposals and also encompassing the additional elements below.

Ground Preparation

- 4.1.10 Following the installation of the array, reinstatement works should include the removal of all stones and other debris to ensure the ground is suitable for use with mowers.
- 4.1.11 Subsequent to the last crop being removed, no fertilizer will be added to the arable land on the site, other than that recommended by the grass seed supplier and only on areas of grazing pasture.
- 4.1.12 Construction activities requiring heavy machinery will only take place during periods of dry weather, in order to avoid churning and damaging the soil.
- 4.1.13 Prior to seeding, the ground will be harrowed and rolled, using a tine harrow in order to avoid damaging underground wiring. However, if there are any areas which have suffered high soil compaction, for instance due to heavy machinery being deployed, these will be harrowed using a disc harrow to ensure the soil structure is suitable for subsequent sowing. If such a requirement arises to harrow with discs, caution should be exercised to ensure newly installed underground services are not damaged during harrowing.
- 4.1.14 If there is an abundance of annual or perennial weeds, then small areas of the site may be treated with herbicide prior to seeding.

⁵ Natural England (2003). Herbicide handbook: Guidance on the use of herbicide on nature conservation sites.

Seeding

- 4.1.15 All seeding will take place ideally in mid-Spring or Late Summer to Mid-Autumn. Seed will be sown in the first year following completion of underground wiring, and be broadcast by machine (fertiliser spreader, slug pellet applicator, grass seed box) and rolled where possible. The gaps between strings of panels are to be wide enough to accommodate a tractor travelling between them for harrowing, sowing and rolling purposes. In areas where a machine is unable to access, such as far underneath panels, seeding in these areas should be broadcast by hand. Seeds can be mixed with a substrate such as sand or sawdust for ease of broadcasting.
- 4.1.16 Sowing rate is recommended by the manufacturer as 3.25g per square metre or 32.5kg/hectare for the pasture grassland mix and at 4g per square metre or 40kg/hectare for the wildflower mix.

Hedgerow Planting

- 4.1.17 Approximately 1.97km of new hedgerow planting is proposed as part of the development, includes a new mixed native species hedgerow within the Site. Hedgerow species have been chosen to be typical of the local area, incorporating species observed during the baseline ecology surveys where appropriate.
- 4.1.18 The following species will form the hedgerow planting within the Site:

Table 4.1: Hedgerow planting mix

Species	Common Name	% Mix
<i>Acer campestre</i>	Field Maple	20
<i>Carpinus betulus</i>	Common Hornbeam	3
<i>Corylus avellana</i>	Hazel	10
<i>Crataegus monogyna</i>	Hawthorn	60
<i>Prunus spinosa</i>	Blackthorn	3
<i>Rosa canina</i>	Dog Rose	3
<i>Prunus padus</i>	Bird Cherry	3

Ground Preparation

- 4.1.19 Where necessary existing weeds will be manually removed or treated with a suitable herbicide as specified within the herbicide handbook (English Nature, 2003) or hand-weeding.
- 4.1.20 All extraneous matter such as plastic, wood, metal and stones greater than 50mm diameter will be removed from site to a registered waste disposal facility.

Planting

- 4.1.21 Hedgerows will be planted in a double staggered row at 5 plants per linear metre, unless specified otherwise in the landscaping proposals.
- 4.1.22 The exact timing of the proposed hedgerow planting will be dependent on the ground conditions but bare-root planting should ideally take place between the months of November-

February inclusive. It is expected that ground conditions and climate will allow for earlier planting (i.e. before January), and this will allow the plants more time to establish a network of feeder roots before the onset of spring. Planting should avoid freezing and water-logged conditions.

- 4.1.23 Planting slots shall be made using a planting spade and shall be dug 450mm wide x 450mm depth. Plant notches should be T, L- shaped or straight, using spades of a design suitable for this purpose. The planting notches must be vertical and deep enough for the roots to hang freely, with the transplant being planted so that the root collar is exactly level with the ground surface. The notch must then be closed and the soil will be well firmed round the roots in line with the guidelines as set out in BS 4428 (1989).
- 4.1.24 All plants will be watered in at the end of each day of planting/or as required. After planting a 50mm layer of approved compost fine bark (nominal size 1-10mm) shall be spread along the hedge trench to 1m wide or spread around the pit of each woodland plant at 1m wide.
- 4.1.25 All hedgerow planting stock will be protected from rabbit damage using rabbit proof fencing or individual spirals/shrub guards supported with canes or stakes as advised by the manufacturer. Any spiral/shrub guards used that are not biodegradable, will be removed approximately three years after planting or once established.

Woodland Planting

- 4.1.26 Woodland screen planting is proposed along north western, northern and north eastern boundaries of the Site, as well as on land west of the Site. This planting will be approximately 10m wide and with a total area of 1.66ha. As well as canopy tree species, it is also recommended that a suitable native shrub layer also be incorporated within the woodland planting, encouraging increased structural diversity within the habitat and thereby increasing the overall biodiversity value of the habitat.
- 4.1.27 It is recommended that the following native species will form the tree planting at this Site:

Table 4.2: Woodland planting mix

Species	Common Name	% Mix
<i>Acer campestre</i>	Field Maple	7
<i>Alnus glutinosa</i>	Alder	15
<i>Betula pendula</i>	Silver Birch	15
<i>Corylus avellana</i>	Hazel	8
<i>Crataegus monogyna</i>	Hawthorn	15
<i>Quercus robur</i>	Common Oak	30
<i>Salix caprea</i>	Goat Willow	7
<i>Viburnum opulus</i>	Guelder Rose	3

Ground Preparation

- 4.1.28 If the formation level is compacted it will be ripped through before topsoiling.

- 4.1.29 Where necessary existing weeds will be uprooted or will be treated with a suitable herbicide as specified within the herbicide handbook (English Nature, 2003). No use of chemicals within 10m from the top of ditches/pond will be undertaken.
- 4.1.30 Trees/shrubs are to be placed into pits that will accommodate the roots comfortably, with approximately 75mm space outside the extent of the roots.
- 4.1.31 The bottom and sides shall be forked to break up the subsoil. All extraneous matter such as plastic, wood, metal and stones greater than half brick size will be removed from site.
- 4.1.32 Topsoil is to be stored in accordance with British Standards or other guidance current at the time of planting. Imported topsoil to conform to requirements of British Standards or other guidance current at the time of planting.

Planting

- 4.1.33 The exact timing of the proposed planting will be dependent on the ground conditions but planting should ideally take place between the months of November and February inclusive, this will allow the plants more time to establish a network of feeder roots before the onset of spring. Planting should avoid freezing and waterlogged conditions.
- 4.1.34 Trees/shrubs are to be placed into the pits and backfilled with local topsoil previously stripped from the Site. A general-purpose slow release fertiliser (at the rate of 75gm/m²) and Tree Planting and Mulching Compost (at the rate of 20litres/m²) are to be incorporated into the top 150mm of topsoil during backfilling. Where tree pits are more than 300mm deep, backfilled material shall be consolidated / firmed in 150mm layers. Additional topsoil will be imported onto the site if topsoil stripping operations do not provide sufficient topsoil for the entire tree planting.
- 4.1.35 Trees shall be well firmed-in and secured with stakes, proprietary rubber tree ties and spacers as below.
- 4.1.36 All trees will be protected from grazing damage by the fitting of approved tree guards. If the bushiness of the tree prevents the use of standard tree guards then an alternative design of guard shall be used in agreement with the project landscape architect. Composted bark mulch will be spread to a depth of 75mm in a 1m diameter circle around all individual trees, ensuring that desirable groundcover plants (where present) are not buried.
- 4.1.37 All trees/shrubs shall be watered in at the end of each day of planting.

4.2 Wildlife enhancements

Birds

- 4.2.1 The tree, hedgerow and grassland planting will provide enhanced nesting and foraging opportunities for birds as they establish. Additional bird nesting provision will be made through the inclusion of a minimum of five bird boxes erected on mature and semi-mature trees located around the Site.
- 4.2.2 Bird boxes should ideally be installed in the autumn (September to November) following the cessation of construction works, by the appointed contractor under advice of the suitably competent ecologist.

- 4.2.3 Boxes should be erected at an appropriate height of between 1 to 5 metres. Boxes should be angled so that they face away from the prevailing wind or in a semi sheltered environment. Positioning within or close to hedgerows will increase chances of occupation. Bird boxes will be suitable for a variety of farmland bird species. Examples of bird boxes suitable for use at the Site, and proposed locations are presented in **Annex 3**. The exact locations of bird boxes should be guided by the ecologist onsite.

Bats

- 4.2.4 The tree, hedgerow and grassland planting will, over time compliment the retained existing habitat features and enhance foraging and commuting opportunities.
- 4.2.5 Additional bat roost provision will be made through the inclusion of a minimum of five bat roost boxes on mature and semi-mature trees along the Sites northern, western and eastern boundaries. Boxes will be erected in suitable habitats (i.e., along boundary features), at an appropriate height (ideally above 4m in height) and with clear flight paths to utilise the Site boundary features. Boxes should be exposed to sun for at least part of the day and so erected on a south facing aspect. It is often appropriate to erect multiple boxes on the same tree at slightly different heights and aspects to create a variety of microclimates. Minor pruning may be required to ensure a clear drop zone below newly installed bat boxes.
- 4.2.6 Examples of bat boxes suitable for use at the Site, and proposed locations are presented in **Annex 3**. The exact locations of bat boxes should be guided by the ecologist onsite.
- 4.2.7 Guidance on the installation of bat boxes is available from the Bat Conservation Trust⁶, or a suitably qualified ecologist should be consulted.

Other Wildlife

- 4.2.8 The habitats within and bordering the Site may potentially support small mammals including hedgehogs. The landscape scheme includes flowering lawn and tree, hedgerow and grassland planting, which will provide enhanced foraging opportunities and places of safe shelter and refuge, if present.
- 4.2.9 The combination of structurally diverse grassland, tree and hedgerow planting will benefit a range of species, including brown hare and valuable pollinator species.

⁶ <https://cdn.bats.org.uk/uploads/pdf/Bat-Box-Information-Pack-Sept-2020-JF.pdf?v=1600095860>

5 HABITAT MANAGEMENT

5.1 Grassland

Pasture Grassland

- 5.1.1 The grassland area shall be left for 8-10 weeks after seeding, after which it could be mown or grazed at a low stock rate during Year 1 after seeding and grazed by sheep during subsequent years, as detailed below.

Year 1

- 5.1.2 Newly seeded grassland will be subject to regular cutting to a height of between 40mm and 60mm, with arisings removed during the first year of establishment in order to prevent annual weeds from establishing.
- 5.1.3 This shall constitute a cut 6-8 weeks after sowing and then every month thereafter between May and September.
- 5.1.4 The frequency of cutting will be increased should annual weeds establish.
- 5.1.5 If the mixture is autumn sown, a high spring cut to between 70-100mm will be undertaken around April with no further mowing until mid-July.
- 5.1.6 Alternatively, the new grassland could be lightly grazed by sheep at no more than 3 sheep per hectare, with livestock rotated between different fields on Site to avoid over grazing and soil compaction, which may lead to grassland failure.

Subsequent years

- 5.1.7 After the first year following seeding, grassland will be managed by rotational low-intensity grazing in accordance with the landowners' requirements, either rotating sheep within the site through control with stock proof fencing or through rotational grazing using nearby fields.
- 5.1.8 Ideally, it is best to aim for a stocking rate just sufficient to maintain a varied structure, rather than the maximum that the grassland can support. Grazing density (As per the table below) is based on medium sized sheep (e.g. 60kg). It is important to constantly monitor the Site to ensure the grassland is not under or over grazed and stock density and duration altered accordingly. The stocking density should be reduced in wet periods or in conditions when poaching would lead to a break-up of the sward and colonisation by aggressive weed species.

Table 5.1: An indicative guide to stocking levels for lowland grassland (number of sheep per hectare). Adapted from the Lowland Grassland Management Handbook produced by Natural England.

Number of grazing weeks per year	Neutral Grassland (sheep per ha)
16	12.5
20	10
24	8
36	5.5

5.1.9 The following indicators will be used to review and amend stocking densities:

- An increase in the amount of uneaten grass, the accumulation of litter, an increase in vigorous rank and unpalatable grasses, and a reduction in low growing herbs: indicates stocking density is too low (need to increase density).
- A reduction in density/diversity of plants, excessive poaching, weed invasion and the development of bare patches: indicates stocking density is too high (need to reduce density).

5.1.10 Any herbicide applications to control weeds should be undertaken immediately after sheep have been removed from a grazing area.

5.1.11 The areas will be subject to light intermittent grazing by sheep between approximately September and January, where conditions allow. Moderate trampling will expose ground for colonisation by annuals the next spring; however, heavy trampling can lead to ground poaching and infestations by weed species that will be detrimental to the Site.

5.1.12 During the spring and summer (March to August), sheep stocking density should be no more than 5 sheep per hectare and fields grazed on a rotational basis to allow summer flowering plants to set seed.

5.1.13 Grazing will be carefully monitored in the winter period in order to prevent excessive compaction of wet earth and in the summer period to ensure the grassland reaches the expected condition criteria. If grassland areas are not reaching target condition criteria, livestock must be removed until grassland has recovered or is re-seeded as appropriate.

5.1.14 Cutting of any un-grazed areas will be in accordance with measures outlined for species rich grassland below.

Species Rich Grassland

5.1.15 The wildflower shall be mown under differing regimes for Year 1 after seeding and subsequent years, as detailed below.

5.1.16 Mowing will only take place during periods of dry weather to ensure that no waterlogged ground is damaged by machinery.

5.1.17 The grassland will not be improved by chemical fertilizer or slurry and nutrient levels in the soil should be allowed to reduce over time.

5.1.18 All arisings should remain on Site for three to five days following the cut to allow seeds to disperse, and then either removed from site or placed on habitat piles within field margins.

Year 1

5.1.19 Newly seeded grassland will be subject to regular cutting to a height of between 40mm and 60mm, with arisings removed during the first year of establishment in order to prevent annual weeds from establishing.

5.1.20 This shall constitute a cut 6-8 weeks after sowing and then every month thereafter between May and September.

5.1.21 The frequency of cutting will be increased should annual weeds establish.

5.1.22 If the mixture is autumn sown or contains yellow rattle a high spring cut to between 70-100mm will be undertaken around April with no further mowing until mid-July.

Subsequent years

5.1.23 After the first year following seeding, grassland will be managed by mowing as per the schedule below:

Table 5.2: Guide to timings of management of species rich grassland

Timing	Management
July to August	Summer hay cut to a height of 40-75mm. Arisings should be left for between 5 and 7 days before being removed to allow seeds to drop.
September to November	Autumn cut to a height of 40-75mm and remove arisings. Ideally at least two cuts should be undertaken in this period after the summer hay cut. If grass growth is vigorous more frequent mowing may be required.
March	Spring cut to a height of 40-75mm. Need for mowing can be assessed based on growth and is most likely to be required in the first years after establishment.
December to February	No management required

5.1.24 Cutting should adopt a systematic method (i.e. working outwards towards the boundary features); this will allow fauna to temporarily and safely vacate the area.

5.1.25 If required, intermittent and very light density grazing could be used as an alternative in subsequent years, but only from September to December, as this would first allow late flowering plants to set seed.

5.1.26 The management will take a flexible approach and the exact dates will be dependent upon weather conditions. A phased (rotational) cutting regime is recommended (i.e., ideally the entire area should not be cut at the same time) in order to allow a more varied structured grassland.

5.2 Hedgerows

Existing Hedgerows

5.2.1 Existing hedgerows shall be left to grow with minimal selective thinning and maintained to a height of no more than 3m.

5.2.2 During establishment, dead, dying and diseased wood is to be removed annually or as required and replaced with stock of a similar size and species by the appointed contractor at their own cost. If the failure of the plant is due to disease and the disease is considered likely

to re-occur, then an alternative native species of local provenance may be used as a replacement. Planting should ideally be undertaken between the months of December and February.

- 5.2.3 Hedgerows across the whole site to be cut on a rotational basis, i.e. not all hedgerows in the same year. This will maintain a resource of flowering and fruiting plants across the site, create nesting and foraging habitat for wildlife, and prevent hedgerows becoming leggy. Existing trees within hedgerows will be left to grow naturally and not cut. These will be clearly marked to ensure that they are not cut back during hedgerow trimming/maintenance works.
- 5.2.4 Established hedgerows will be cut between late September and February and no cutting or trimming is to be undertaken during the breeding bird season (1st March to 31st August inclusive).
- 5.2.5 Ground flora will be cut at the base of hedges on a 3 year rotation to 150mm height, with arisings removed. This is to maximise the value of the habitat for overwintering and foraging insects, and prevent scrub establishment. Cutting is to take place in October/November.

New and infill Hedgerows

- 5.2.6 All canes, spirals or guards shall be regularly checked and adjusted or replaced as required. Bases of all hedges are to be kept weed-free with a minimum of 4No. applications of systematic herbicide per growing season; or a combination of visits to manually remove weeds in conjunction with the use of herbicide, during the first three years. After the first three years the ground flora is to be allowed to develop naturally in order to contribute to the wildlife value of the hedgerow and managed as an existing hedgerow.
- 5.2.7 Any litter accumulated around hedgerow bases is to be cleared at the same time as weed control operations.
- 5.2.8 All hedge lines shall be regularly watered in times of drought to field capacity and shall receive an application of slow-release fertiliser for the first three years.
- 5.2.9 Plants will remain upright and adjusted during treatment of weeds. Rabbit protection will be retained/replaced until no longer needed, when it will be removed from Site and disposed of. This is to be checked annually.
- 5.2.10 All hedges shall be allowed to grow up to 3m high and will be maintained at this height. Any plants that fail to thrive shall be replaced with stock to the original specification.
- 5.2.11 Annual inspection is to be undertaken in September to replace dead/diseased plants at the end of each growing season and to be replaced within the first five years after planting. Pruning will be undertaken to promote healthy growth, where required, between late September – February to avoid bird breeding season.
- 5.2.12 Bark mulch is to be topped up annually or as required, to maintain 50mm deep layer, until the plants have established.
- 5.2.13 Once new and infill sections of hedgerows have established, management operations are to reflect those as set out for existing hedgerows.

5.3 Woodland

Woodland Planting

- 5.3.1 During the establishment period all dead, dying or diseased trees/shrubs will be replaced with specimens of similar size and species by the appointed contractor. If the failure of the plant is due to disease and the disease is considered likely to re-occur then an alternative native species of local provenance may be used as a replacement with agreement from the LPA. The exact timing of the planting of replacement trees is dependent on the ground conditions; however, planting should take place between the months of November and February inclusive, this will allow the plants more time to establish a network of feeder roots before the onset of spring.
- 5.3.2 During the establishment period weeds around the base of each tree will be removed within a 1m to 1.5m radius, using approved hand-weeding or if necessary herbicide treatment (applications in April, June and August). The herbicide handbook (English Nature, 2003) provides guidance on appropriate herbicide use in relation to nature conservation works. Where used, herbicides will be sprayed in appropriate weather conditions, to avoid affecting adjacent habitats.
- 5.3.3 Tree guards and stakes will also be checked and replaced where necessary and removed once trees are sufficiently established that they are no longer required.

5.4 Habitat Piles

- 5.4.1 A small proportion of any wood and grass removed during habitat management or other work operations and not taken off-site should be placed into loose piles and placed along the edge of hedgerows or within areas of woodland creation. These habitat piles should not exceed approximately 1m high by 2m wide and will provide valuable invertebrate habitat and shelter for other species including small mammals/amphibians/reptiles. These should be placed in the same locations each year, with locations to be determined on Site in consultation with the advising ecologist.

6 ECOLOGICAL MONITORING AND CONTINGENCY

6.1 Timings

- 6.1.1 The development of the biodiversity interest of the Site will be monitored over time by a suitably experienced ecologist. A walkover survey will be undertaken on years 1, 3 and 5 and 10. This will involve an inspection of the grassland, hedgerows and trees to ensure that they are being managed in a manner suitable for the enhancement of wildlife interest.
- 6.1.2 In addition, a habitat survey and condition assessment of the site will be undertaken to ensure created habitats are achieving their target condition as stated in the biodiversity metric calculations.
- 6.1.3 The management plan will be amended if necessary, based on the monitoring recommendations.

6.2 Monitoring Criteria

- 6.2.1 Habitats will be monitored in accordance with the criteria set out with Natural England Biodiversity Metric 4.0 Technical Supplement⁷, as shown in **Annex 2**. Habitats are expected to achieve the conditions set out within the submitted Biodiversity Metric 4.0 Calculation Tool and summarised below.

Table 6.1: Expected condition of newly created habitats within the Site

Habitat type	Statutory metric habitat type	Target condition	Time to achieve target condition (years)
Pasture Grassland	Other neutral grassland	Moderate	5
Species rich grassland	Other neutral grassland	Good	10
Woodland planting	Other woodland; broadleaved	Moderate	15
Hedgerow	Native species rich hedgerow	Good	12

- 6.2.2 If habitats are not meeting the description for the particular habitat type, are not achieving the target condition, or appear unlikely to achieve it, a suitably qualified ecologist will be consulted to determine appropriate changes to the management to enable the proposed habitat type and/ or target condition to be achieved. Suggestions for management changes are outlined in the contingency measures section below, however the exact requirements will be dependent on the cause and extent of any failure.
- 6.2.3 If it is considered it is not possible to achieve either the proposed habitat type or target condition the biodiversity calculator will be revised and the results submitted to the local planning authority with a report detailing the reasons why habitats have not achieved the condition stated, steps taken to rectify this and any additional compensation measures as appropriate.

6.3 Contingency Measures

- 6.3.1 If the monitoring outlined above identifies that a habitat is not meeting the target condition, or is not meeting the description for the proposed habitat type the following contingency measures should be considered.
- 6.3.2 In all cases, where a failure is identified the root cause should be identified and remedial measures implemented.

⁷ Biodiversity Metric 4.0 – Technical Supplement.
<https://publications.naturalengland.org.uk/publication/5850908674228224>

Grasslands

Absence of herbs/ high cover of bare ground

- 6.3.3 If the herb layer is not establishing, or there are large areas of bare ground it may be appropriate to re-seed the area. This should be done using a suitable mix and following the methodology outline in the habitat creation section above. It may be necessary to create batches of bare ground prior to seeding.

Area is over-grazed

- 6.3.4 Should the area become over grazed, as will be indicated by a uniform and short grass sward, it may be appropriate to reduce the grazing density. This could be achieved either through the removal of animals or by grazing for a shorter period each year.

Grasses are over-dominant

- 6.3.5 Should grasses become over-dominant the grazing intensity may need to be increased. This could be achieved either through the introduction of more animals, or grazing for an extended period.
- 6.3.6 Alternatively, it may be appropriate to introduce yellow rattle to the grassland area. This plant parasitises grasses, reducing their competitive ability.

Nutrient levels too high

- 6.3.7 If nutrient levels are too high, resulting in lack of species diversity and indicated by the dominance of a small number of competitive species (e.g., nettles, spear thistle, white clover, coarse grasses), efforts should be made to reduce the nutrient levels in the soils. Grazing should help reduce nutrient levels, however as an additional measure a cut and collect regime may also be the most appropriate way to do this.
- 6.3.8 Cut and collect involves waiting for plants to reach a substantial height before mowing and then removing all arisings from the Site. Any nutrients taken in by the plants during growth will therefore be removed from the site. This method may take a number of years to be effective.

Absence of bare ground

- 6.3.9 Many herb species require patches of bare soil to germinate. If grazing animals are not adequately disturbing the soil, or in ungrazed areas if there are no localised bare patches, it may be appropriate to manually disturb the soil. This should be in no more than 5% of the total area.

Woodland

Woodland becomes over-dense

- 6.3.10 Should the woodland become overly dense with little light reaching understory layers then selective thinning may be required. If not caught early it is also possible that understory shrubs may need to be replanted, and/ or the ground seeded with a shade tolerant flower mix.

Hedgerows

High planting failure rate.

- 6.3.11 Small gaps should fill in naturally as neighbouring hedgerow shrub species grow, however where there is a high failure rate shrub species should be replanted or alternative species used. It may be appropriate to consider alternative planting methods, such as traditional hedgerow laying.

7 INDICATIVE MANAGEMENT SCHEDULE

- 7.1.1 The following management programme shows possible months in which habitat creation and management activities should be undertaken. Note that this schedule should be seen as a guide only and management should be informed by conditions on the Site and any changes to the management regime should be agreed with a suitably qualified ecologist.

Initial Habitat Enhancement Year 1

Management Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year 0 / 1												
Grassland creation (*recommended)			✓*	✓*	✓	✓	✓	✓	✓			
Hedgerow and tree/shrub planting (*recommended)	✓	✓									✓	✓*
Installation of bird nest and bat roost boxes	✓	✓							✓	✓	✓	✓
Watering- water as necessary in period of drought					✓	✓	✓	✓	✓			

Habitat Management Year 2

Management Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year 2												
Visual inspections- inspect hedgerows and woodland for signs of disease or damage, inspect grassland for damage and weed levels								✓	✓			
Initial management of grassland / meadows areas (targeted herbicide treatment of perennial weeds or cutting/topping where necessary)				✓		✓		✓				
Weeding (by hand) of hedgerow planting bed and surrounding planted trees				✓	✓	✓	✓	✓	✓			
Weeding (herbicide treatment, only if necessary) of hedgerow planting bed and surrounding planted trees				✓		✓		✓				
Trimming of new hedgerows	✓	✓							✓	✓	✓	✓
Watering- water as necessary in period of drought only during the first 2 years or until the shrubs have established					✓	✓	✓	✓	✓			
Replacement planting- any plants that have failed should be replaced to the original specification and planted within the next planted season	✓	✓									✓	✓

Ongoing Annual Management

Management Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Year 3 onwards												
Visual inspections- inspect hedgerows and woodland for signs of disease or damage, inspect grassland for damage and weed levels. Assess habitats against condition criteria required and adjust management as necessary								✓	✓			
Grassland cutting		✓						✓	✓			
Sheep grazing within pastoral fields. Note: * spring and summer grazing not to exceed 5 sheep/ha and subject to removal if grassland not reaching target condition	✓	✓	✓*	✓*	✓*	✓*	✓*	✓*	✓	✓	✓	✓
Sheep grazing outside the perimeter fencing (if required)	✓	✓	✓						✓	✓	✓	✓
Weeding (by hand) of hedgerow planting bed and surrounding planted trees- establishment period first five years				✓	✓	✓	✓	✓	✓			
Weeding (herbicide treatment, only if necessary) of hedgerow planting bed and surrounding planted trees- establishment period first five years				✓		✓		✓				
Trimming of new hedgerows (up to year 3 and established)	✓	✓							✓	✓	✓	✓
Established hedgerows cut on a 2 or 3 year cycle (no more than 1/3 cut in any one year)	✓	✓							✓	✓	✓	✓
Tree stakes, ties and guards- check and adjust, replace or remove as required until shrubs have established. Check and re-adjust after strong winds. Remove in year 3-5 or as required.			✓	✓				✓	✓			
Replacement planting- any plants that have failed should be replaced to the original specification and planted within the next planted season	✓	✓									✓	✓

ANNEX 1: OUTLINE REASONABLE AVOIDANCE MEASURES (RAMS) METHOD STATEMENT

The following Method Statement outlines suitable measures to be implemented during construction works associated with the proposed solar development to avoid the disturbance, injury or killing of individual animals including hedgehog, brown hare, amphibians and common reptile species.

No evidence of badger was found during the habitat survey, however, habitat on Site and adjacent to Site is suitable and a pre-construction survey has been recommended.

Measures to ensure the favourable conservation status of the species during the proposed development must reflect legislation and guidance application at the time and the construction phase will be undertaken following RAMS under the supervision of an Ecological Clerk of Works (ECoW) as required to provide advice.

These RAMs relate to small scale removal of habitats such as grassland and hedgerow. These should not be employed for larger scale or extensive habitat removal. Minor or short term destructive or disturbance works (e.g. cable laying, ground mountings, construction of substations) will also follow this Method Statement to ensure legal compliance and to ensure the objectives are achieved.

Method Statement

The following measures will be adopted throughout the construction period of the proposed development:

- Site operatives will be informed by 'tool box' talk of the potential for protected species to occur on-site, what to look out for and what to do in the event that animal is found.
- Vegetation clearance works (e.g. short sections of hedgerow and other dense vegetation or tall grassland) should only commence after a careful visual inspection by an ECoW has determined that no animals are present. Vegetation should be reduced (by hand strimmer) to a height of c.150mm prior to ground works commencing to aid visual searches and encourage individuals to temporarily move away from the working areas.
- The proposed timing of the removal of any hedgerow bases or other feature potentially offering shelter or refuge should avoid the hibernation period (November to February inclusive) in order to prevent disturbance to hibernating animals.
- Trenches and excavations should include an escape route for animals that might enter the trench, especially if left open overnight. Ramps should be no greater than 45 degrees in angle and can include wooden planks or ramped earth. Ideally, any excavations open for a prolonged period should be covered.
- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling.
- Any excavated material stored overnight should be searched prior to being used as infill.
- Site specific management practices will be set out within the LEMP or a Construction Environment Management Plan (CEMP) and must be adhered to during construction to ensure the protection of habitats and species within the Site.

Should a hedgehog, brown hare, amphibian, reptile or other notable species (or signs of) be found at any point during construction, works within suitable habitat and/or potentially disturbing works in close proximity to the animal must cease immediately and the ECoW will advise on the appropriate actions, including applying for a licence, if required.

ANNEX 2: BIODIVERSITY NET GAIN CONDITION ASSESSMENT TECHNICAL SHEETS

Other neutral grassland condition criteria

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)			
UK Habitat Classification (UKHab) Habitat Type(s)			
Grassland - Lowland calcareous grassland Grassland - Lowland dry acid grassland Grassland - Lowland meadows Grassland - Other lowland acid grassland Grassland - Other neutral grassland Grassland - Tall herb communities (H6430) [Note Tall herb habitat that does not meet the Annex 1 definition should be recorded as 'Other neutral grassland'] [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.] Grassland - Upland acid grassland Grassland - Upland calcareous grassland Grassland - Upland hay meadows Sparsely vegetated land - Calaminarian grassland			
Site name and location		On-site or off-site	
Limitations (if applicable)		Survey reference (if relating to a wider survey)	
Grid reference		Habitat parcel reference	
Habitat Description			
ukhab – UK Habitat Classification			
Condition Criteria	Assessment	Criterion passed (Yes or No)	Notes (such as justification)
A	The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.		
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.		
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens ¹ .		

D	Cover of bracken <i>Pteridium aquilinum</i> is less than 20% and cover of scrub (including bramble <i>Rubus fruticosus</i> agg.) is less than 5%.		
E	Combined cover of species indicative of sub-optimal condition ² and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴) are present, this criterion is automatically failed.		
Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). Note - this criterion is essential for achieving Good condition for non-acid grassland types only.		
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)			
Number of criteria passed			
Condition Result	Assessment	Condition Score	Assessment
		Score Achieved ×/✓	
Acid Grassland Types (Result out of 5 criteria)			
Passes 5 criteria		Good (3)	
Passes 3 or 4 criteria		Moderate (2)	
Passes 2 or fewer criteria		Poor (1)	
Non-acid grassland Types (Result out of 6 criteria)			
Passes 5 or 6 criteria, including essential criterion A and additional criterion F.		Good (3)	
Passes 3 - 5 criteria, including essential criterion A.		Moderate (2)	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding criterion A and F.		Poor (1)	
Suggested enhancement interventions to improve condition score			

Notes

Footnote 1 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.

Footnote 2 - Species indicative of sub-optimal condition for this habitat type include: creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, creeping buttercup *Ranunculus repens*, greater plantain *Plantago major*, white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris*. There may be additional relevant species local to the region and or site.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, by applying professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

Deciduous woodland condition criteria

Condition Sheet: WOODLAND Habitat Type					
UK Habitat Classification (UKHab) Habitat Type(s)					
Woodland and forest - Lowland beech and yew woodland Woodland and forest - Lowland mixed deciduous woodland Woodland and forest - Native pine woodlands Woodland and forest - Other coniferous woodland Woodland and forest - Other Scot's pine woodland Woodland and forest - Other woodland; broadleaved Woodland and forest - Other woodland; mixed Woodland and forest - Upland birchwoods Woodland and forest - Upland mixed ashwoods Woodland and forest - Upland oakwood Woodland and forest - Wet woodland					
Habitat Description					
ukhab – UK Habitat Classification This condition sheet is based on the England Woodland Biodiversity Group (EWBG) Woodland Condition Survey Method, available here: Woodland Wildlife Toolkit (sylva.org.uk) IMPORTANT: This biodiversity metric woodland condition assessment must be used to assess woodland being input into the biodiversity metric. The outputs of this condition assessment are not equivalent to, nor are they comparable with the scores from the EWBG condition assessment, because the EWBG assessment has been adapted for the biodiversity metric, including the removal of EWBG Indicator 7 (Proportion of favourable land cover around woodland) and Indicator 14 (Size of woodland), and minor changes to other indicators.					
Site name and location		On-site or off-site			
Limitations (if applicable)		Survey reference (if relating to a wider survey)			
Grid reference		Habitat parcel reference			
Condition Assessment Criteria					
Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator	Notes (such as justification)
A Age distribution of trees	Three age-classes ¹ present.	Two age-classes ¹ present.	One age-class ¹ present.		
B Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ² .	Evidence of significant browsing pressure is present in 40% or less of whole woodland ² .	Evidence of significant browsing pressure is present in 40% or more of whole woodland ² .		
C Invasive plant species	No invasive species ³ present in woodland.	Rhododendron <i>Rhododendron ponticum</i> or cherry laurel <i>Prunus laurocerasus</i> not present, other invasive species ³ <10% cover.	Rhododendron or cherry laurel present, or other invasive species ³ >10% cover.		
D Number of native tree species	Five or more native tree or shrub species ⁴ found across woodland parcel.	Three to four native tree or shrub species ⁴ found across woodland parcel.	Two or less native tree or shrub species ⁴ across woodland parcel.		
E Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native ⁵ .	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native ⁵ .	<50% of canopy trees and <50% of understory shrubs are native ⁵ .		
F Open space within woodland	10 - 20% of woodland has areas of temporary open space ⁶ . Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted ⁷ .	21 - 40% of woodland has areas of temporary open space ⁶ .	<10% or >40% of woodland has areas of temporary open space ⁶ . But if woodland <10ha has <10% temporary open space, please see Good category ⁷ .		

G	Woodland regeneration	All three classes present in woodland ⁸ ; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland ⁸ .	No classes or coppice regrowth present in woodland ⁸ .		
H	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback ⁹ .	11% to 25% mortality and/or crown dieback or low-risk pest or disease present ⁹ .	Greater than 25% tree mortality and or any high-risk pest or disease present ⁹ .		
I	Vegetation and ground flora	Recognisable NVC plant community ¹⁰ at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community ¹⁰ at ground layer present.	No recognisable woodland NVC plant community ¹⁰ at ground layer present.		
J	Woodland vertical structure	Three or more storeys across all survey plots or a complex woodland ¹¹ .	Two storeys across all survey plots ¹¹ .	One or less storey across all survey plots ¹¹ .		
K	Veteran trees	Two or more veteran trees ¹² per hectare.	One veteran tree ¹² per hectare.	No veteran trees ¹² present in woodland.		
L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities ¹³ .	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities ¹³ .		
M	Woodland disturbance	No nutrient enrichment or damaged ground evident ¹⁴ .	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground ¹⁴ .	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground ¹⁴ .		
Total Score (out of a possible 39)						
Condition Assessment Result				Condition Assessment Score	Result Achieved	
Total score >32 (33 to 39)				Good (3)		
Total score 26 to 32				Moderate (2)		
Total score <26 (13 to 25)				Poor (1)		
Suggested enhancement interventions to improve condition score						

Footnotes

Footnotes below refer to the EWBG woodland condition assessment methodology: EWBG (No date). *Assessing your Woodland's Condition* [online]. Available from:

[Woodland Wildlife Toolkit \(sylva.org.uk\)](http://sylva.org.uk)

When applying this condition sheet, good practice would be to use the methodology associated with the EWBG toolkit.

Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0 – 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). For birch, cherry or *Sorbus* species; 0 - 20 years = Young; 21 - 60 years = Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an 'age-class' of young trees.

Footnote 2 - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed.

Footnote 3 - See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly.

Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage *Lysichiton americanus*; Himalayan balsam *Impatiens glandulifera*; Japanese knotweed *Reynoutria japonica*; cherry laurel *Prunus laurocerasus*; shallon *Gaultheria shallon*; snowberry *Symphoricarpos albus*; variegated yellow archangel *Lamiasstrum galeobdolon subsp. argentatum*; rhododendron *Rhododendron ponticum*; and tree-of-heaven *Ailanthus altissima*.

Footnote 4 - See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present.

Footnote 5 - See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs.

Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees.

Footnote 7 – Given the increased ratio of edge habitat to woodland where the woodland is <10ha.

Footnote 8 - See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4-7 cm DBH. All three classes would fall in the 'young' category of the 'age distribution of trees' indicator, but the regeneration indicator gathers additional information by considering regeneration potential - if seedlings, saplings and young trees are all present that means natural regeneration processes are happening.

Footnote 9 - See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level.

Footnote 10 - See EWBG method INDICATOR 10 directing to NVC key for more information. The 'UKHab to NVC translation table' in the UK Habitat Classification resources may also be useful to assess this.

Footnote 11 – This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information.

Footnote 12 - See EWBG method INDICATOR 12 for more information. See gov.uk standing advice on ancient and veteran trees. Available from:

[Keepers of time: ancient and native woodland and trees policy in England](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/612122/Keepers_of_time_-_ancient_and_native_woodland_and_trees_policy_in_England.pdf)
(publishing.service.gov.uk)

and:

[Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/612122/Ancient_woodland_ancient_trees_and_veteran_trees_advice_for_making_planning_decisions_-_GOV.UK.pdf)

Footnote 13 – See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm.

Footnote 14 - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.

Native hedgerow condition criteria

Condition sheet: HEDGEROW Habitat Types					
Habitat Type					
Native hedgerow Native hedgerow - associated with bank or ditch Native hedgerow with trees Native hedgerow with trees - associated with bank or ditch Species-rich native hedgerow Species-rich native hedgerow - associated with bank or ditch Species-rich native hedgerow with trees Species-rich native hedgerow with trees - associated with bank or ditch					
Habitat Description					
See the Biodiversity Metric 4.0 User Guide Section 9. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the ‘favourable condition’ criteria.					
Site name and location			On-site or off-site		
Limitations (if applicable)			Survey reference (if relating to a wider survey)		
Grid reference			Habitat parcel reference		
Condition Assessment Criteria					
A series of ten attributes, representing key physical characteristics are used for this assessment. This assessment is based on the Hedgerow Survey Handbook ¹ and Favourable Conservation Status document ² . For further clarification please refer to the Hedgerow Survey Handbook. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the ‘favourable condition’ criteria.					
Hedgerow favourable condition attributes					
Attributes and functional groupings (A, B, C, D and E)	Criteria - the minimum requirements for ‘favourable condition’		Description	Criterion passed (Yes or No)	Notes (such as justification)
Core groups - applicable to all hedgerow types					
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).		
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height.		

			Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ³) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁵ where the 'Online Atlas of the British and Irish Flora' ⁶ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (e.g., excessive hedgerow cutting).
Additional group - applicable to hedgerows with trees only			
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.

E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.
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The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees		
Category	Category Requirements	Metric Score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; AND Does not fail both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 and C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		
Condition categories for hedgerows with trees		
Category	Category Requirements	Metric score
Good	No more than 2 failures in total; AND No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; AND Does not fail both attributes in more than one functional group (e.g., fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; OR Fails both attributes in more than one functional group (e.g. fails attributes A1, A2, B1 and B2 = Poor condition).	1
Score achieved:		

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 – DEFRA (2007) *Hedgerow Survey Handbook. A standard procedure for local surveys in the UK*. [online] Available on:

[layout \(hedgelink.org.uk\)](http://hedgelink.org.uk)

Footnote 2 – STALEY, J.T. ET AL. (2020) *Definition of Favourable Conservation Status for Hedgerows*. [online] Available on:

[Definition of Favourable Conservation Status for Hedgerows - RP2943 \(naturalengland.org.uk\)](https://naturalengland.org.uk/rp2943)

Footnote 3 – Wildlife and Countryside Act 1981 (as amended).

Footnote 4 – CHEFFINGS, C. M. et al. (2005) *The Vascular Plant Red Data List for Great Britain*. Species Status 7: 1-116. [online] Available on:

[The Vascular Plant Red Data List for Great Britain \(Species Status No. 7\) | JNCC Resource Hub](https://jncc.gov.uk/resources/species-status-7)

Footnote 5 – BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). *Definitions: wild, native or alien?* [online] Available on:

[Definitions: wild, native or alien? – Botanical Society of Britain & Ireland \(bsbi.org\)](https://bsbi.org/definitions-wild-native-or-alien)

Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) *Online Atlas of the British and Irish Flora*. [online] Available on:

[Acknowledgements | Online Atlas of the British and Irish Flora \(brc.ac.uk\)](https://brc.ac.uk/acknowledgements)

Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNS) (2022) Available on:

[Home » NNSS \(nonnativespecies.org\)](#)

Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from:

[Keepers of time: ancient and native woodland and trees policy in England \(publishing.service.gov.uk\)](#)

and

[Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK \(www.gov.uk\)](#)

ANNEX 3: Proposed Mitigation

Proposed mitigation at the Site includes the installation of mammal gates, bird boxes and bat boxes. Examples of mammal gates, bird and bat boxes to be used at the Site are presented in **Table A3:1**, and proposed locations are presented in **Figure A3:1**.

Table A3:1. Mitigation Examples and Specifications

Mitigation Type	Photograph	Specifications
Mammal gates		Mammal gates, suitable for use by badger and other British mammal species, must allow two-way access. Gates should be made from aluminium or galvanised steel for durability. Grill panel allows visibility through the gate. Access Badger Gate NHBS Practical Conservation Equipment Badger Gate
Bird Box		1B Schwegler Nest Box made from woodcrete for durability. A variety of entrance hole sizes should be used, to be suitable for use by a range of species. Entrance hole sizes include: 32mm, 26mm and oval (29 x 55mm). 1B Schwegler Nest Box NHBS Practical Conservation Equipment
Bat Box		2F Schwegler Bat Box made from woodcrete for durability and maintains a stable temperature inside the box. The box should be installed at a height of between 3 – 6m in an open sunny position. This bat box is an ideal summer roost, ideal for smaller British species. 2F Schwegler Bat Box (General Purpose) NHBS Practical Conservation Equipment
		2FN Schwegler Bat Box made from woodcrete for durability and maintains a stable temperature inside the box. The box should be installed at a height of between 3 – 6m in an open sunny position. This larger bat box has two entrances one at the front and one against the tree and is ideal for woodland species. 2FN Schwegler Bat Box NHBS Practical Conservation Equipment

Figure A3:1. Proposed Mitigation Locations



