

LAND SOUTH OF DICKETTS ROAD, CORSHAM

Construction and Environmental Management Plan: Biodiversity

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ABBREVIATIONS

BAP	Biodiversity Action Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
EcIA	Ecological Impact Assessment

IEF	Important Ecological Features
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MAGIC	Multi-Agency Geographic Information for the Countryside

1. INTRODUCTION

1.1. Engain has been instructed by The Trustees of The Willford Family Trust ('hereafter referred to as the 'client') to prepare an Construction and Environmental Management Plan (CEMP) relating to biodiversity for land the Land South of Dicketts Road, Corsham, Wiltshire.

Site Location

1.2. The site is located within Corhsam, to southeast of the town's urban fringes. Residential developments lie to the north and east and to the south and west lies farmland. The site area is approximately 1.5ha. The ordnance survey grid reference for the centre of the site is ST87466929.

General Description

1.3. The site's habitats consist of a grassland field surrounded by tall mature hedges and a small stand of secondary woodland.

1.4. According to Soilscape, the site is lime-rich loamy and clayey soils with impeded drainage.

1.5. This CEMP provides the details as set out in British Standard BS42020:2013, which requires:

- A map showing the location of all of the ecological features, including location of biodiversity protection zones (**Figure 1**);
- A risk assessment of the potentially damaging construction activities (**Table 2**);
- Practical measures (physical measures and sensitive working practices) to avoid and reduce impacts during construction (**Table 2**);
- Location and timing of works to avoid harm to biodiversity features
- The times during construction when specialist ecologists need to be present on site to oversee works (e.g. vegetation clearance in suitable reptile habitat)

- Responsible persons and lines of communication
- The roles and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person
- Use of protective fences, exclusion barriers and warning signs.

1.6. The site has potential to support the following ecological features that may be impacted during the site preparation and construction phases of the development:

- Retained woodland and hedgerows;
- Reptiles;
- Dormice;
- Bats (roosting); and
- Breeding birds.

2. ECOLOGICAL CLERK OF WORKS

Role and Responsibilities

2.1. An ECoW will be appointed prior to commencement of construction. The ECoW will be familiar with the site and will have relevant experience with the species concerned, with experience of working on construction sites.

2.2. The ECoW's primary role will be to ensure the implementation of this CEMP and the relevant method statements during the site work are adhered to.

2.3. They will provide on-site briefings to relevant construction staff prior to works and provide advice and guidance during and up to the completion of the work. This will include advising on practical measures to avoid, reduce and mitigate adverse impacts, and micro-siting of works to avoid impacts. The ECoW will be the primary point of contact for the Principal Contractor on matters relating to ecology.

2.4. In order to assist with the implementation of this ECEMP, an ECoW will visit the site at the following key stages:

- Once the site compound is set up to brief/train (e.g. via a toolbox talk) the Principal Contractor and / or Site Manager with the ecological constraints on site.
- Whenever vegetation needs to be cleared including at the following points:
    - Should vegetation need to be cleared within the bird nesting season (March to August inclusive).
    - Supervision of vegetation clearance relating to reptiles;
    - Supervision of veefetation clearance relating to dormice; and
    - Supervision of and trees with the potential for roosting bats.

Training

2.5. The Principal Contractor (with the assistance of the ECoW) will ensure that the site staff is aware of the commitments made in the CEMP. In turn, relevant information on environmental management will be passed to the work force via a toolbox talk at key stages. A record will be maintained detailing attendance of said toolbox talks. In addition, a poster should be displayed in the site office to inform site staff of ecological issues.

3. TIMING OF SENSITIVE WORKS

3.1. **Table 1** sets out a guide to the seasonal constraints relating to the works and activities described in this CEMP, and this is also illustrated in **Figure 1**). Purple colouring indicates the ideal time for works to be undertaken. If the timing of work needs to vary from this the EcOW will be consulted.

Table 1, "Seasonal Constraints"

	J	F	M	A	M	J	J	A	S	O	N	D
Breeding Birds												
Clearance of trees, shrubs etc where birds could nest	■	■							■	■	■	■
Bats (roosting)	■	■							■	■	■	■
Felling or works to trees with low bat roosting potential n.b update assessment including an endoscope inspection should be undertaken prior to the removal.	■	■										■
Reptiles												
Removal of refugia (e.g., debris piles, logs etc.)								■	■			
Phased clearance of rough grass and field margins	■	■								■	■	■
Tree removal*	■	■								■	■	■
Earth works*	■	■								■	■	■
Dormice												
Two stage clearance of dormouse habitat												
Stage 1	■	■	■									■
Stage 2				■	■	■	■	■	■	■	■	
One stage clearance				■	■	■	■	■	■	■	■	

*if there are no reptile hibernating opportunities

Figure 1, "Biodiversity protection zones"



4. ECOLOGICAL RISK ASSESSMENT

4.1. **Table 2** provides:

- A risk assessment of potentially damaging construction-type activities on biodiversity features.
- Identification of practical measures, both physical and sensitive working practices to protect and avoid negative impacts on biodiversity, including the identification of biodiversity buffer zones. e.g. root protection zones or buffers for nesting birds.
- Where applicable, reference relevant method statements to achieve specific biodiversity outcomes including mitigation measures.
- The location and timing of works to avoid harm to biodiversity features.
- Outline when an ECoW is required to supervise any works.

Table 2, "ECOLOGICAL RISK ASSESSMENT"

Activity	Risk	Control
Site clearance	Spills of fuels & oils or other potential pollutants (e.g. whilst refuelling plant and machinery) leading to harm to wildlife or pollution of watercourses.	Pollution prevention measures: spill kits, bunds etc. for all tools and vehicles; avoidance of storage and works in or close to sensitive habitats. Precautions will include: • Materials with potential to cause harm to the environment will be securely stored in appropriate containers within the temporary construction compound. • Secondary containment will be provided where required: this will include bunds around storage areas designed to accommodate the potential incident with a suitable overage. • All plant and machinery will be inspected and maintained to the appropriate standards, repaired where necessary and wear and tear will be monitored to mitigate the risk of accidental spills. • Provision will be made for containing and recycling water (using settlement tanks) for washing out concrete mixing trucks and plant. • All deliveries to the site will be supervised.
	Damage to retained trees and habitats leading to permanent loss of habitat.	• The following precautions will be taken: • In advance of construction work, the root protection zones of all retained trees and hedgerows will be plotted and fencing erected in accordance with the standards set out in BS5837:2012 as set out in the project's Arboricultural Impact Assessment.
	Noise and vibration causing disturbance to wildlife.	The following precautions will be taken during site work: • The selection of tools and machinery will take account of noise levels. • Vehicles and mechanical plant will be maintained in a good and effective working order and operated in a manner to minimise noise emissions. • The contractor will ensure that all plant complies with the relevant statutory requirements. • Deliveries of plant and materials by HGV to site will only take place by designated routes and within times set out in the planning consent. • Compressor, generator and engine compartment doors will be kept closed and plant turned off when not in use. • Care will be taken when unloading vehicles to avoid un-necessary noise. • Drop heights will be minimised when loading vehicles with materials.
	Killing or injury of animals during vegetation clearance and ground works.	The construction compound will be located on existing hard standing in the courtyard to minimise the potential impacts on vegetation. • The following general good practice should also be applied: • Vegetation will be removed with reference to the timing in Table 1; • Trees with low bat roosting potential will be subject to soft felling techniques (refer to **Figure 2** for tree locations). • Any excavations should be covered when not being worked on. • Excavations should include a ramp to allow any animals which fall in to escape. • Wheels should be checked on machinery before works to ensure no animals have refuged under them. • Any temporarily exposed pipe systems larger than 100mm in diameter should be capped overnight to prevent animals gaining access. • An ecologist to be contact at any point during works if uncertainty or concern arises, or evidence of animal activity is identified.
Lighting	Site and task lighting illuminating vegetation corridors and bat roosting locations at night, which can hinder the movement of wildlife such as bats.	Construction stage lighting will be subject to the following controls: • Suitable fencing to ensure the dark corridors are maintained during the construction phase. • Lights will be LED lights with a warm white colour temperature around 2,700 Kelvin. • Lights will be mounted on columns of the minimum suitable height. • Lights will be selected that have no upward light spill. • Lighting will be directed away from site boundaries. • Lighting will be motion activated (unless continuous light is required for a specific purpose). • Lighting will be switched off at night when not in use.
Dust	Dust falling onto vegetation and leading to reduced plant health or death.	Dust control measures will include: • Minimising the extent of topsoil removal to retain the binding effects of the existing vegetation. • Minimising the duration over which ground is left exposed and re-instating vegetation as soon as practicable after works are completed in that location. • Using water bowsers to provide a water source for the localised control of dust when required. • Precautions when handling and transporting materials. e.g. when tipping and loading.

Activity	Risk	Control
		• A site speed limit of 5mph will be set. • Covering of loads or stockpiles of materials that may generate dust and appropriate storage of dusty materials (such as bags of concrete) within containers where appropriate. • Wheel washing facilities at the site entrance / exit.
Storage of Materials	Materials such as topsoil piles can become inhabited by wildlife such as reptiles and amphibians, which are then at risk of harm when the topsoil is re-used. Construction materials (aggregate, building materials etc.) can damage retained habitats if stored in or close to retained habitat.	• Storage control measures: • Topsoil piles will be stored within the construction area and away from retained vegetation. A buffer zone around topsoil piles, which is maintained free of vegetation, will reduce the risk of them being inhabited by wildlife. • The erection of protective fencing around retained vegetation will prevent the storage of materials in sensitive areas.

5. PERFORMANCE MONITORING AND CORRECTIVE ACTION

5.1. Performance will be monitored to assess compliance and action taken if compliance is not achieved.

5.2. The appointed ECoW will schedule visits periodically during construction, with the timing and frequency to be agreed with the Site Manager to correlate with construction programme.

5.3. The ECoW will maintain a site visit report for each visit, documenting the activities that are taking place and any advice given or implemented. This will provide a record from one visit to the next to ensure that matters raised are appropriately dealt with. This information will be provided to the local authority ecologist.

5.4. Should a non-conformance be identified, corrective action will be implemented immediately. This will be recorded on the site visit reports which will be made available on request.

APPENDICIES

Appendix 1: Breeding Birds Method Statement

Legislation

Under the Wildlife & Countryside Act 1981 (as amended), it's 'an offence intentionally to kill, injure or take any wild bird, or take or destroy their eggs or nest, or damage a nest, while that nest is in use or being built'.

Methodologies During Site Clearance and Construction

Vegetation clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and August inclusive.

If this is not possible then any vegetation that is to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them would have to be delayed until the young have fledged, and the nest has been abandoned naturally.

Appendix 2 –Reptile Method Statement

Common species of reptile and amphibians have been recorded on site during ecological surveys.

Legislation

The four widespread species of reptiles in the UK, comprising adders (Vipera berus), slow-worms (Anguis fragilis), grass snakes (Natrix helvetica) and common lizards (Zootoca vivipara), are protected under The Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly:

- Damage or destroy any structure or place used for shelter or protection;
- Disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- Obstruct access to any structure or place which any such animal uses for shelter or protection.

The legislation therefore requires that, before destroying or removing habitat where reptiles are likely to be present, suitable precautions are taken to ensure that no reptiles are harmed, either through the habitat destruction itself or through the consequences of habitat removal (i.e., the loss of habitat sustaining that population).

Methodologies During Site Clearance and Construction

The following methodologies are to ensure no contravention of legislation and adhering to planning policy relating to reptiles and amphibians.

Toolbox Talk

A toolbox talk will be provided by the ECoW to relevant contractors prior to any works taking place to provide information on the legislative requirements associated with reptiles as well as setting out the methodologies detailed in this method statement.

Habitat Manipulation/Vegetation Clearance

To encourage reptile/amphibian dispersal to the buffer zone via reducing the available suitable reptile/amphibian habitat (refer to **Figure 2** for the location), under the supervision of the ECoW, habitat manipulation/vegetation clearance will be undertaken. This will involve a phased approach (with a period of 48 hours in between each phase) taking place during periods of fine and warm weather (above 10°C with little rain), during the main reptile/amphibian activity season (April to September inclusive):

- Phase 1 - cutting any areas of rough grass to 150-200 mm with arisings removed.
- *Phase 2* – Cut vegetation to ground level and remove arisings; and
- *Phase 3* – Soil scrape.

Should a dismantling of suitable refugia be required (such as rubble or debris piles), it should be untaken outside the gravid period (May to July) and will be supervised by the ECoW.

Receptor Site

Should any reptiles/amphibians be found during the mitigation works, they will be translocated to the retained habitats within the woodland or hedgerows.

Appendix 3: Dormouse Method Statement

Legislation

Dormice are protected under the EU Habitats Directive, which is transposed into UK law through *The Conservation of Habitats and Species Regulations 2017*. Additionally, dormice are protected under *The Wildlife and Countryside Act 1981* (as amended).

These regulations protect dormice from:

- Deliberate capturing, injuring, or killing;
- Deliberate disturbance; and
- Damage to or destruction of breeding sites and resting places.

The legislation therefore requires that, before destroying or removing habitat where dormice are likely to be present, suitable precautions are taken to ensure that no dormice are harmed, either through the habitat destruction itself or through the consequences of habitat removal (i.e. the loss of habitat sustaining that population).

Toolbox Talk

A toolbox talk will be provided by an appropriately licensed Ecological Clerk of Works (ECoW) to relevant contractors prior to any work that could harm dormice, taking place to:

- Provide information on the protection afforded to dormice;
- Describe the areas in which they may be found; and
- Explain what to do should any of these animals be encountered when an ECoW is not present.

Pre-Commencement Site Check

Prior to the commencement of any vegetation clearance, a site walkover in suitable dormouse habitat will be conducted by a suitably qualified ECoW to determine any significant changes to habitats supported by the site with the respect to dormice.

Sensitive Vegetation Clearance

Vegetation clearance will be undertaken in a sensitive manner to mitigate the potential impact on dormice.

Vegetation clearance will take place following either a two-stage winter clearance or, for small areas, a single stage summer clearance methodology (Bright et al., 2006), determined case-by-case for each area of vegetation on site using information from previous survey results.

Two Stage Clearance

All areas of dormouse habitat not being retained will be removed via two stage clearance.

The first stage will take place in winter, between November and March, and will involve the clearance of above-ground vegetation. The second stage will begin no earlier than May and will involve below-ground clearance.

A suitably qualified ECoW will carry out a pre-commencement check for dormice or their nests immediately prior to the clearance of suitable vegetation.

Trees and shrubs considered suitable for future translocation will be identified and marked up prior to commencement of clearance works.

Clearance works will be overseen by a suitably qualified ECoW.

In the very unlikely event that a torpid dormouse without dependant young is found during clearance works it would be relocated to a suitable protected area of retained habitat.

Should an active dormouse winter nest be encountered, clearance works will cease within a suitable buffer from the nest and will recommence no earlier than May. Habitat connectivity will be maintained between the hibernation site and an adjacent area of suitable retained habitat throughout this period. Where necessary, brash piles will be created between the nest and the suitable retained habitat to facilitate foraging and dispersal.

Should an active (non-torpid) dormouse be encountered, clearance works will temporarily cease. The dormouse will be given adequate time to disperse away from the area and towards retained habitat before the clearance works re-commence.

Above-ground vegetation will be removed as follows:

1. Vegetation will be removed using hand-held tools/machinery slowly and carefully, and in a direction towards retained habitat to aid dispersal of wildlife potentially remaining; and
2. All woody vegetation including trees, shrubs, and scrub to be removed will be cut down to heights of between 30cm and 50cm above ground level and in a direction towards retained vegetation.

Brash will remain in situ for 24 hours following clearance, to allow for dispersal of wildlife. Brash will then be re-used to maintain habitat connectivity, taken off site or waste chipped and stored away from vegetated areas.

Vehicles will avoid tracking across areas subject to clearance and will instead be confined to the hedgerow edges and field interiors utilising long-reach machinery where required.

Second stage, below ground clearance, can commence from April. All below-ground material including tree stumps, root balls, buried rubble etc. will be lifted out using a tracked excavator in a sensitive manner to ensure no significant disturbance to soil and adjacent retained habitat.

Second stage clearance works will follow the methodologies listed for single stage summer clearances.

If any specimens are translocated, such material will be excavated to a depth appropriate to root depth. Specimens will be gently lifted to ensure the root ball is fully intact and transferred to the receptor trench for replanting at similar heights to its initial state. Specimens will be backfilled with topsoil to ensure no roots are left exposes, with soil firmed and sufficiently watered.

Following completion of the above and below ground clearance works the site area will be released to allow the commencement of the construction works.

Single Stage Clearance

If any areas of habitat suitable for dormice need to be cleared in summer this will be done a single-stage clearance between September and October, and in areas of sub-optimal dormouse habitat only.

Single stage clearances involve the completion of both above-ground and below-ground vegetation clearance during the dormouse active season, whilst avoiding the breeding season and hibernation season. This will encourage active dormice to move away from the habitat being cleared and towards retained vegetation.

A suitably qualified ECoW will carry out a pre-commencement check for dormice or their nests immediately prior to the clearance of suitable vegetation.

Clearance works will be overseen by a suitably qualified ECoW.

Should an active (non-torpid) dormouse be encountered, clearance works will temporarily cease. The dormouse will be given adequate time to disperse away from the area and towards retained habitat before the clearance works re-commence.

In the unlikely event that a dormouse breeding nest containing young is encountered, clearance works will cease within a 10m radius of the nest until all young have independently dispersed. Habitat connectivity will be maintained between the breeding site and an adjacent area of suitable retained habitat throughout this period with no clearance works continuing here. Where necessary, brash piles will be created between the nest and the suitable retained habitat to facilitate foraging and dispersal.

Above-ground vegetation will be removed as follows:

- Vegetation will be removed using suitable tools/machinery only and in a direction towards retained habitat to aid dispersal of wildlife potentially remaining. An ECoW will work with the contractor to declare habitat sections as being clear following completion of a thorough check prior to clearance; and
- All woody vegetation including trees, shrubs, and scrub to be removed will be cut down to heights of between 30cm and 50cm above ground level and in a direction towards retained vegetation.
- Brash will remain in situ for 24 hours following clearance, to allow for dispersal of wildlife. Brash will then be taken off site or waste chipped and stored away from vegetated areas.
- Vehicles will avoid tracking across areas subject to clearance and will instead be confined to the hedgerow edges and field interiors utilising long-reach machinery where required.
- Below-ground vegetation will commence immediately after above-ground clearance and will be removed as follows:

- A pre-commencement check by a qualified ECoW of all remaining above-ground vegetation for dormice or their nests will be carried out;
- Should a dormouse be found during the works it will be persuaded to be move away from the working area and towards suitable retained vegetation;
- In the unlikely event that a dormouse breeding nest with dependent young is encountered, clearance works will cease within a 10m radius of the nest until all young have independently dispersed. Habitat connectivity will be maintained between the breeding site and an adjacent area of suitable retained habitat throughout this period. Where necessary, brash piles will be created between the nest and the suitable retained habitat to facilitate foraging and dispersal;
- Thereafter, all below-ground material including tree stumps, root balls, buried rubble etc. will be lifted out using a tracked excavator in a sensitive manner to ensure no significant disturbance to soil and adjacent retained habitat; and
- Any such excavations that occur within the root protection zone of retained vegetation will be undertaken by hand and backfilled as soon as possible.

Following completion of the above and below ground clearance works the site area will be released to the Developer to allow the commencement of the construction works.

Appendix 4: Roosting Bats

Several trees have low potential for roosting bats. Should they require removing they will be subject to this method statement.

Legislation

In summary, all UK bat species are protected by the Conservation of Habitats and Species Regulations2017 and by the Wildlife and Countryside Act 1981 (as amended). It's an offence to deliberately, intentionally or recklessly:

- Kill, injure or capture a bat;
- Disturb bats in such a way as to be likely significant to affect:
    - the ability of any significant group of bats to survive, breed, or rear / nurture their young; or
    - the local distribution of that species.
- Damage or destroy any breeding or resting place used by bats; or

Obstruct access to any place used by bats for shelter or protection and disturbing bats while occupying such as place.

Pre-commencement survey

Trees subject to removal should have a pre-commencement survey undertaken prior to removal. Including an inspection with an endoscope if required.

Toolbox Talk

A toolbox talk will be provided by the ECoW to relevant contractors prior to any works taking place to provide information on the legislative requirements associated with roosting bats as well as setting out the methodologies detailed in this method statement.

Methodologies During Site Clearance and Construction

Soft felling techniques will be undertaken on any trees to be removed which have been rated to have low potential for roosting bats. Soft felling techniques will involve a sectional felling technique where the tree is cut down in phases and each section of tree is lowered carefully to the ground. The works will be undertaken outside the typical hibernation period (November – February inclusive) and the maternity period (April - August inclusive).



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