

# Construction Environment Management Plan
# CEMP (Biodiversity)

**Bleachcroft Way, Barnsley**

**Harron Homes**

**ER-4066-10**

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| Report Reference: | Construction Environment Management Plan<br>CEMP (Biodiversity)<br>Bleachcroft Way, Barnsley |
| Report Reference: | ER-4066-10 |
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| Date: | 27/ 3/2023 |

The information which we have prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions. This report does not constitute legal advice.

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# Introduction

This CEMP (Biodiversity) is produced to show how the proposed development can be built out without impacting on important ecological features during construction.

This document is produced with reference to British Standard 42020 Clause 10.2 Construction Environment Management Plan (CEMP). The purpose of a CEMP (Biodiversity) is to identify risks to biodiversity during the construction phase, evaluate the level of risk and supply methods for the management of these.

In producing this plan, the following information sources are referred to:

- Proposed Site Layout, Harron Homes Dwg. PL-001 Rev U Jan 2023
- Ecological Impact Assessment , Brooks Ecological Ref ER-4066-04C Oct 2021
- Biodiversity Management Plan, Brooks Ecological Ref ER-4066-07A Jan 2023
- Woodland Restoration Plan, Dob Syke. Brooks Ecological R-4066-09b Jan 2023
- Arboricultural Method Statement inc. Tree Protection Plan, JCA Ltd JCA Ref:16747-D/AJB. 2022

## Responsible Persons & Lines of Communication

An Ecological Clerk of Works (ECoW) will be appointed by Harron Homes (the Developer) prior to any activity commencing on site.

The Developer will formalise lines of communication with the ECoW establishing who within their operation is responsible for actions on site prior to any work commencing. These links will be maintained until such a time as a Site Manager is appointed and assumes this responsibility.

The Developer is responsible for maintenance of protection and exclusion fencing, however the ECoW will check fencing on each visit and immediately bring issues to the attention of the Project Manager or Site Manager

The Developer is responsible for compliance with regulations, legal consents, planning conditions, environmental procedures and contractual agreements and the issuing of periodic reports on success and compliance. These periodic reports will feedback into the CEMP for







**Figure 1**– Development plan (above) and development area (right)

the subsequent phase(s) and the Developer will ensure the results of this review are effectively communicated to on-site staff.

### The Role of an Ecological Clerk of Works

The ECoW will be a suitably trained and experienced professional ecologist who is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

The ECoW will carry out all ecological surveys and watching briefs.

The ECoW will deliver a tool box talk to site workers prior to any clearance commencing.

The ECoW will make periodic monitoring visits to check the integrity of any fencing and monitor site activities (pollution control). On each visit to the site, the ECoW will monitor the activities and assess for compliance with this CEMP (Biodiversity).

A Site Inspection Certificate will be issued to the Developer following this with any recommendations highlighted. The Developer will take all measures necessary to comply with the recommendations. ECoW visits will be carried out according to Site conditions The Site Manager will call the ECoW to site as soon as any of the following emergency events occur:

<u>Encountering protected species</u>

Should any protected species (or nesting birds) be encountered during any phase the ECoW will be consulted. Any advice provided to ensure that wildlife offences are not committed will be followed. This could include curtailing works in part or all the site until appropriate species mitigation, licensing or agreed avoidance measures be secured.

<u>Damage to retained habitats</u>

The Site manager will follow the advice of the ECoW to ensure that the careful like for like restoration of habitats damaged is enacted in the first available season. This may include replanting, re-seeding and appropriate establishment management.

<u>Spillage of chemicals</u>

The Site Manager will follow the CEMS produced by the main contractor for the Site

# Constraints

The Ecological Impact Assessment (EcIA), undertaken in October 2021 assessed the biodiversity impacts to the species and habitats present with in the site. The EcIA also set out mitigation required to address these impacts at the clearance, construction stages of development which are relevant to this plan.

Some preliminary clearance of the site has been undertaken in 2021 with ecologist advice and targeted surveys to ensure of protected species including badger were adequately assessed and mitigated.

Some accidental clearance to woodland along the Dob Syke corridor is being addressed though a specific Woodland Restoration Plan which should be read in conjunction with this CEMP to ensure restoration areas are adequately identified and protected.

Though not identified as a constraint in the EcIA, precautions to protect reptiles have also been advised in response to LPA ecologist concerns. This advice has been carried forward into this plan.

Proposed mitigation is summarised as follows.

- A method for working close to the outlier badger set, this may include licensed closure of the set if required.;
- Protective fences to avoid damage to retained or off-Site habitats;
- Silt fencing or similar to avoid pollutants of sediments reaching sensitive retained or off-Site habitats;
- Precautions required in relation to nesting birds or the potential for bat roosting in trees;
- Clearance methods to reduce risk of harm to reptiles during site clearance.

**Table 1** Ecological constraints

| Habitat/ Feature | Protected/ Notable species |
|---|---|
| Dob Syke | Badgers |
| Retained trees and woodland | Bats (using the site) |
| | Nesting birds (potential) |
| | Reptiles (potential) |

**Typical Impacts from Construction**

Impacts on biodiversity features and associated fauna fall into the following broad categories:

- Vegetation clearance;
- Soil stripping;
- Re-spreading soil and stored materials; and
- Noise generation and disturbance.

**Construction Stages**

**i) Site clearance and soil stripping**

Trees and woody vegetation are usually removed by a forestry or arboricultural contractor using either a large driven mulching machine which chops arisings and incorporates with the soil, or locally by hand machinery with material being chipped and spread, piled or removed.

Large excavators scrape back soil to create clear development platforms. Topsoil is taken by dumper to soil stores on Site, where it can be left for many months before being reused on Site.

This phase presents the greatest risk to nesting birds and the health of retained hedgerows and trees.

**ii) Installing drainage**

Creating drainage will require localised vegetation clearance away from the development platforms. Machinery will excavate trenches for pipes and the trenches will be backfilled and seeded. This process is anticipated to be completed within 1 month of commencing.

**iii) Installing roads and sewers**

This is normally completed by a contractor digging into the cleared development platforms as the first construction activity.

**iv) Building out cleared plots**

Creation of show home, then phased construction of plots according to market demand in approximately 2-3 years.

Typical activities which require Ecological Clerk of Works (ECoW) overseeing are likely to be; clearing any remaining bird nesting habitat or clearance of soil stores (which could have been used by fauna such as badger /fox).







**Figure 2**– Old canal corridor (top), Dob Syke (middle), potential badger habitat (bottom)

# Risk Assessment of Potentially Damaging Development

## High Risk

### Interfering with a badger sett contrary to the Protection of Badgers Act (1992)

Preliminary ecological survey identified evidence of badger utilising the development area and subsequent surveys in 2021 prior to clearance of vegetation required for archaeological investigation identified old setts to the south of the site associated with the Dob Syke corridor. Further pre-clearance badger checks were recommended prior to further vegetation clearance.

### Control 1 : Survey and supervision

**Survey:** Prior to site clearance work commencing the area identified right will be subject to a badger survey. If a badger sett is found it will be marked out on the ground by the ECoW using temporary barrier fencing and pins and notices will be erected advising of a No Works Area. The Developer or their appointed contractor will follow all advice supplied by the ECoW in terms of the need for and approaches to licensing or supervision of works in proximity to any identified sett.

**Supervision:** In areas where vegetation is too dense to allow the ECoW to conclude likely absence of a sett the ECoW will supervise vegetation clearance. Only hand held brush cutters will be used in these areas. The ECoW will direct cutting until such a time they are can conclude no badger sett is present.








# Risk Assessment of Potentially Damaging Development

## High Risk

### Destroying bird nests

Works which require the removal of trees and scrub, rough grass and old arable present a moderate risk of affecting nesting birds contrary to the Wildlife and Countryside Act (1981). The whole site has potential for nesting birds to be present.

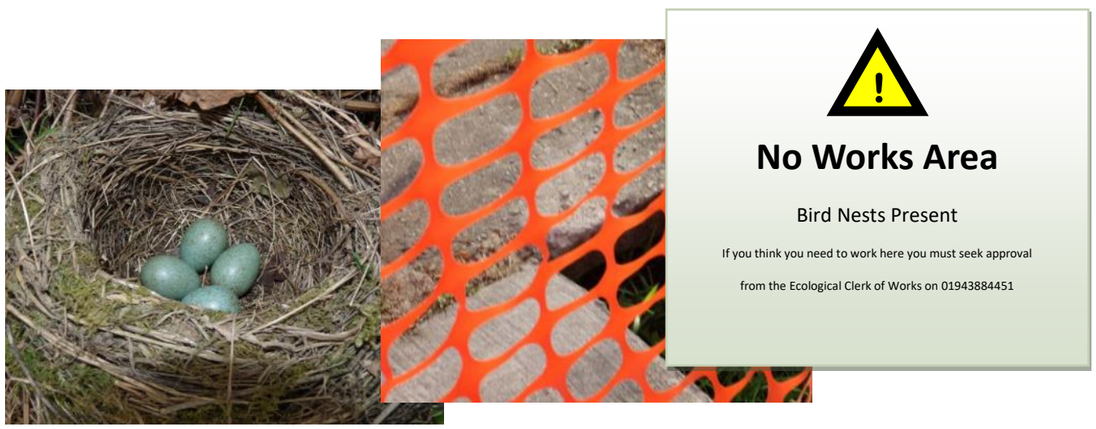
### Control 2 : Timing and Survey

The site will be cleared outside of the bird nesting season (in period October-February).

### Control 3 : Survey

Where this is not possible or sections have been missed and need to be cleared in the period March to September the ECoW will carry out nesting surveys of the vegetation to be affected. The area illustrated right is subject to this control.

If nests are found these will be demarcated on the ground and works will avoid them until birds have fledged or abandoned the nest. An ecologist inspection report will be produced before works continue.
In areas where vegetation is too dense to allow the ECoW to conclude likely absence of a nest the ECoW will supervise vegetation clearance. Only hand held brush cutters will be used in these areas. The ECoW will direct cutting until such a time that she/he is happy that no nests are present .






# Risk Assessment of Potentially Damaging Development

## High Risk

### Unnecessary damage to retained trees and Biodiversity Protection Zone

Without protection in place development poses a high risk of affecting retained trees and boundary habitats within the Dob Syke corridor and other retained boundary habitats. These habitat areas constitute a Biodiversity Protection Zone that requires protection throughout the constructions phase. The Woodland Restoration Plan identifies areas to the south eastern boundary with Dob Syke to be protected and restored.

### Control 4: BS5837 fencing

1. Fencing according to the site's Tree Protection Plan (TPP) and the zone identified in the Woodland Restoration Plan will be followed. The fence lines shown in the figure right are illustrative only.
2. Fencing will be installed prior to site clearance following the plan in the TPP.
3. Fencing position will be checked by the ECoW prior to site soil stripping.






# Risk Assessment of Potentially Damaging Development

## Moderate Risk

### Harming Reptiles

Works which require the clearance of rough grass are at moderate risk of affecting reptiles contrary to the Wildlife and Countryside Act (1981).

Grass snake or other reptiles have been assessed as low potential for presence within the site but the LPA ecologist has recommended directional clearance as a precaution. Peripheral retained habitat is more favourable than central areas to be cleared and provides suitable refuge for individuals that may be displaced through clearance.

### Control 5: Directional clearance

1. Directional clearance should be undertaken between mid-April and mid-September during suitable weather conditions when the daytime temperature is above 10˚C.
2. Vegetation will be cleared in such a way that reptiles could take flight and head for safe cover in retained, or off-Site habitat, rather than be trapped in areas being cleared.
3. An initial clearance from the centre towards the boundaries with the cutter set to 200mm will protect reptiles yet create considerable disturbance.
4. The Site will be left for c. 2hrs and a walkover by the ECoW will take place.
5. A final directional clearance with cutter set to 50mm will then create additional disturbance and leave unsuitable habitat conditions. Provision to prevent re-entry of reptiles (such as fencing) to the Site is not considered necessary here.



# Risk Assessment of Potentially Damaging Development

## Moderate Risk

### Disturbance to Nocturnal Fauna

Without precautionary controls in place artificial lighting used during works poses a moderate risk of causing disturbance to bats and other nocturnal animals which are present in peripheral off-site habitat areas. These areas comprised of woodland to the south, the Dob Syke corridor, the old canal basin to the east and the railway corridor to the west,  are more likely to be of value to bat species as foraging and commuting areas where adverse lighting could reduce the value of these habitats to bats and other species.





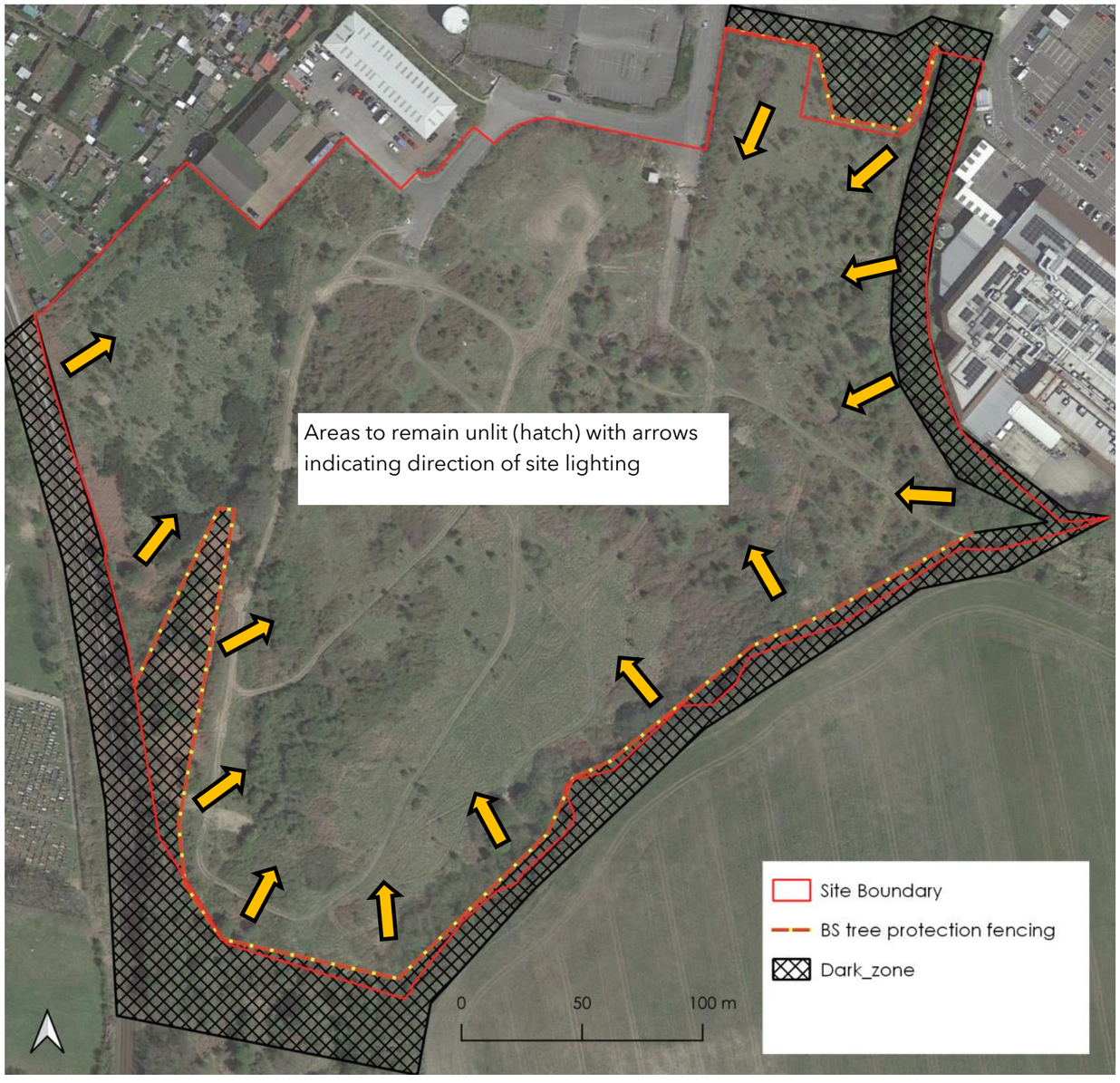
Illustrative example of directed lighting.

### Control 6:  Site Lighting controls

These controls provide measures to remove light spill into the biodiversity protection zones indicated in the plan right, and maintain these as protected dark zones. Lighting can be controlled through a variety of mechanisms which control the location, height, direction, intensity, duration, frequency and beam of light sources.

1. If the Site is to be trafficked at night or used for operations such as welding at night, perimeter fencing adjacent to the dark zone should incorporate light screening material construction to prevent headlight  illumination, or arc lighting.

2. On-site construction lighting to be directed away from the protected dark zones throughout the construction phase through considered placement of lighting towers and use of directional lighting baffles.



# Risk Assessment of Potentially Damaging Development

## High Risk

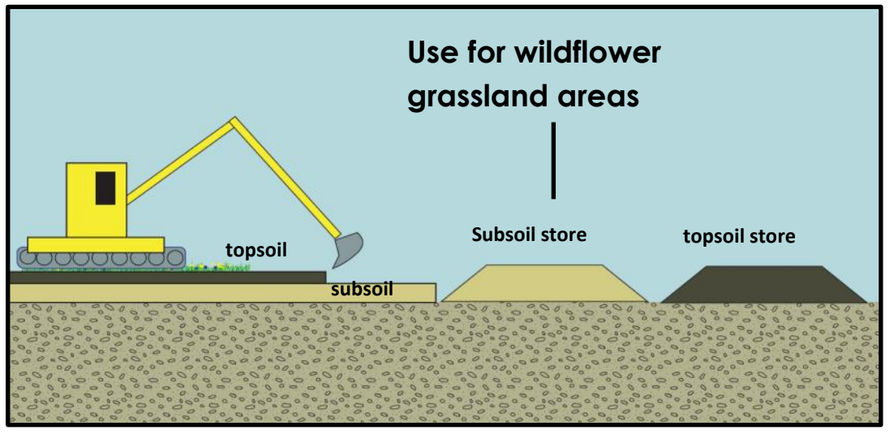
### Failure of made wildflower grassland habitats

Please see Biodiversity Management Plan (ER-6475-02) for detail on wildflower area establishment .

Effective habitat creation and reinstatement, depends on correct soil handling procedures. If stripped stores are re-spread without due care it is unlikely to be possible to create target habitats and may lead to degraded and problematic habitats which require significant interventions to rectify. Wildflower grasslands almost all need low nutrient soils so re-spreading topsoil on wildflower grass areas is likely to lead to failure as weeds establish and course grassland develops that cannot be easily cut and removed. Wildflower grassland created on correctly handled, low nutrient soils is much more easily managed and will save money and resources.

### Control 7: The role of the ECoW

- During site stripping the ECoW will help identify suitable on-site soil/ subsoil. This will be stored in a suitable location on site fenced and marked as soil for wildflower grassland. The ECoW will verify this action.
- Prior to spreading this or any replacement soil in areas marked for wildflower grassland the ECoW will be contacted to assess its condition and suitability for use and tested for correct mineral content. The soil will be rejected if it does not meet the correct mineral content or is seen or suspected to be heavily weed or weed seed infested.
- Any replacement brought to site will be subject to the same testing and ECoW approval.







**Soil stores**

Clearly labelled and separated from subsoil in locations to be agreed.

**Location notes**

Locate away from obvious weed source (such as main topsoil store or sheet to prevent weed colonisation.

# Work Schedule

The work schedule below outlines when the tasks required should be carried out, and whether input is required from the ECoW.

| Task | ECoW to direct | ECoW to carry out | At Setting out stage | Prior to any work in identified areas | Other timing considerations |
|---|---|---|---|---|---|
| Control 1: Badger Survey and Supervision | | Yes | | Yes | |
| Control 2&3 Nesting birds survey and controls | | Yes | | Yes | Vegetation clearance carried out 1st March to 31st August requires pre-start nest survey. |
| Control 34Tree and Biodiversity Protection Fencing | | | Yes | | During or after controls 1 and 2 |
| Control 5 Directional clearance to protect reptiles | Yes | | | Yes | Mid April–Mid September |
| Control 6 Lighting Plan controls | | | | Plan in place | Lighting controls adjusted through season as required |
| Control 7–ECoW advice on meadow soils | Yes | | Yes | | Prior to soil stripping to identify suitable soils for meadow creation. |
| ECoW monitoring and reporting. | | Yes | | Yes | Monitoring visits through construction phase<br><br>Provide suitable notice to arrange Site visits |
| ECoW available for unforeseen issues and supervision | | Yes | Yes | Yes | |