

Construction Environment Management Plan (CEMP: Biodiversity)



Darton Lane, Darton

Report Ref. ER-6517-10

February 2024

Report Reference:	Construction Environmental Management Plan (CEMP: Biodiversity) Darton Lane, Darton
Report Reference:	ER-6517-10
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Introduction

This document is produced to show how the Site can be built out without significant impacts on important ecological features.

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:

- Preliminary Ecological Appraisal Report, Ref. ER-6517-01A (Feb. 2022). Brooks Ecological.
- Biodiversity Net Gain Assessment, Ref. ER-6517-02C (Mar. 2024). Brooks Ecological.
- Bat Activity Survey, Ref. ER-6517-03A (Sep. 2023). Brooks Ecological.
- Reptile Survey Report, Ref. ER-6517-04A (Sep. 2023). Brooks Ecological.
- Badger Assessment & Report, Ref. ER-6517-05 (Aug. 2023). Brooks Ecological.
- Breeding Bird Survey, Ref. ER-6517-06 (Aug. 2023). Brooks Ecological.
- Invertebrate Survey, Ref. ER-6517-07 (Nov. 2023). Brooks Ecological.
- Great Crested Newt eDNA Site Inspection Report, Ref. SI-6517-01 (Jul. 2023). Brooks Ecological.
- Grassland Site Inspection Report, Ref. SI-6517-02 (Aug. 2023). Brooks Ecological.
- Arboricultural Impact Assessment, plus Tree Survey, Ref. AR-6517-02 (Feb. 2023). Brooks Ecological.
- Planning Layout, dwg no. 2239.01 Rev. AE (Feb. 2024). Duchy Homes.
- Horizontal Illuminance of Footpath link, Ref. OP000223661 LD19038 (Jul. 2023). Schreder.
- Darton Lane Street Lighting Design, Street Lighting Proposals, dwg no. SL20-108_1300_1 (Jul. 2023). Barnsley Council.

Responsible Persons & Lines of Communication

An Ecological Clerk of Works (ECoW) will be appointed by Duchy Homes prior to any activity commencing on-Site.

Duchy Homes 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.

Duchy Homes 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.

Duchy Homes 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 feed back into the CEMP for the subsequent phase/s, and Duchy Homes 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 toolbox 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 Duchy Homes following this with any recommendations highlighted. Duchy Homes 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:

Encountering protected species

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 can be secured.

Damage to retained habitats

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.

Figure 1 Site Location.



Figure 2 Site Layout.



Constraints

A Preliminary Ecological Appraisal was undertaken in January 2022 by Brooks Ecological; from this, a suite of detailed further surveys were recommended and subsequently undertaken across 2023.

Designated Sites

A desk-based study confirmed that there are no statutory designated sites present within the Site's Ecological Zone of Influence (EZOI).

Three non-statutory designated sites fall within a 2km radius; however, only one of these lies within the Site's EZOI. This is Mapplewell Tip LWS (Local Wildlife Site), which is located immediately southeast of the Site. Measures will need to be put in place to avoid impacts on this LWS.

Habitats

The Site comprises primarily unmanaged neutral grassland, which is generally species-poor to the centre and east, and moderately diverse to the west. Mixed scrub, hedgerows and scattered trees are present along the field boundaries, whilst a flush is present between the central and western field, and two ephemeral ponds are present within the easternmost field.

Protected Species

A full suite of protected/notable species surveys were undertaken at the Site, to support the planning application.

These surveys confirmed the likely absence of great crested newt, badgers and reptiles from Site.

Bat activity survey recorded low to moderate levels of bat activity on-Site, mostly attributed to common pipistrelle, with other species being recorded in low abundance. The Site is unlikely to be a significant foraging resource for local bat populations, but due to its linear nature is likely to be of higher value as a commuting corridor.

Breeding bird surveys recorded four Red List species, seven Amber List species, and 13 Green List species, with most of the Red and Amber listed birds being distributed across the Site boundary features of woodland to the south, hedgerow, tree lines and scrub.

The invertebrate survey identified a wide variety of invertebrates on-Site, with a reasonable number of uncommon species. No rare species requiring bespoke mitigation were recorded.

Invasive Species

No Invasive Non-Native Species (INNS) listed on Schedule 9 of the Wildlife and Countryside Act (1981) were identified on-Site.

Table 1 Ecological constraints.

Habitat/Feature	Protected/Notable species
On-Site grassland	Nesting birds
On-Site trees	Badgers
Off-Site woodland & Mapplewell Tip LWS	Bats
	Fauna generally

Habitat Plan (UK Habs)



Impacts

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.

iii) Construction of buildings, hard surfaces & sports pitches

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

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).

Risk Assessment of Potentially Damaging Development

High Risk

Unnecessary damage to retained vegetation, both on- and off-Site.

A large area of existing grassland to the western end of the Site will be retained *in situ* under the proposals. Without adequate protection in place, construction activities pose a significant risk of damaging or degrading this habitat unnecessarily, which would have consequent effects on the Biodiversity Net Gain Assessment.

Several boundary trees, as well as the off-Site woodland (south) and Mapplewell Tip LWS (southeast), will also need to be protected during construction.

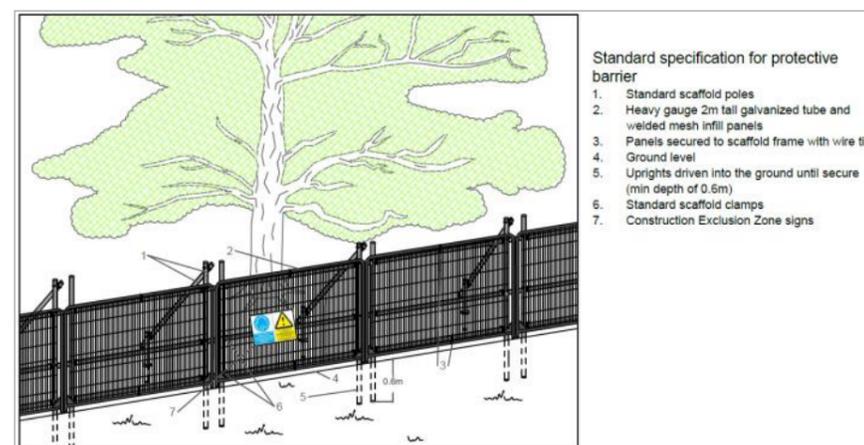
Control 1: BS5837 fencing

The Site's Arboricultural Impact Assessment (AIA) identifies the root protection areas for the retained boundary trees and groups of trees, and sets out the exact location/requirement for tree protection fencing within Drawing DR-6517-02 Tree Protection Plan; see Brooks Report AR-6517-02 for full details.

The location of fencing within the Tree Protection Plan (TPP) has been adapted within the western half of the Site, in order to encompass the retained grassland.

Fencing will be installed prior to site clearance.

Fencing position will be checked by the ECoW and lead Arboricultural Consultant prior to site soil stripping.



Risk Assessment of Potentially Damaging Development

High Risk

Destroying bird nests

Initial clearance works impacting on any areas of rough or woody vegetation present a significant risk of affecting nesting birds contrary to the Wildlife and Countryside Act (1981).

The areas shown in orange on the plan opposite have the potential for nesting birds to be present.

Control 2: Timing and Survey

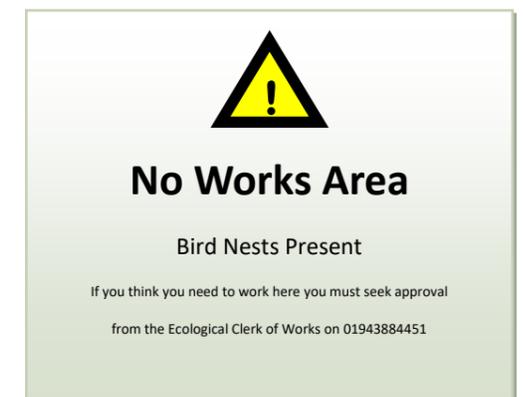
Where feasible, vegetation will be cleared outside of the bird nesting season (in period September-February).

Control 3: Survey

Where this is not possible, or sections have been missed and need to be cleared in the period March to August (inclusive), the ECoW will carry out nesting surveys of the vegetation to be affected. The area shaded orange opposite 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 confirming this 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 they are happy that no nests are present.



Risk Assessment of Potentially Damaging Development

Low Risk

Interfering with a badger sett contrary to the Protection of Badgers Act

Although no evidence of badger setts or activity was found by Brooks Ecological during the course of previous surveys, it was recognised that the surrounding woodland presents suitable badger habitat, and there is a risk that this species could move into the Site prior to development commencing. A precautionary approach to this species is therefore recommended.

Control 4: Pre-commencement Survey & Precautions

Survey: Prior to site clearance work commencing, all land within the development footprint and surrounding woodland habitat (30m radius from barrier fencing) will be subject to a precautionary, pre-commencement 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 Site Manager 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.

Standard precaution: Even where evidence of badger activity is not found during the pre-commencement survey, there is always a risk that badgers can move into the Site at any time during the construction phase.

The Site Manager should therefore be vigilant for signs of badger activity appearing on-Site. Prior to re-working soil stores, contractors should be advised to check for mammal holes; should any be found, the ECoW should be asked for advice before proceeding.

Where possible, trenches/excavations should not be left open overnight. Where this is unavoidable, a means of escape should be fitted to the excavation in the form of an earth ramp of scaffold board.



Risk Assessment of Potentially Damaging Development

Low Risk

Injuring/killing wildlife, i.e. reptiles and small mammals

Surveys undertaken in 2023 demonstrated a likely absence of reptiles within the red line boundary. Despite this, reptiles are recorded locally, and the Site is well connected to areas of suitable reptile habitat such as Mapplewell Tip LWS.

The Site also has the potential to support small mammals such as hedgehog, which could be injured or killed without suitable controls being put in place for site clearance.

Control 5: Destructive Search & Directional Clearance

Destructive search: Prior to site clearance, an appropriate sized team of ecologists will carry out a hand search for wildlife (reptiles and small mammals) in all suitable refuges, including leaf litter, rubble/log piles, and any other natural or man-made debris that provides cover.

Any animals found will be rescued and released in suitable habitat beyond barrier fencing to the southwest corner.

Directional clearance: Areas of rough vegetation (marked purple in the right-hand figure) will be cleared in such a way that wildlife can take flight and head off into safe cover rather than be trapped in areas to be cleared later, or forced out into unsuitable habitat such as roads and hardstanding.

The figure opposite shows the recommended direction of vegetation clearance.

Prior to vegetation works commencing, the ECoW will deliver a toolbox talk to contractors, and will oversee the start of clearance works.



Risk Assessment of Potentially Damaging Development

Moderate Risk

Disturbance to Nocturnal Fauna

Without precautionary controls in place, artificial lighting used during works poses a risk of causing disturbance to bats and other nocturnal animals which are present in peripheral habitats.

Control 6: Lighting plan

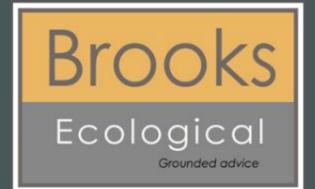
A strategic plan to control artificial lighting during construction and beyond will need to be devised, so as to remove/limit light spill into the zones indicated in the plan right, and maintain these as protected dark zones.

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.
3. The Site's Lighting Strategy will demonstrate the avoidance of impacts to these areas during operation, as seen in the figure opposite.



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
<u>Control 1</u> Tree Protection Fencing			Yes	Yes	Prior to any works commencing on-Site.
<u>Controls 2 & 3</u> Nesting birds survey		Yes		Yes	Prior to any vegetation clearance or ground works during nesting season (1st March–31st August).
<u>Control 4</u> Pre-commencement check (Badger)		Yes		Yes	Prior to any ground works commencing.
<u>Control 5</u> Destructive search and directional clearance		Yes		Yes	Prior to vegetation clearance.
<u>Control 6</u> Sensitive Lighting Strategy					To be in place for duration of construction phase/s.
ECoW monitoring and reporting		Yes		Yes	
ECoW available for unforeseen issues and supervision		Yes	Yes	Yes	Provide suitable notice to arrange Site visits.