Land rear of 5 Woods Road
Caversham
Reading

Construction Environmental Management and Enhancement Plan (CEMP: Biodiversity)

Ref: R3587/b

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1 INTRODUCTION

1.1 Project Background

1.1.1 John Wenman Ecological Consultancy LLP was commissioned by Bockmer Developments to produce a Construction Environmental Management Plan focusing on protection of site biodiversity (CEMP: Biodiversity) to ensure compliance with relevant legislation and the planning conditions relating to redevelopment of the land to the rear of 5 Woods Road in Caversham, Reading in Berkshire, and to prepare a biodiversity enhancement plan for the site (refer to proposed plans in **Appendix 1**).

1.1.2 Planning approval issued by Reading Borough Council stipulated the following conditions (Planning Application Reference 220451):

No development shall take place (including ground works, vegetation clearance) until a construction environmental management plan (CEMP: Biodiversity) has been submitted to and approved in writing by the local planning authority. The CEMP (Biodiversity) shall include the following:

a) Risk assessment of potentially damaging construction activities.
b) Identification of "biodiversity protection zones".
c) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements).
d) The location and timing of sensitive works to avoid harm to biodiversity features
e) The times during construction when specialist ecologists need to be present on site to oversee works.
f) Responsible persons and lines of communication.
g) The role and responsibilities on site of an ecological clerk of works (ECoW) or similarly competent person.
h) Use of protective fences, exclusion barriers and warning signs.

The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the local planning authority.
Reason: To ensure that wildlife using the site is not adversely affected by the proposed development.

No development shall commence on site until details of biodiversity enhancements, to include two bird boxes and two integral bat boxes, tiles or bricks on each of the new buildings, reptile refuges and native and wildlife friendly landscaping (including gaps at the bases of fences to allow hedgehogs to traverse through the gardens), have be submitted to and approved in writing by the council. The biodiversity enhancements shall thereafter be installed as approved prior to first occupation of each dwelling.

1.1.3 This report considers and relies on information previously published in the Preliminary Ecological Appraisal (PEA) and updated PEA, which are recorded separately (R2746/a; April 2021) and (R3036/a; February 2022).

1.2 Description of Development Site

1.2.1 The land covers an approximate area of 0.07 hectares and is located to the rear of 5 Woods Road in Caversham, Berkshire (OS grid reference: SU 73001 75723).

1.2.2 The land is the rear garden of the 5 Woods Road. It is situated in a suburban area between neighbouring residential plots and backs onto the Henley Road Cemetery.

1.2.3 A detailed site description is given in the previous PEA reports (reported separately – PEA (R2754/a; April 2021 and PEA (R3036/a; February 2022). Additional background detail and site images can also be found in the PEA.

2 ECOLOGICAL BACKGROUND

2.1 Ecological Surveys

2.1.1 To inform the development proposals the following ecological surveys and assessments were carried out.

2.1.2 An ecological walkover survey was undertaken on the 14th April 2021 by Conor Watson - a graduate member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and assistant ecologist. During the survey the habitats present were noted and plotted on a site plan using definitions based on the standard phase 1 definitions. The survey was updated, making use of the UK Habitat Classification system in a walkover completed by Conor Watson on February 14th 2022

2.1.3 Detailed survey methodology, survey findings and assessment of ecological value is presented within the PEA report.

2.2 Desktop Study

2.2.1 As part of the PEA, the Thames Valley Environmental Records Centre (TVERC) was commissioned to undertake a search for any pre-existing records of notable or protected species and statutorily or non-statutorily designated sites held by them for the site and land within a 1 km radius.

2.3 Ecological and Biodiversity Features

2.3.1 The main ecological features identified during the PEA were:

- Existing garden hedgerow on northern boundary (reference 2 in PEA).
- Potential for hedgehogs using the hedgerow (2) and brash/log piles on site (Target notes 1 & 4).
- Potential for individual common reptiles and amphibians within the site using features such as brash piles, and traversing the site; and
- Potential for feeding bats.
- Nesting opportunities for common and widespread bird species in hedgerow and scattered trees.

3 IMPACTS

3.1 Potentially Damaging Activities

3.1.1 Potentially damaging construction activities are listed below. These have been identified from: the proposed site layout as detailed in **Appendix 1** and the proposed construction practices and current guidance on activities/operations likely to result in impacts to ecological features (CIEEM, 2016):

- Movement of machinery and vehicles;
- Site clearance;
- Digging/excavation or infilling;
- Noise;
- Lighting;
- Construction of roads, hardstanding or buildings;
- Laying of pipes and cables;
- Engineering works including drilling.

3.1.2 The expected zone of influence of these activities were considered, along with any potential direct or indirect impacts resulting from the proposed construction activities identified. These include short-term impacts (i.e. disturbance) and long-term impacts (i.e. modification, loss, and fragmentation). An assessment of the impacts of these potentially damaging construction activities on ecological features on site to inform the location of protected areas and the approach to mitigation and are detailed below in **Section 3.2** and **Table 1**.

3.2 Impacts on Ecological Features

3.2.1 Based on the requirements made in the planning condition, and the site-specific ecological factors, this CEMP refers to the potential impacts, and associated risk level of these impacts, on these ecological features:

- Retained trees
- Hedgerow replanting

- Hedgehogs
- Reptiles and amphibians
- Nesting birds

Table 1 – Assessment of impacts of potentially damaging activities on identified ecological features			
Ecological Feature	**Impact Assessment**	**Risk Assessment**	**Location of Risk**
Scattered Trees	Indirect impacts from movement of vehicles, groundworks and storing of materials to retained habitat along boundaries with damage to tree roots during construction affecting tree health and longevity of trees.	During the ground and construction works there is a chance that there could be damage to roots. In the absence of mitigation, the risk is moderate.	Scattered trees on site boundary (Trees 1 – 4).
Bats	Indirect impacts through lighting during construction and when houses occupied.	Impacts possible in the absence of mitigation and risk is low.	Site boundaries
Reptiles and Amphibians	Direct impacts possible during ground clearance of brash and log piles could cause death or injury to sheltering individuals.	Impacts possible in the absence of avoidance measures and risk is low.	Brash and log piles on site (Target Notes 1 & 4). Northern boundary hedgerow (2)
Hedgehogs	Direct impacts possible during ground clearance of brash and log piles could cause death or injury to sheltering individuals.	Impacts possible in the absence of avoidance measures and risk is low.	Brash and log piles on site (Target Notes 1 & 4).
Nesting Birds	Direct impacts through removal of shrub in hedgerow for replanting during the breeding season could damage active bird nests, with potential to result in the death or injury of eggs and young.	Impacts possible in the absence of mitigation and risk is moderate.	Within northern boundary hedgerow (2)

4 CONSTRUCTION & ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

4.1 Scope of Works

4.1.1 The scope of works will involve site clearance to facilitate the construction of the new dwellings and associated hard landscaping. The existing trees will be retained and protected in accordance with the tree protection plan (refer to the CEMP plan in **Appendix 4**).

4.2 Responsible Persons

4.2.1 The landowner and the appointed contractor are responsible for the implementation of this CEMP. During the works, responsibility will be held by contractor's site manager or a suitable delegate to ensure that all personnel working on site are aware and adhere to this CEMP. All personnel working on site will have site inductions and toolbox talks on the potential for protected species to be present on site, of relevant protection measures and the procedure for alerting the Ecological Clerk of Works (ECoW) if any protected species are discovered on site when the ecologist is not present.

4.3 Lines of Communication

4.3.1 John Wenman Ecological Consultancy have been appointed to advise on ecological issues and to act as the Ecological Clerks of Works (ECoW) for the duration of the project. The ECoW will be responsible for:

- Delivering a toolbox talk to inform all site contractors of the ecological constraints and protection measures outlined in the CEMP;
- Providing on-site supervision of works where necessary, as stated in the CEMP (details in **Table 2**); and
- Supplying ad-hoc ecological advice and support as required.

4.3.2 A start up meeting with the site manager will be held where the contents of this CEMP will be discussed. As part of their induction all contractors will be briefed by the site manager about ecology and protected species issues and legislation, and what measures will be taken should protected species be found. A copy of this CEMP will be kept in the site office and will be made available to contractors and staff on request.

4.4 Avoidance, Mitigation and Compensation Measures

4.4.1 All measures detailed in Table 2 follow the established mitigation hierarchy as set out in BS42020:2013 (BSI, 2013). This seeks to firstly avoid all

impacts; mitigate for unavoidable impacts; and as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. All mitigation measures follow current best practice guidance and are appropriate to the degree of impact identified and to the scale of the works.

4.4.2 A Tree Protection Plan (S J Stephens Associates, 2022 – illustrated in CEMP Plan (Appendix 4)) in combination with the location of ecological features identified on site during the ecological surveys, has determined areas to be protected during the construction work, as identified in **Table 1,** to avoid damage and/or disturbance to protected species and habitats, and the layout of the protection areas is presented on an annotated CEMP plan in **Appendix 4.** Additional enhancements are also detailed on the plans in **Appendices 3 & 5**.

Table 2 – Mitigation strategy with timings and locations (with reference to the mitigation hierarchy)				
Ecological Feature	**Avoidance and Mitigation**	**Compensation and/or Enhancement**	**Schedule of Works**	**Location**
Scattered Trees	The retained trees will be protected fenced with tree protection fencing (e.g. Heras panels) that will be set out in accordance with the Tree Protection Plan or through hand digging in root zones (SJ Stephens Associates) (This will ensure the protection of the trees on site from accidental damage during construction activities (see **Appendix4** for CEMP Plan). The fencing will have all weather notices attached to it, with the warning 'Tree Protection Zone – KEEP OUT'. No materials will be stored within this Tree Protection Zone and no activity is to take place within this area. The demolition of the derelict outbuilding on the southern boundary will be done carefully by hand wherever possible and any concrete footings removed by machine but avoiding extensive vehicle movement within the fenced area.	Additional tree planting of native or species of benefit to wildlife will take place to increase the structural diversity and species diversity of the site. The northern boundary hedgerow will be re-planted with a mixture of native shrub species (refer to Site Plan – Landscaping (Spire Architects)	Protective tree fencing will be put in place prior to the commencement of construction works. The fencing will remain in place throughout the construction period.	Scattered trees (1-4).
Bats	During construction, external lighting will be kept to a minimum and if security lighting is required, this will be controlled by passive infra-red motion sensors with no light spillage on to any existing linear features likely to be used by bats, such as the northern boundary. Northern boundary hedge will be maintained	Retained commuting and foraging habitat i.e. trees and hedgerow to be protected throughout the construction. Mixed native hedgerow and trees planting to provide enhanced habitat for feeding bats.	N/A .	Northern boundary hedge and scattered trees

	as a dark corridor with carefully designed external lighting i.e. using directional lighting controlled using passive infra-red sensors and directed, warm white LED lamps.	There is to be no loss of roosting opportunities for bats, however bat roosting features will be installed in new houses by fitting integrated bat boxes (refer to Section 5 & Appendices 2 & 5)		
Hedgehogs	The grassland within the construction area will be kept short prior to the commencement of works to minimise the likelihood of individuals being present during excavations. Brash and log piles will be carefully dismantled by hand with ecological supervision. Any vegetation in the development area will be kept closely mown during the course of the works, with any open excavations and trenches to be backfilled before nightfall, or alternatively, escape ramps to be installed to allow reptiles and newts, and other animals, to escape if they become trapped. Any building materials stored on site will be on the grassland or bare ground and raised off the ground on pallets as they may offer temporary resting places or hibernation sites for reptiles and amphibians.	The garden will include features that provide cover hedgehogs i.e. a log pile and native hedgerow. Close board fencing will be installed so that it has no gravel boards, or so each fence line has 13cm square openings in the gravel boards to allow the free movement of hedgehogs.	Management of the grassland in the lead up to the commencement of works Careful clearance of brash/log piles by hand before ground works. Precautionary measures to remain in place throughout the works.	Grassland and brash/log piles
Reptiles and Amphibians	The grassland within the construction area will be kept short prior to the commencement of works to minimise the likelihood of individuals being present during excavations.	The garden will include features that provide cover and foraging for newts and reptiles i.e. a log pile and native hedgerow.	Management of the grassland in the lead up to the commencement of works	Grassland brash/log piles

	Brash and log piles will be carefully dismantled by hand with ecological supervision. Any vegetation in the development area will be kept closely mown during the course of the works, with any open excavations and trenches to be backfilled before nightfall, or alternatively, escape ramps to be installed to allow reptiles and newts, and other animals, to escape if they become trapped. Any building materials stored on site will be on the grassland or bare ground and raised off the ground on pallets as they may offer temporary resting places or hibernation sites for reptiles and amphibians.		Careful clearance of brash/log piles by hand before ground works. Precautionary measures to remain in place throughout the works.	
Nesting Birds	Any shrub removal to enable replanting of northern hedgerow will be timed to avoid the peak bird nesting (March to August inclusive) or after a check to confirm that birds are not nesting currently. In the event that nesting birds are discovered during the course of the work, work will stop immediately, and the work will continue only once bird nesting has finished i.e. young have fledged and left the nest. If an active nest is present, a buffer area of at least 5 m (or wider as appropriate and dependent upon the species identified) will be implemented, or the vegetation retained until any young have fledged.	Additional native trees and hedge planting will provide cover, foraging resources and nesting opportunities for a range of common bird species. Bird nesting boxes will be included at the eaves of the new houses for Priority Species such as house sparrow (*Passer domesticus*).	Removal of shrubs to be completed within September to February inclusive. If undertaken between March and August, a nesting bird check will be required, prior to removal of the shrubs.	Northern boundary hedge.

5 BIODIVERSITY ENHANCEMENT PLAN

5.1 Overview

5.1.1 The following sets out recommendations for ecological enhancements in accordance with the planning condition with reference to the Site Plan - Landscaping (Drawing (20.65-120) Spires Architects).

5.2 Bat boxes

5.2.1 Two integrated bat boxes (Habibat 003 bat boxes) will be installed within the brickwork at eaves level on the southwestern side of the semi-detached houses (refer to plans in **Appendix 2** and elevations in **Appendix 5**).

5.3 Bird boxes

5.3.1 Two integrated bird boxes (Habibat 003 nest boxes) will be installed within the brickwork at eaves level on the north eastern side of the semi-detached houses (refer to plans in **Appendix 2** and elevations in **Appendix 5**).

5.4 Log pile

5.4.1 A log/brash pile will be created in the garden in the south eastern corner of the site to provide cover for small animals i.e. invertebrates, small mammals, amphibians and reptiles. Any shrubs and ruderal vegetation cleared from the site will be used to create the pile.

6 REFERENCES

BSI, 2013. Biodiversity - Code of Practice for Planning and Development BS42020:2013. BSI Standards Limited: London.

CIEEM, 2016, Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition.

CITB, 2016. *Construction (Design and Management) Regulations 2015.* Available at: http://www.citb.co.uk/health-safety-and-other-topics/health-safety/construction-designand-management-regulations/cdm-guidance-documents

APPENDIX 1 – PROPOSED SITE LAYOUT

APPENDIX 2 – SITE LAYOUT (LANDSCAPING)

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APPENDIX 3 – PHASE 1 HABITAT SURVEY PLAN

Land rear of 5 Woods Road
Caversham

Preliminary Ecological Appraisal
UKHab Survey Plan

Key:

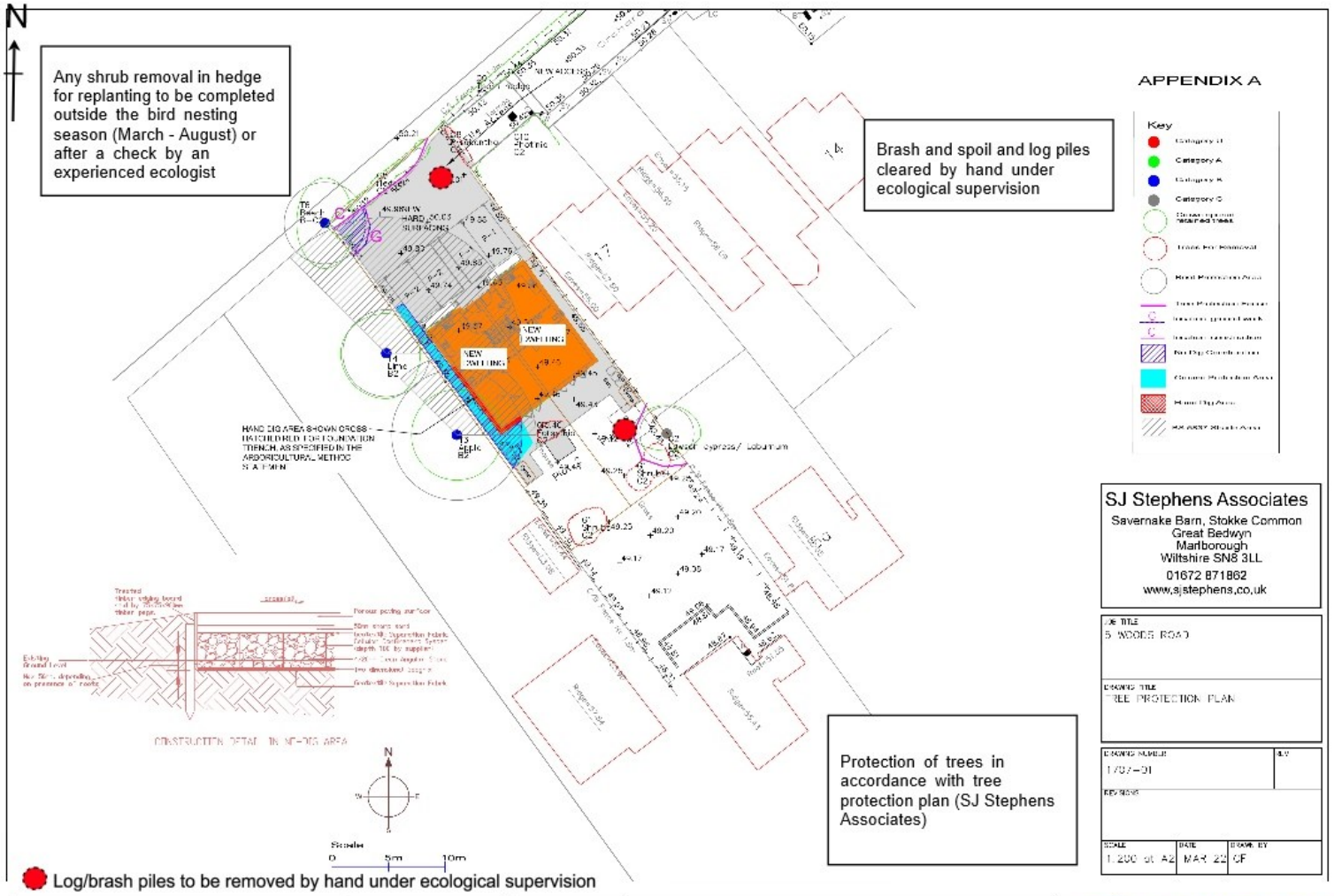
- Site boundary
- u1d - suburban mosaic
- h2b - other hedgerows
- Target notes
- Scattered trees
- Timber fence

Mapped by: Conor Watson Grad CIEEM

Date: February 2022

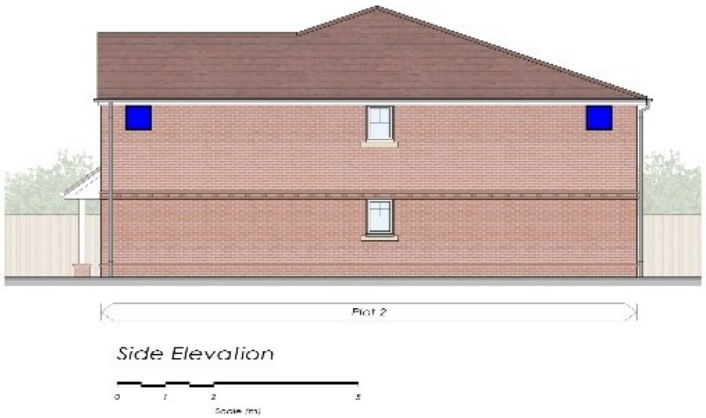
JOHNWENMAN ecological consultancy

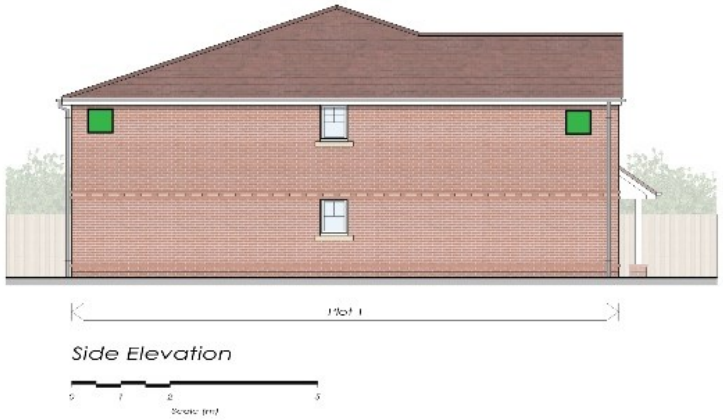
APPENDIX 4 – CEMP PLAN (BIODIVERSITY)



Drawn by: JW (annotations)	Date	Scale:	Land rear of 5 Woods Road, Caversham, Reading	JOHNWENMAN ecological consultancy
Base drawing (Tree Protection Plan; SJ Stephens Associates 1707-01)	November 2023	Not to scale	CEMP Plan (Biodiversity)	

APPENDIX 5 –BAT AND BIRD LOCATIONS (HOUSE ELEVATIONS)





Integrated Habibat 003 Bat Box Integrated Habibat 003 Bird Box

Drawn by: JW (annotations) Base drawings (Proposed Elevations (Spires Architects)	Date November 2023	Scale: Not to scale	Land rear of 5 Woods Road, Caversham, Reading Bat and Bird Box Locations	JOHNWENMAN ecological consultancy