

**Begbroke Science Park – Zones B  
and C**

Construction Ecological Management Plan  
(CEMP)

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# 1 Introduction

## Background to commission

- 1.1 BSG Ecology was commissioned on 24 June 2021 by Burofour on behalf of Oxford University Development Ltd in relation to the Reserved Matters Submission pursuant of the approval of outline planning permission ref. 18/00803/OUT, comprising one academic building and one commercial building totalling 12,500 sq m of B1 a/b/c and ancillary D1 floorspace at Begbroke Science Park in Begbroke, Oxfordshire, centred at Ordnance Survey National Grid Reference SP477135.
- 1.2 BSG Ecology carried out an ecological assessment to accompany the outline planning application submitted in 2018 including an *Ecology Report* and a *Great Crested Newt and Reptile Report* (BSG Ecology, 2018a and 2018b). These were based on a Phase 1 habitat survey and a desk study, as well as on surveys for reptiles and great crested newt.
- 1.3 Condition 14 of the outline planning permission states '*the development hereby permitted shall be carried out in accordance with the recommendations set out in Table 6 of the Ecology Report prepared by BSG, issued on 4th May 2018*'. Of these recommendations, those that relate to the installation of habitats and ecological features are covered by a Landscape and Ecology Plan (LEMP) which forms part of the Reserved Matters Submission (Condition 4). Recommendations which require surveys or protective measures during the pre-construction phase are set out in this Construction Ecological Management Plan (CEMP).

## Site description

- 1.4 The wider Begbroke Science Park is managed by the University of Oxford for academic research and high-tech start-up companies. It is located off the A44 Woodstock Road, approximately 5 miles north of Oxford city centre. Close to the village of Begbroke, the main Science Park occupies approximately 4.8 hectares. The building architecture comprises a mixture of large, modern office buildings; complemented by traditional buildings of historic value, such as the Jacobean farmhouse in the southern part of the Science Park. Landscaped gardens, including a walled garden, extensive lawns and a perimeter tree screen planted in 2001 along with associated grassland provide green space within the Science Park.

## Description of project

- 1.5 Outline planning permission was granted in September 2018 with all matters reserved apart from access for up to 12,500 sq m of B1 a/b/c and ancillary D1 floorspace and associated works. The Reserved Matters Submission seeks approval for two new buildings comprising one academic building and one commercial building (Zones B and C in Figure 1). A new surface car park and services building are proposed in the north-west corner of the site and are subject to a separate full planning application. No development is now proposed in Zone D on Figure 1.
- 1.6 A Phase 1 habitat plan of the Site from 2018 is shown in Figure 1. The proposed landscape plan is shown in in the CEMP document.

## Aim of report

- 1.7 The aim of this CEMP is to ensure that the pre-construction phase of the development takes place in accordance with the recommendations of the *Ecological Appraisal* report, including adherence to relevant wildlife legislation (for a summary of relevant legislation, see Appendix 1). It provides a mechanism to ensure the protection of habitats and species at the Site during the pre-construction phase.
- 1.8 Construction of habitats and the site and installation of bird and bat boxes are covered separately in the Landscape and Ecology Management Plan (LEMP) and in the architect's drawings, respectively.

**Site Walkover**

- 1.9 A site walkover was carried out by Dr Tom Flynn, Principal Ecologist at BSG Ecology, on 22 July 2021, prior to the production of this CEMP. This walkover found no significant changes had occurred at the Site since the 2018 ecology surveys. Following the walkover, the ecological impact assessment work carried out in 2018 (BSG Ecology 2018a, 2018b) was reviewed and it was found that no significant changes to the ecological mitigation are necessary, except regarding reptiles and amphibians as set out below.

**Great crested newt mitigation**

- 1.10 A pond at the science park supports a small population of great crested newt, a species that is protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended). Since the Site is around 100 m from the pond at its closest point and currently supports sub-optimal habitats for great crested newt, impacts from the development are likely to be limited. However, there is some potential for impacts on individual animals from construction activities. These impacts are to be mitigated, and legislative compliance ensured, through carrying out the works under a Natural England licence, such as via registration of the scheme under the Naturespace district licence for great crested newt. This CEMP excludes any consideration of great crested newt or associated mitigation, which will be covered in the licence documentation.
- 1.11 Given that mitigation for great crested newts will be considered separately, and the requirement for construction works to start in March 2022, the mitigation for amphibians and reptiles set out in the 2018 report has been updated in this CEMP (see Method Statement 4).

**Structure of CEMP**

- 1.12 This document includes a schedule of works which lists four separate ecology activities required during the pre-construction stage, followed by a series of method statements which sets out the detail of these activities.

## 2 Schedule of Works

2.1 The following table sets out the proposed timing of the various activities described in this CEMP. Method statements on the following pages provide further details of these activities.

*Table 1: Schedule of works.*

<b>Method Statement</b>	<b>Activity</b>	<b>Proposed Timing</b>
<b>Pre-construction phase</b>		
1	Pre-construction badger check	In the month prior to the start of construction
2	Nesting bird precautions during clearance of woody vegetation	January to February 2022
3	Protective fencing for retained hedgerows and trees	Installation February 2022 Retain throughout construction
4	Grassland mowing prior to turf stripping	Mowing every two weeks between early September 2021 to end October 2021, and between 01 March 2022 to start of construction

### 3 Method Statement 1: Pre-construction badger check

#### Purpose

- 3.1 A check survey to determine whether badgers have constructed any setts on or near the Site (which could be affected by, or delay) construction.
- 3.2 No setts have been found at the Site to date, but badgers are known to be present in the general area and can construct new setts in a relatively short space of time, and therefore this pre-construction check is considered necessary.

#### Timing

- 3.3 Survey to be carried out in the month prior to the start of construction (potentially in February 2022).

#### Methods

- 3.4 A badger survey of the Site will be carried out by a suitably experienced ecologist, as follows:
- The ecologist will search the Site, and, where possible, all areas within 30 metres of the Site boundary for any badger setts or other signs of badgers.
  - If any badger setts are found, locations will be recorded by the ecologist via handheld GPS and marked on the ground.
  - The ecologist will present the results of the survey via an email report, with (if necessary) an accompanying figure.
- 3.5 If any badger setts are present on or near the Site, it may be necessary to apply for a licence from Natural England to allow sett closure and demolition. In the absence of the appropriate licence and associated mitigation measures, works affecting badgers or active badger setts would be in breach of the Protection of Badger Act 1992. Since setts can only be closed between August and October, and the licencing process will take time to arrange, there is the potential for the presence of badger setts to cause delays to construction work in their vicinity (typically within 30 m).

#### Roles and responsibilities

- 3.6 The Construction Manager will be responsible for instructing a suitably experienced ecologist to carry out the badger check, and with assistance from a suitably experienced ecologist, for applying for and implementing any necessary badger sett closure licences.

#### Outcome/signoff

- 3.7 If the ecologist is satisfied that no badger setts are present, an inspection record (email) will be provided to the Construction Manager.
- 3.8 If badger setts are present, the ecologist will advise the Construction Manager on any requirements for licensed closure, or non-licensed measures to protect badgers during construction.



## **4 Method Statement 2: Nesting bird precautions during clearance of woody vegetation**

### **Purpose**

- 4.1 To avoid impacts on nesting birds during clearance of woody vegetation that may be necessary.

### **Timing and method**

- 4.2 Any woody vegetation above 45 cm in height that needs to be removed for the development should be cut outside the bird breeding season (i.e., outside March to August inclusive).
- 4.3 Alternatively, the vegetation can be cut during the bird breeding season if subject to check by a suitably qualified ecologist which confirms nesting birds to be absent. If nesting birds are present, the ecologist will advise on a suitable exclusion zone. Works will not proceed within this zone until the nest is no longer active.
- 4.4 It may not be possible to thoroughly check very tall or dense vegetation, and the ecologist may recommend that such vegetation is retained until the end of the bird breeding season.

### **Roles and responsibilities**

- 4.5 The Construction Manager will instruct a suitably experienced ecologist if woody vegetation above 45cm in height requires clearance within the bird breeding season.

### **Sign off**

- 4.6 The ecologist will provide an inspection record (email) to the Construction Manager confirming the presence or absence of nesting birds, and any advice regarding proposed vegetation clearance.

## 5 Method Statement 3: Protective fencing for retained hedgerows and trees

### Purpose

- 5.1 Trees and hedgerows with or adjacent to the Site will be fenced prior to the start of construction to prevent accidental encroachment or damage during construction.

### Timing

- 5.2 Fencing is to be installed prior to the start of any turf stripping or construction works at the Site and following the felling of trees requiring removal.

### Method

- 5.3 All **trees** within or adjacent to the site that are to be retained in the development are to be protected in line with the recommendations of the *Arboricultural Assessment* (FPCR, 2018), including Root Protection Areas as shown in the *Tree Protection Plan*. This applies to trees along the western boundary of Zone C.
- 5.4 All **hedgerows** within or adjacent to the site that are to be retained in the development are to be protected through the use of Heras fencing or similar. This applies to the parts of the hedgerow along the western boundary of Zone C that are to be retained (see LEMP).
- 5.5 Due to the impracticality of protected area of grassland during construction, and the limited ecological value of the grassland at the Site, it is assumed that all grassland within the red line boundary will be lost during construction. Area of new grassland will be created as detailed in the LEMP.
- 5.6 The fencing should be installed prior to the start of any construction works.
- 5.7 The fencing should be retained in-situ until construction works are complete.
- 5.8 Ground disturbance (e.g., digging) and storage of materials or soil should be avoided within fenced areas. There should be no incursion of machines, personnel or materials, or storage of materials, in these areas during construction.

### Roles and responsibilities

- 5.9 Marking out and fencing should be arranged by the Construction Manager. The construction manager should ensure that staff are aware they must not enter the fenced areas or move fences.

### Checks and sign off

- 5.10 The Construction Manager should check the location of the Heras fences following installation, and that all trees and hedgerows to be retained have been protected.
- 5.11 The Construction Manager should check that the Heras fence is intact and in position every month during construction.

## **6 Method Statement 4: Grassland mowing prior to turf stripping**

### **Purpose**

- 6.1 In order to deter reptiles and amphibians from utilising grassland areas of the Site that will be stripped of turf for construction, these areas will be subject to a regime of regular mowing prior to turf stripping. This approach supersedes the amphibian and reptile mitigation set out in the ecology report.
- 6.2 Separate protection measures for great crested newt may also be required prior to or during construction, based on Natural England licensing requirements.

### **Timing**

- 6.3 To allow turf stripping to begin in March 2022, regular mowing (i.e., one cut every two weeks) of any grassland that will be lost to construction should be carried out between early September 2021 and end October 2021 and between 01 March 2022 and the start of construction.
- 6.4 Mowing in the winter period (November to February inclusive) is not necessary, due to slow grass growth and because amphibians and reptiles will be hibernating.
- 6.5 If construction is delayed after March 2022, then regular mowing of these areas (i.e., one cut every two weeks) should continue until the start of construction.

### **Method**

- 6.6 This mowing should be applied to all areas of grassland within the red line boundary.
- 6.7 These areas should be closely mown (i.e., 5 cm cut height or lower) every two weeks during the periods indicated above.

### **Roles and responsibilities**

- 6.8 Mowing should be arranged by the Construction Manager. The Construction Manager should keep a record of mowing dates.

### **Checks and sign off**

- 6.9 The Construction Manager should check that the required mowing is being properly carried out (i.e., that the cut height is 5 cm or less and that all of the required areas are being covered).

## 7 References

- BSG Ecology (2018a) *Begbroke Science Park: Outline Planning Application: Ecology Report*.  
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## 8 Figures

**Figure 1: Phase 1 habitat plan from 2018**

## Appendix 1: Summaries of Relevant Policy, Legislation and Other Instruments

This section briefly summarises the legislation, policy and related issues that are relevant to the main text of the report. The following text does not constitute legal or planning advice.

### European protected species (Animals)

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidates various amendments that have been made to the original (1994) Regulations which transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.

“European protected species” (EPS) of animal are those which are shown on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). They are subject to the provisions of Regulation 43 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

- a. Intentionally or deliberately capture, injure or kill any wild animal included amongst these species
- b. Possess or control any live or dead specimens or any part of, or anything derived from a these species
- c. deliberately disturb wild animals of any such species
- d. deliberately take or destroy the eggs of such an animal, or
- e. intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place

For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

- a. to impair their ability—
  - i. to survive, to breed or reproduce, or to rear or nurture their young, or
  - ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- b. to affect significantly the local distribution or abundance of the species to which they belong.

Although the law provides strict protection to these species, it also allows this protection to be set aside (derogated) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works and by Natural Resources Wales in Wales. In accordance with the requirements of the Regulations (2017, as amended), a licence can only be issued where the following requirements are satisfied:

- a. The proposal is necessary ‘to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’
- b. ‘There is no satisfactory alternative’
- c. The proposals ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

### Definition of breeding sites and resting places

Guidance for all European Protected Species of animal, including bats and great crested newt, regarding the definition of breeding and of breeding and resting places is provided by The European Council (EC) which has prepared specific guidance in respect of the interpretation of various Articles of the EC Habitats Directive.<sup>1</sup> Section II.3.4.b) provides definitions and examples of both breeding and resting places at paragraphs 57 and 59 respectively. This guidance states that ‘The provision in Article 12(1)(d) [of the EC Habitats Directive] should

<sup>1</sup> Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC. (February 2007), EC.

therefore be understood as aiming to safeguard the ecological functionality of breeding sites and resting places.’ Further the guidance states: ‘It thus follows from Article 12(1)(d) that such breeding sites and resting places also need to be protected when they are not being used, but where there is a reasonably high probability that the species concerned will return to these sites and places. If for example a certain cave is used every year by a number of bats for hibernation (because the species has the habit of returning to the same winter roost every year), the functionality of this cave as a hibernating site should be protected in summer as well so that the bats can re-use it in winter. On the other hand, if a certain cave is used only occasionally for breeding or resting purposes, it is very likely that the site does not qualify as a breeding site or resting place.’

## Birds

All nesting birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to disturb them whilst they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

The Conservation of Habitats and Species Regulations 2017 (as amended) places duties on competent authorities (including Local Authorities and National Park Authorities) in relation to wild bird habitat. These provisions relate back to Articles 1, 2 and 3 of the EC Directive on the conservation of wild birds (2009/147/EC, ‘Birds Directive’<sup>2</sup>) (Regulation 10 (3)) requires that the objective is the ‘preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive...’ Regulation 10 (7) states: ‘In considering which measures may be appropriate for the purpose of security or contributing to the objective in [Regulation 10 (3)] Paragraph 3, appropriate account must be taken of economic and recreational requirements’.

In relation to the duties placed on competent authorities under the 2017 Regulations, Regulation 10 (8) states: ‘So far as lies within their powers, a competent authority in exercising any function [including in relation to town and country planning] in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the area to which the new Wild Birds Directive applies).’

## Badger

Badger is protected under the Protection of Badgers Act 1992. It is not permitted to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as “a structure or place, which displays signs indicating current use by a badger”.

ODPM Circular 06/2005<sup>3</sup> provides further guidance on statutory obligations towards badger within the planning system. Of particular note is paragraph 124, which states that “The likelihood of disturbing a badger sett, or adversely affecting badgers’ foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions.”

Natural England provides Standing Advice<sup>4</sup>, which is capable of being a material consideration in planning decisions. Natural England recommends mitigation to avoid impacts on badger setts, which includes maintaining or creating new foraging areas and maintaining or creating access (commuting routes) between setts and foraging/watering areas.

## Reptiles

All native reptile species receive legal protection in Great Britain under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Viviparous lizard, slow-worm, grass snake and adder are protected against killing, injuring and unlicensed trade only. Sand lizard and smooth snake receive additional protection as “European Protected species” under the provisions of the Conservation of Habitats and Species

<sup>2</sup> 2009/147/EC Birds Directive (30 November 2009. European Parliament and the Council of the European Union.

<sup>3</sup> ODPM Circular 06/2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System* (2005). HMSO Norwich.

<sup>4</sup> <http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/specieslinks.aspx>

Regulations 2017 (as amended) and are fully protected under the Wildlife and Countryside Act 1981 (as amended).

All six native species of reptile are included as 'species of principal importance' for the purpose of conserving biodiversity under Section 41 (England) of the NERC Act 2006 and Section 7 of the Environment (Wales) Act 2016.

Current Natural England Guidelines for Developers<sup>5</sup> states that 'where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.' Further the guidance states: 'Normally prohibited activities may not be illegal if 'the act was the incidental result of a lawful operation and could not reasonably have been avoided'. Natural England 'would expect reasonable avoidance to include measures such as altering development layouts to avoid key areas, as well as capture and exclusion of reptiles.'

The Natural England Guidelines for Developers state that 'planning must incorporate two aims where reptiles are present:

- To protect reptiles from any harm that might arise during development work;
- To ensure that sufficient quality, quantity and connectivity of habitat is provided to accommodate the reptile population, either on-site or at an alternative site, with no net loss of local reptile conservation status.'

### **Wild mammals in general**

The Wild Mammals (Protection) Act 1996 (as amended) makes provision for the protection of wild mammals from certain cruel acts, making it an offence for any person to intentionally cause suffering to any wild mammal. In the context of development sites, for example, this may apply to rabbits in their burrows.

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<sup>5</sup> English Nature, 2004. *Reptiles: guidelines for developers*. English Nature, Peterborough. <https://webarchive.nationalarchives.gov.uk/20150303064706/http://publications.naturalengland.org.uk/publication/76006>