



Crest Nicholson

Land to the East of the A49, Holmer, Herefordshire,

Ecological Management Plan

January 2017

FPCR Environment and Design Ltd

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FIGURES

Figure 1: Biodiversity Enhancement Plan

1.0 INTRODUCTION

- 1.1 This document has been prepared by FPCR Environment and Design Ltd on behalf of Crest Nicholson. It is a Biodiversity Management Plan that has been written pursuant to the discharge of overlooked ecology conditions for Reserved Matters following outline approval (Outline Planning Ref: P141487/O).
- 1.2 The following memorandum was received from Herefordshire Council on 29th September 2016 (Ref: 162912):

"It would appear from the information supplied that the Ecology comments from the original outline application (P141487 – 25/06/2014) have been overlooked.

Quote:

"Thank you for consulting me on the above application. I visited the site as part of the pre-application process and can vouch for the accuracy of the vegetation assessment. In principle, I would support this application as I think the biodiversity interest of the site might be secured and enhanced. The report is commensurate with my thoughts concerning some integration of the richer areas of grassland into the development design and landscaping. The semi-improved, species poor nature of the three fields in question has richer patches of botanical richness. The removal of hedgerows is of concern – there is not a clear enough picture of the use of these hedges as flight lines by bat species. This is one recommendation of the report which I would advise is addressed preferably not through condition. I would accept the assessment regarding great crested newt (GCN) and the surrounding ponds; there is no pond on the site and the potential hibernation refugia on the site would appear to be limited excepting the hedgerows to be removed. Pre-development site checks and Reasonable Avoidance Measures should be put in place to ensure that the impact on GCN is minimal. I note the intention to retain as much existing hedgerow as possible, I would call for a review of those intended for removal in the landscape plan and a revised scheme to accommodate more of the existing internal to the site such as the whole length of that flanking the existing footpath across the site at least. It is important for continuity that existing structures are maintained.

I could suggest a condition which accommodates the recommendations in Section 4.13 to 4.16 of the ecologist's report and procurement of a habitat enhancement plan. However, I feel that there needs to be greater consolidation of the ecological information with mitigation within the design scheme before granting any approval. In particular, the arboricultural appraisal also needs to include a category assessment for bat potential. Further clarification is needed of the use of existing grassland sward within the scheme. I would ask that the biodiversity enhancement of grassland areas utilises as much as possible of existing turf with supplementary seeding rather than replacement by sowing a wildflower mix afresh. The reason for this is to preserve any entomological ecology associated with the current botanical communities. Bird's foot trefoil for instance is a food plant for a number of butterfly species including Common Blue and I would not wish to see any elimination of meta-populations of insect dependent upon it for survival. If this requires any turf translocation, then I would support this."

The landscaping plan now included seems to have no retention or transplanting of the existing ecologically interesting grass sward of food plant species and there is no indication of any use of appropriate wildflower enhancement of any proposed grass areas.

There appears to be no habitat enhancement plan showing the location, type and number of bird boxes or bat roosting enhancements – as identified in recommendations of original ecological report). In addition to these national biodiversity actions have seen the inclusion of insect/pollinator houses, amphibian refugia and hedgehog houses in the enhanced boundary features as being appropriate. I would request that these full and complete details and locations are supplied for consideration.

As requested in original ecological comments we still require the submission of a detailed Great Crested Newt Reasonable (risk) Avoidance Measures for our approval.”

- 1.3 The further information requested on the use of the Application Site by bats was addressed within the outline application in 2014 through subsequent surveys and reporting.
- 1.4 FPCR has worked with Pegasus Group and suitable biodiversity enhancements are included within the landscape scheme and landscape management plan to address the grassland issue raised in the Memorandum. A short sward flowering lawn mixture containing bird's-foot trefoil such as EL.1 seed mixture available from Emorsgate or similar will be planted across the site in less formal areas. The information, including management, is provided within Pegasus Group drawings Bir.4884_01, 02 and 03 and within the Landscape Management and Maintenance Plan (BIR.4884-LMP-001).
- 1.5 Native hedgerow and tree planting and management are also addressed within the Pegasus Group landscape drawings and Landscape Management and Maintenance Plan.
- 1.6 A Protected Species Method Statement including Great Crested newt Reasonable Avoidance Measures is submitted alongside this document cover the potential construction impacts on these species. The document covers construction impacts on retained habitats, GCN, nesting birds and other precautionary mitigation for other protected species.
- 1.7 Further details provided here to meet the remaining points raised in Herefordshire Council's response are:
 - Bird, bat, insect and hedgehog box scheme and management.
 - Amphibian refugia specification and location.
 - Monitoring and continuing work program.

2.0 BIODIVERSITY ENHANCEMENT SCHEME

- 2.1 The following chapter outlines the biodiversity enhancements included within the scheme. It lists those already covered by within Pegasus Group drawings Bir.4884_01, 02 and 03 and within the Landscape Management Plan (LMP: BIR.4884-LMP-001). Those enhancements additional to the scheme are also included here.

Ecology Enhancements

- 2.2 The following biodiversity enhancements have been adopted as part of the scheme:
1. A short sward flowering lawn mixture containing bird's-foot trefoil such as EL.1 seed mixture available from Emorsgate or similar will be planted across the site in less formal areas.
 2. New native and fruit tree standards within hedgerows and open green space.
 3. New native double hedgerow to compensate for loss of hedgerow.

Bat, Insect, Hedgehog and Bird Boxes

Description

- 2.3 Box locations and installation instructions are shown in Figure 1: Biodiversity Enhancement Scheme drawing. All boxes should be in place by the completion of the final dwelling. The following are to be installed:
- 2x Natural History Book Shop (NHBS) Hedgehog Nest Box (or similar) installed within hedgerow base and well concealed.
 - 4 x NHBS Bug Mansion (or similar) installed on posts within formal and informal areas within or on the edge of vegetation / shrub mix.
 - 3x 1SP Schwegler Sparrow Terraces. Installed on buildings 2.5m above ground and north east to south east facing.
 - 5 x 1BS Schwegler Nest Box. Boxes should be oriented between north and east and be at least 3m from ground level.
 - 6 x 1FR Schwegler Bat Boxes. These are small self-contained boxes which require no maintenance and are built into or attached to masonry. Installed 3m+ facing south west, south or south east.
 - 3 x 2FN Schwegler bat boxes. All located on T4 (Arboricultural Survey: Pegasus Group 2014) at a unique height and orientation. 3m plus, south-west, south and south-east.

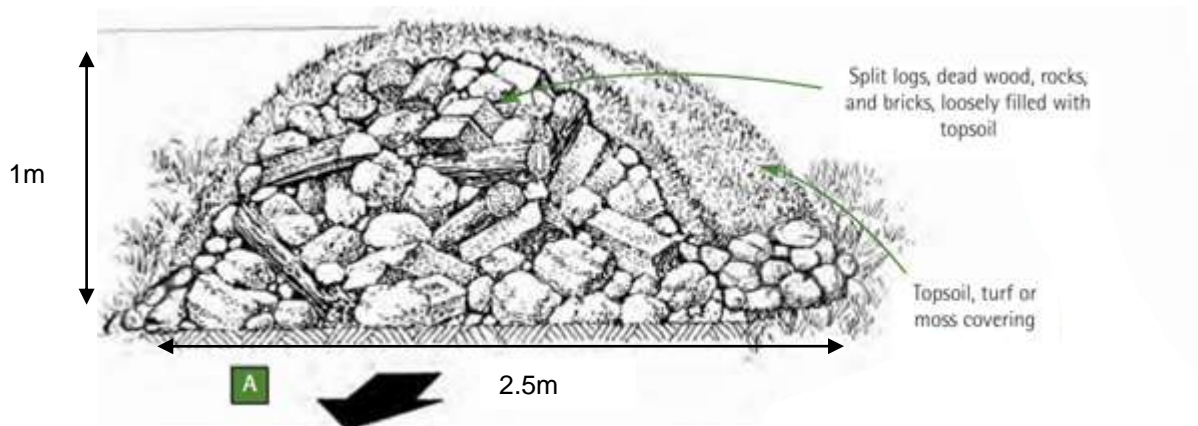
Management

- 2.4 The presence and condition of the boxes should be checked from the ground bi - annually for ten years and suitably replaced when required.
- 2.5 A single mid-summer check for the presence of bat occupation by licenced bat worker should be conducted after four years.

Amphibian Refugia

Specification

- 2.6 As part of the GCN mitigation, it is recommended that a GCN refuge is installed in the centre of the northern boundary (location show in Figure 1). The refugia should be installed following the installation of the exclusion fence on the development side to avoid attracting GCN to the development site until after the scheme is complete.
- 2.7 The specification below adapted from the Great Crested Conservation Handbook (Langton, Beckett & Foster 2001). The refugia should be installed above ground as shown as the soil type has impeded drainage.



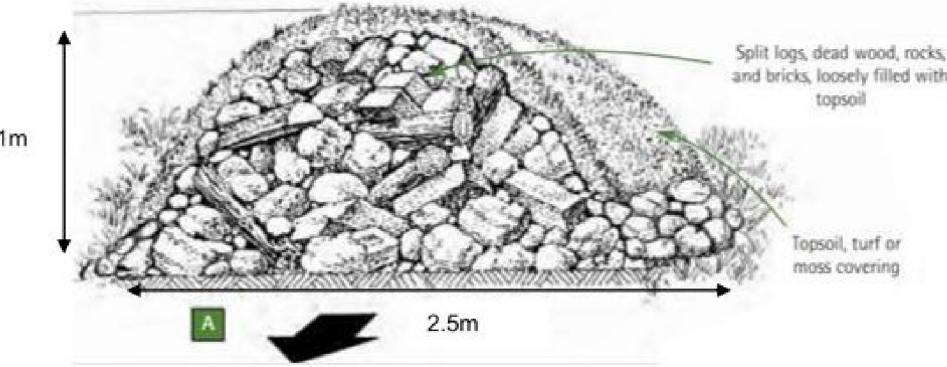
Management

- 2.8 Access to the artificial refugia substrate should be maintained.
- 2.9 Vegetation on the surface can be left or strimmed. Strimming should ideally be conducted during the breeding season (April – June) or in weather conditions above 10°C in the summer / early autumn.
- 2.10 A “Wildlife Refuge” sign should be erected to inform residents of the refuge purpose.

3.0 MONITORING AND CONTINUING WORK PROGRAM

Description of Works	Years with Priority				
	1	2	3	4	5
REVIEW OF WORK PROGRAM					
1. Site walkover by management team to assess if the biodiversity enhancements within this document and within Pegasus Group drawings Bir.4884_01, 02 and 03 and within the Landscape Management Plan (LMP: BIR.4884-LMP-001) are being achieved.	√				√
2. Site walkover by management team to assess the extent of proposed created habitat.	√				√
3. Create further five year work program and adjust accordingly.					√
BAT, INSECT, HEDGEHOG AND BIRD BOXES					
1. Installation of the 9x bat boxes, 8x bird boxes, 2x Hedgehog t Boxes and 4x insect boxes as per Figure 1 .	√				
2. Bi annual monitoring presence and condition of boxes	√		√		√
3. Boxes should be replaced if lost or in poor condition within the first 10 years.	√	√	√	√	√
4. A single mid-summer check for the presence of bat occupation by licenced bat worker should be conducted after four years.				√	
AMPHIBIAN REFUGIA					
1. Installation of the amphibian refuge in the centre of the northern boundary prior to exclusion fence removal.	√				
2. Installation of "wildlife refuge" sign.	√				
2. Annual check of presence and condition of refuge and sign including ensuring substrate is accessible to amphibians. Repair if required during the GCN breeding season (April to July). Leave undisturbed in the late autumn / winter months.	√	√	√	√	√
3. Leave or cut vegetation as and when required. Cutting should take place during the breeding season (April – June) or in weather conditions above 10oC in the summer / early autumn.	√	√	√	√	√

Great crested newt refugia



1B Schwegler Nest Box



Description
The 1B Schwegler Nest Box is a durable bird box that can be attached to a tree or wall with an aluminium nail. Different entry hole sizes could be purchased to prevent birds from competing with each other for the boxes.
These boxes should be placed so that there is a clear flight path to the entrance and ensuring that the entrance is not exposed to stronglight or winds.
Place 1.5m or higher. Orientate north east to south east facing.

- Specification**
- Material: Woodcrete
 - Height: 23cm
 - Diameter: 16cm
 - Weight: 3.6kg

Schwegler 1SP House Sparrow Box



Description
This terrace provides nesting opportunities for three sparrow families.
The terrace can be fixed onto the surface of a suitable wall or incorporated into the wall. It is suitable for all buildings.
Place 2.5m high. Orientate north east to south east facing.

- Specification**
- Material: Woodcrete

- Height: 24.5cm
- Width: 10.5cm
- Depth: 15cm
- Weight: 15kg

NHBS Hedgehog Nest Box



A robustly designed hedgehog house, eliminating loose entrance tunnels by incorporating all features into one design. It has an inbuilt "unblockable" ventilation system to provide the right temperature and humidity without draughts.
Should be placed under a hedgerow where it is not likely to be disturbed.

- Specification**
- Material: Exterior quality 12mm resin bonded ply.
 - Height: 22cm
 - Width: 38cm
 - Depth: 47cm

NHBS Bug Mansion



Description
The bug mansion has an accessible chamber and a Perspex view-glass. It has perforations for insect access and a bamboo chamber for solitary bees.

- Specification**
- Material: Exterior grade 9mm FSC ply
 - Height: 30cm
 - Width: 12cm
 - Depth: 13cm

2FN Schwegler Bat Box



Description
The 2FN bat box has two entrances- one at the front and one at the rear against the tree. This design has proved highly successful with noctule and Bechstein's bats. It is designed to be effective against small predators and excludes draughts and light. There is an opening at the bottom so it does not require cleaning. Three of these should be located within T19 at unique height and orientation. Place 3m+. Orientate south west, south or south east facing.

- Specification**
- Material: Woodcrete
 - Height: 36cm
 - Diameter: 16cm
 - Weight: 4.3kg

1FR Schwegler Bat Box



Description
The 1FR Bat Tube is designed to be installed on the external walls of buildings, either flush or beneath a rendered surface. This makes it ideal for situations where you wish the box to be discrete as only the entrance hole will be visible. It can also be painted to match your building with an air permeable paint if desired.
The 1FR is specifically designed to meet the characteristic behavioural requirements of the types of bats that inhabit buildings. It has an integrated wooden panel onto which bats can cling and a ridged entrance slope which makes it easy for them to enter and leave the box safely. The design maintains excellent climatic conditions inside providing bats with a safe and stable environment in which to roost and it requires no maintenance because droppings fall out of the entrance ramp. Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers. Place 3m+ high. Orientate south west, south or south east facing.

- Specification**
- Material: Woodcrete with integrated wooden panel
 - Height: 47.5cm
 - Width: 20cm
 - Depth: 12.5 cm
 - Entrance dimensions: 15 x 9 x 2cm
 - Weight: 9.8kg

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Key

- Site Boundary
- 1FR Schwegler Bat Box
- 2FN Schwegler Bat Box
- 1B Schwegler Nest Box
- Schwegler 1SP House Sparrow Box
- GCN Refugia
- NHBS Bug Mansion
- NHBS Hedgehog Nest Box