



LAND AT TORTINGTON, ARUNDEL

Response to Ecology Consultation

Environmental Gain Ltd
The Old Church School
Butts Hill
Frome
Somerset
BA11 1HR

eg17809-EC-CR-REV00
08/02/21

Planning Ref: AB/135/20/OUT

Introduction

This document sets out further ecological information about the proposed development at 'Land at Ford Road, Arundel' in response to the matters raised by Liz Annals, Environment Officer for Chichester District Council, in an email dated 15th December 2020. The matters raised in that email, and expanded upon here, comprise:

1. Lighting design and how potential impacts on bats will be avoided or mitigated;
2. Survey information and mitigation in relation to dormice;
3. Mitigation measures for potential construction-stage effects on reptiles and great crested newts;
4. Long term ecological management and enhancement measures

In addition to these matters, the email response noted that a Construction Environmental Management Plan would be required for the development. A detailed CEMP would be prepared as part of any reserved matters application, drawing on all of the information set out in the ecology reports provided with this outline application.



Lighting and Bats

Details of the proposed lighting strategy prepared for this application comprise:

1. A lighting strategy report (MMA Lighting Consultancy Ltd, 4th December 2020);
2. An outdoor lighting report setting out the adoptable roads lighting design details (MMA Lighting Consultancy Ltd, 24th November 2020);
3. An outdoor lighting report setting out the private roads street lighting design details (MMA Lighting Consultancy Ltd, 25th November 2020);
4. An indicative lighting design drawing (MMA Lighting Consultancy Ltd Drawing Number: MMA16090/001).

The consultation response states that:

"The lighting scheme for the site will need to take into consideration the presence of bats in the local area and the scheme should minimise potential impacts to any bats using the trees, hedgerows and buildings through the provision of dark habitat orientated north-south direction and avoiding unnecessary artificial light spill through the use of directional light sources and shielding. We require that further details of the lighting scheme and dark corridors are provided as part of this application."

The ecological strategy in relation to bats is to maintain commuting and foraging corridors on key axes through and around the site. This is achieved by using a combination of lighting design measures including back-shields, low-level lighting on 4m columns and bollards, and directional fittings. The details of these are provided in the reports referred to above.

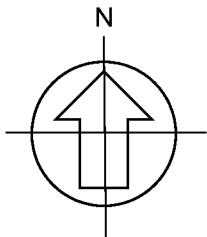
The dark corridors for bats are illustrated in the plan overleaf, overlaid onto the indicative lighting design drawing. With reference to the plan, these provide corridors of less than 1 Lux as follows:

1. A continuous dark corridor in a north-south direction along the eastern site boundary
2. A dark corridor in an east-west direction, along the site's northern edge, reach 2Lux in two places by turning heads
3. A dark corridor in a north-south direction, broken in one place by lighting of the adopted road;
4. A dark corridor in a north-south direction along Ford Road, partially affected by lighting of the adopted road.

There are therefore three north-south links, one across the top of the site and potential for an improved link across the bottom edge of the site (not shown on this figure).



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ON BEHALF OF
The Arundel Estate

PROJECT
Land off Ford Road, Arundel

SCALE
NTS
PROJECT NO
eg17809.003

DATE
09/02/21
APPROVED
MD

TITLE
Figure 1: Illustrative Bat Corridors

Dormice

The surveys carried out in the course of the project design process had the objective of determining if dormice were present within the site's red line boundary, and whether they would be likely to be affected by the proposed development in principal. The surveys were carried out in accordance with the standard methods used for this purpose, and achieved the necessary points score as set out in the Dormouse Conservation Handbook for establishing presence or absence.

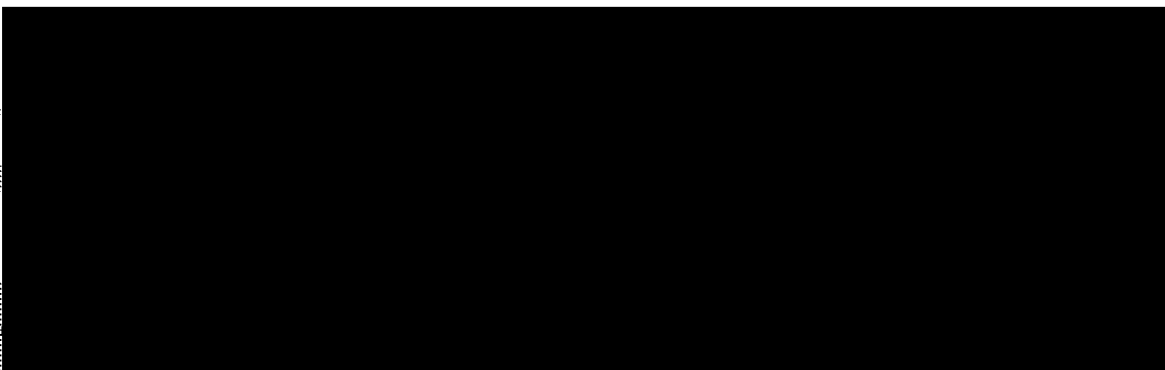
The long-term impact of the proposal on dormice habitat will be a net increase in hedgerow habitat. In the short-term, the development will require two hedgerow breaches for the proposed adopted roads (where no evidence of dormice was detected) and minor works to two sections of hedge on the northern boundary to accommodate turning heads (where a dormouse nest was found).

The presence / absence surveys were sufficient to detect the presence of dormice and determine that, whilst a European Protected Species Licence will be required for the development, the net effect is such that a licence is highly likely to be granted. A licence will not be required for some time, and not before all relevant planning conditions have been discharged. At this point the dormouse survey data will need to be updated, and this would include a population estimate to inform the licence application. But at this point no further surveys are needed.

Reptiles

The edges of the site are used by three reptile species (slow-worms, common lizards and grass snakes) but the majority of the site is not used because the habitats are not suitable. In order to avoid harm to reptiles during construction, a translocation exercise will be completed to ensure that they are removed from construction areas to safe receptor areas within the site.

The illustrative development layout and parameters plans allow for substantial areas of green space, which have the potential to enhance the site for these reptiles. An outline Reptile Mitigation Strategy (RMS) has been prepared to illustrate how this can be achieved based on the current illustrative masterplan. This would need to be re-visited and revised as appropriate as part of a reserved matters application, should the outline consent be granted. The RMS and accompanying illustrative biodiversity enhancement plan (included in this document for reference) also set out the proposed locations of log piles and hibernacula.



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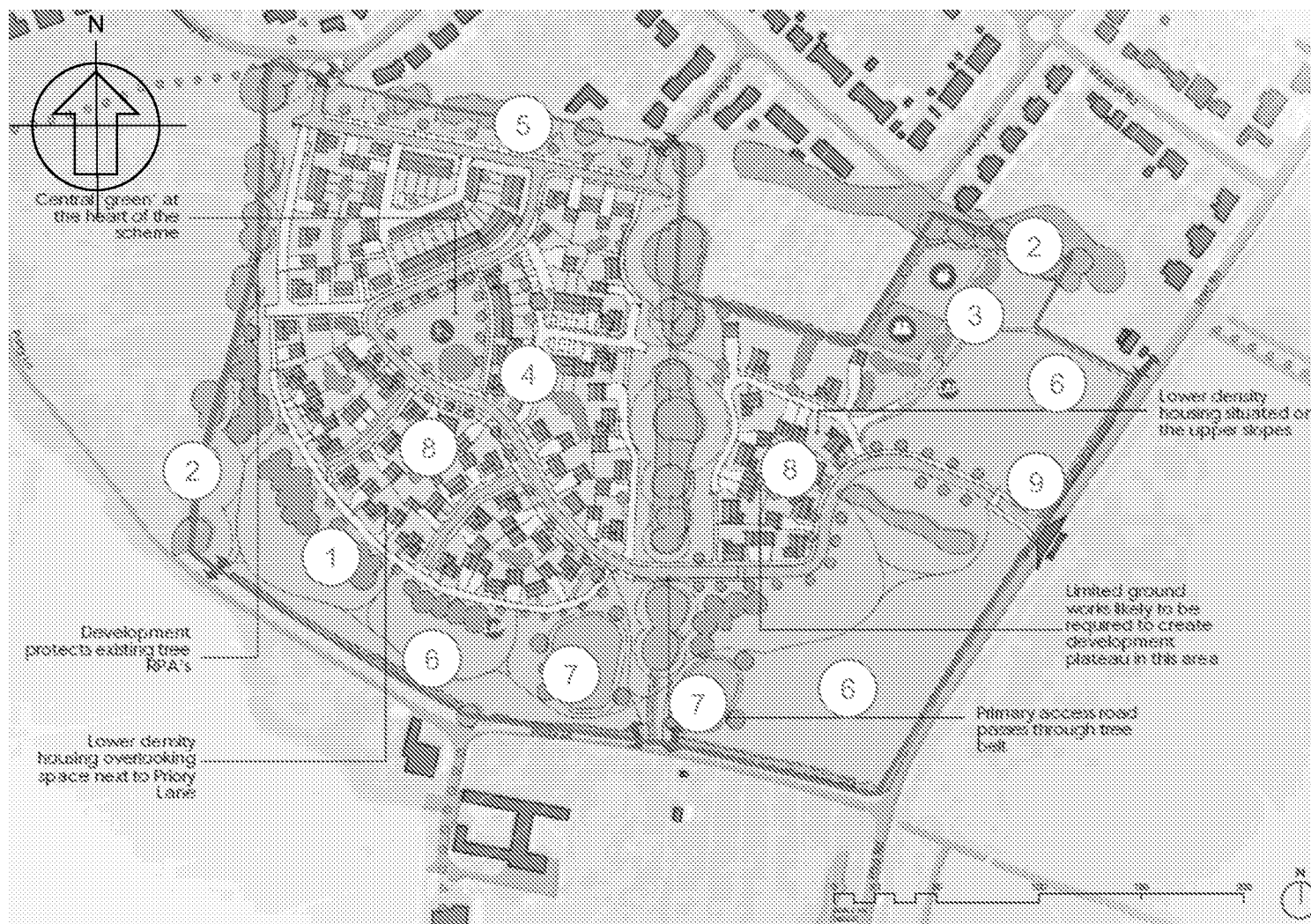
Biodiversity Enhancement

The illustrative masterplan allows for the enhancement of biodiversity in the following ways:

- 370m of new hedge creation to offset the loss of hedges during construction
- The enhancement and management of retained grassland to increase its species-richness
- The creation of seasonal water bodies combined with SUDS features to provide habitat for reptiles, amphibians and other wildlife
- Bat and bird boxes integrated into at least 20% of the new dwellings
- Bat boxes installed onto retained trees
- Creation of new species-rich grassland and scrub mosaics for wildlife and public open space
- The retention of most of the hedgerows and mature trees (only eight trees would need to be removed for the illustrative layout)
- The replacement of the eight trees at a ratio of more than 2:1
- Barn owl boxes installed in locations overlooking species-rich grassland and scrub where small mammals will be hunted
- Log piles and hibernacula created for reptiles in appropriate locations
- Gaps left under garden fences for wildlife including hedgehogs
- Hedgehog nesting boxes installed in suitable areas

The illustrative locations of these biodiversity features are set out in the plan overleaf. A Heads of Terms Mitigation and Enhancement management Strategy is provided here to set out how these features would be managed. A more detailed Landscape and Ecological Management Plan would be prepared for any subsequent reserved matters application, based upon a finalised development design.





- 1 New tree planting groups, providing more than the 16 trees required to replace lost trees at a ratio of 2:1
- 2 Barn owl boxes installed on retained trees overlooking foraging areas
- 3 Reptile hibernacula created next to the off-site allotments
- 4 Bird and bat boxes built-in to at least 20% of new dwellings
- 5 Hedgehog nesting boxes installed on suburban boundary
- 6 Wildflower grassland created from existing habitats
- 7 Creation of new seasonal water bodies
- 8 Hedgehog highways through garden fences throughout site
- 9 Wetland area managed as mosaic of wet grassland and scrub
- 10 Hedges managed to promote flowering and fruiting, with 'edge habitat' at bases



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Figure 2: Illustrative Biodiversity Enhancement Plan