Ecological Design Strategy

Chestnut Street, Grimethorpe

6th March 2020



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Document ref: MBE/OTH/2020/01				
Purpose and Description	Originated	Checked	Reviewed	Date
For Planning	P Middleton MCIEEM [redacted]	Robert Bell	-	06/03/20

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1. Summary

1.1.1 The Ecological Design Strategy (EDS) was commissioned by the developer Jason Etherington on 4th March 2020.

1.1.2 The EDS has been requested by Barnsley Metropolitan Borough Council in order to address Conditions 10 (and 5 in part) of the planning approval for application no: 2019/1098. Erection of 4 no. dwelling in two blocks at Chestnut Street, Grimethorpe S72 7LQ.

1.1.1 A detailed scheme prescription is included in this EDS, which addresses the design and implementation of the ecological mitigation and biodiversity enhancement measures for the scheme. The proposals include bird and bat box provision and measures to ensure the free movement of hedgehogs.

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2. Introduction

2.1.1 Middleton Bell Ecology were commissioned by the developer Jason Etherington on 4th March 2020 to provide an Ecological Design Strategy (EDS) for a development comprising the construction of four dwellings.

2.1.2 The EDS has been requested by Barnsley Metropolitan Borough Council in order to address Conditions 10 (and 5 in part) of the planning approval for application no: 2019/1098. Erection of 4 no. dwelling in two blocks at Chestnut Street, Grimethorpe S72 7JZ.

2.1.3 Condition 10 states that upon commencement of development, details of the ecological mitigation and biodiversity enhancement stipulated in the Ecological Report (MBE/ECO/2019/38/02) shall be submitted to and approved in writing by the Local Planning Authority (LPA). Condition 5 states that upon commencement of development, a plan indicating the position, composition and size of boundary treatments to be erected shall be submitted and approved in writing by the LPA.

2.1.4 The EDS is to include details of the following:

a) Purpose and conservation objectives for the proposed works.
b) Locations (shown on appropriate scale maps and plans) of specific make and model, or design, of bat and/or bird boxes to be installed integral to all new building.
c) Timetable for implementation, demonstrating that works are aligned with the proposed phasing of development.
d) Persons responsible for implementing works.
e) Details of initial aftercare and long-term maintenance.
f) Details of monitoring and remedial measures.

2.1.5 The EDS should be implemented in accordance with the approved details and all ecological features should be retained in that manner thereafter.

3. Purpose and Conservation Objectives

3.1.1 The strategy is aimed at achieving the following:

- To ensure the optimal benefits of biodiversity are achieved in line with the aims of NPPF Section 15.
- Provide bat roost provision and to ensure correct location of these features on site to maximise the likelihood of use.
- Provide nest boxes, suitable for use by house sparrows *Passer domesticus*.
- Ensure the free movement of hedgehog *Erinaceus europaeus* throughout the site.

4. Review of Site Potential and Constraints

Existing site

4.1.1 An Ecological Appraisal of the site was conducted in November 20019 by Middleton Bell Ecology. Site habitats are considered to be of site level importance to nature conservation, whilst the site is unlikely to be of greater than site level importance to any faunal species group.

Habitat assessment

4.1.2 The application site is located off Chestnut Street in a somewhat rural location on the outskirts of the village of Grimethorpe approximately 7.5 kilometres east of Barnsley town centre. The site consists of approximately 0.10ha of land, with semi-natural habitats present on site comprising bramble scrub, bracken, tall ruderal vegetation and very small areas of poor semi improved grassland and introduced shrub. The site has linkages with semi natural habitats and a Local Wildlife Site (see Figure 1).

Figure 1. Site, as indicated by red line boundary



5. Detailed Scheme Prescription

Bat roost provision

5.1.1 The new development (two of the dwellings) will have a cavity bat box integrated at wall top height on the southeast and southwest elevations (see Figures 2 & 3). The Habibat Bat Box is a large, solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built. A variety of facings can be fitted to suit any existing brick, wood, stonework or rendered finish, rendering the box unobtrusive and aesthetically pleasing. The Habibat box is suitable for species which are most commonly found roosting in buildings in the UK including common pipistrelle *Pipistrellus pipistellus*.

Plate 1. Habibat Bat Box (custom brick facing)



5.1.2 The development will be constructed of brick with a concrete tile roof. Correct placement of bat boxes is fundamental to their successful uptake by bats with temperature known to be the major factor influencing use of artificial roosts by bats. For this reason, The Habibat boxes are to be located in positions where they will receive favourable amount of sunlight, on the southwest and southeast elevations of the buildings. Placing the bat boxes in these locations avoids the impact of street lighting and they will not be located over windows or doors.

5.1.3 No external lighting is to impact upon the location of the new bat boxes. A web address for the purchase of this product is detailed below:

https://www.nhbs.com/search?q=integrated%20bat%20boxes&hPP=60&idx=titles&p=0&fR%5Bdoc_s%5D%5B0%5D=false&fR%5Bhide%5D%5B0%5D=false&fR%5Blive%5D%5B0%5D=true

Figure 2. Elevation plan showing bat box on southeast and southwest, as indicated by yellow rectangle.



Bird box provision

5.1.4 The new development will have two Schwegler 1SP Sparrow terraces installed directly under soffits on the northwest elevations (see Plate 2 & Figures 3 & 4). The Sparrow Terrace has been designed to help redress the balance of falling house sparrow numbers. The current UK population of 6 million pairs is half what it was in 1980 and this is thought to be due to habitat destruction and lack of suitable nesting spaces. Sparrows are social birds and like to nest in company. This terrace provides ideal nesting opportunities for three families. Made of Schwegler's wood-concrete mix, this terrace is durable, breathable and will last many decades.

Plate 2. Schwegler 1SP Sparrow Terrace



5.1.5 A web address for the purchase of this product is detailed below:

https://www.nhbs.com/search?q=sparrow+boxes

Figure 3. Location plan of bat boxes on south elevation of extension, as indicated by red square. Sparrow box locations indicated by blue rectangle. Access through fences for hedgehog, as indicated by red star.

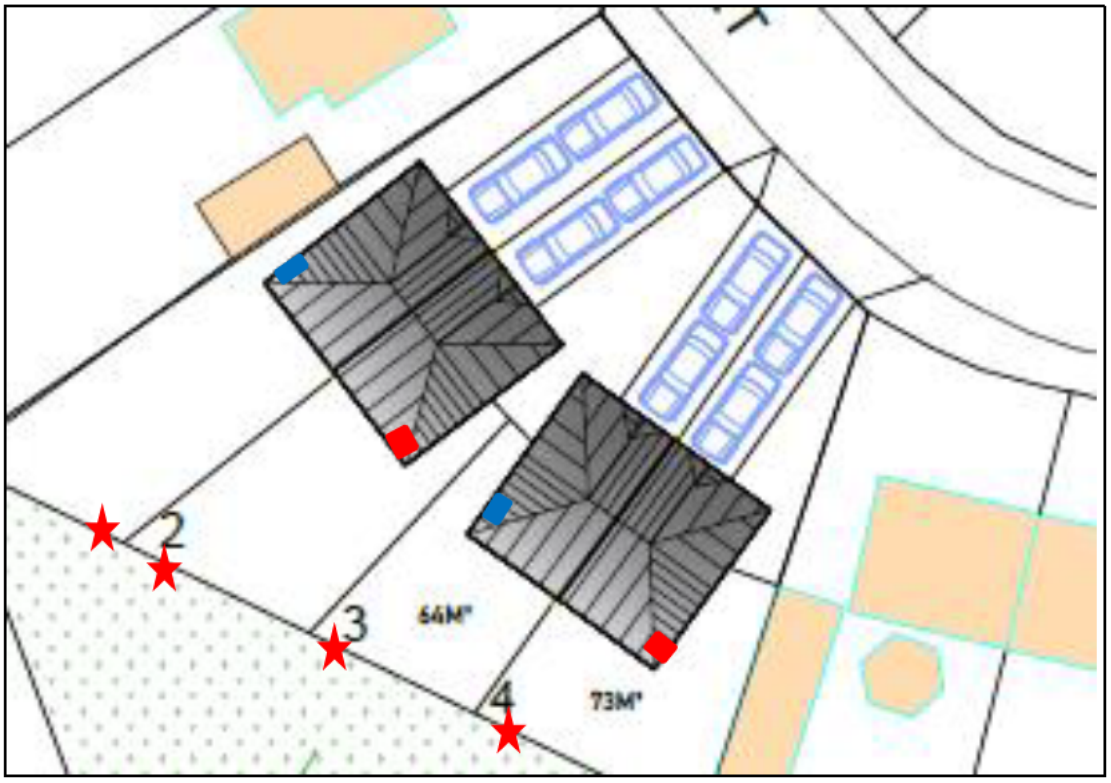
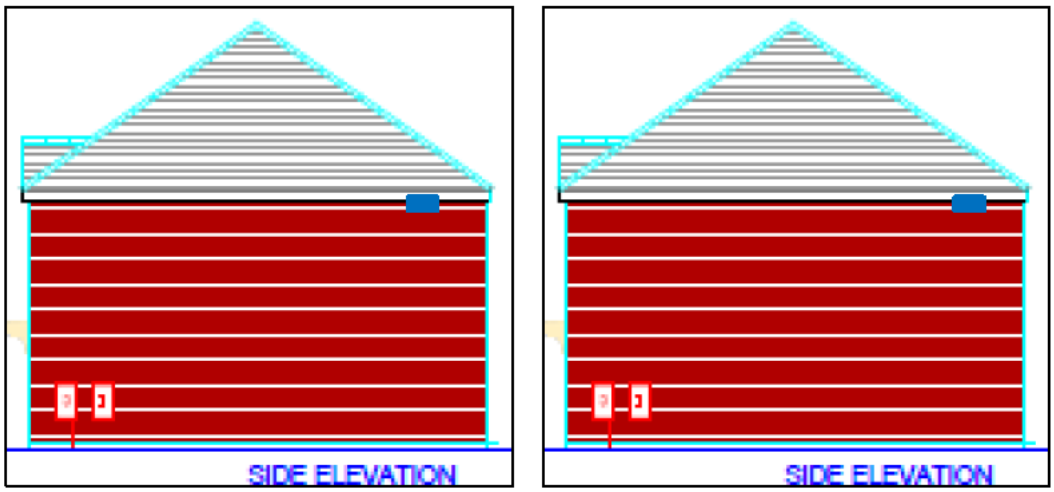


Figure 4. Elevation plan of sparrow boxes on northwest elevations of dwellings, as indicated by blue rectangles



5.1.6 Nesting birds receive strict legal protection. As such, site vegetation clearance was undertaken during winter 2019/2020, outside the nesting bird season.

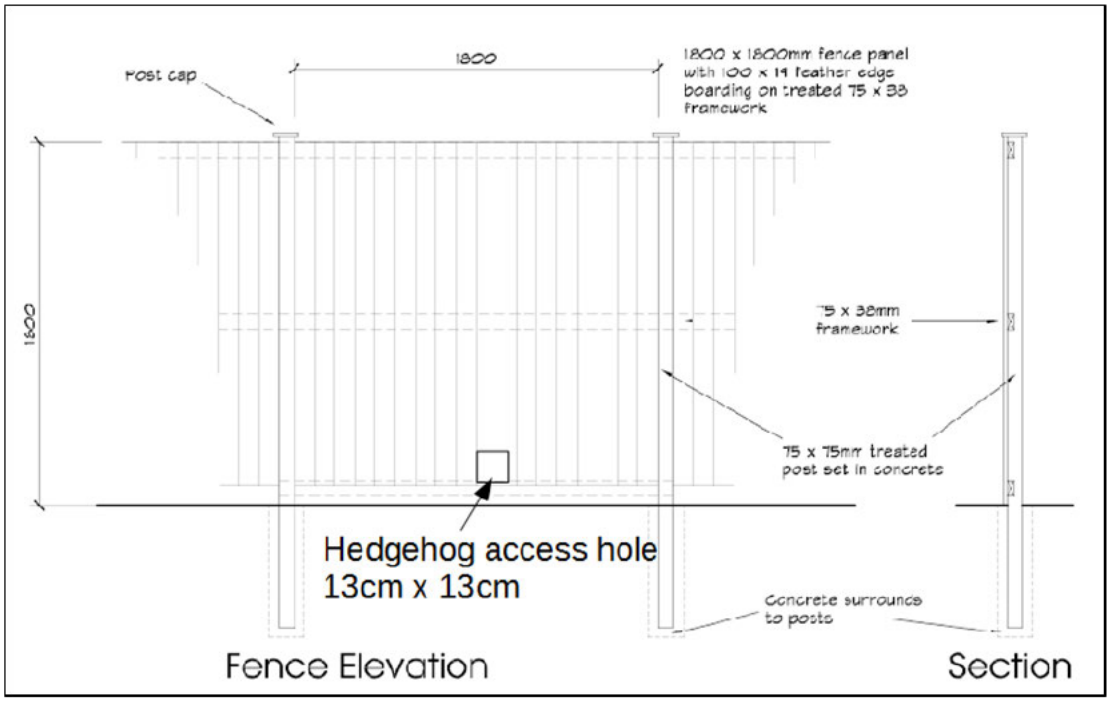
Hedgehogs friendly boundaries

5.1.1 The boundaries to the dwelling must provide for the free movement of hedgehogs through the site by installing hedgehog friendly fences. At least two holes measuring at least 12cm x 12cm must be provided on each length of fence, it is recommended that a 2m high hit and miss fence is erected (see Figure 5).

Plates 5 & 6. Hedgehog friendly fences



Figure 5. Detail of hedgehog friendly fences



6. Timetable of Works

Table 1. Works timetable

Development activities and timing		
Activity	**Timing**	**Notes**
Site clearance	January 2020	Already completed
In-situ installation of bat boxes at wall top height on south elevation	During construction when walls are almost complete (March/April 2020)	As described in Section 5 of this report.
Installation of sparrow boxes on southeast & southwest elevations	During construction when roof is complete (April/May 2020	As described in Section 5 of this report.
Erection of hedgehog friendly fencing	Following construction of dwellings (June-Aug 2020)	As described in Section 5 of this report.

Persons responsible for implementation of works

The developer (Jason Etherington) is responsible for the implementation of works.

Aftercare and long-term maintenance

6.1.1 Sparrow boxes should ideally be cleaned out annually; the developer (Jason

Etherington) will advise the occupants regarding the annual cleaning of boxes. No maintenance of bat boxes is required.

Details of monitoring and remedial measures

6.1.2 By implementing the prescription detailed in Section 5 of this EDS, the conservation objectives will be achieved. No monitoring is required