

Alice Brighton

Welbeck Land

By email only

6th November 2017

Barn Owls at Land East of Wandleys Lane and West of West Walberton Lane (WA/73/17/OUT)

Thank you for sending through the comments regarding ecology at Land East of Wandleys Lane from Liz Rogers, the Environment Officer for Chichester District Council. My understanding is that our Preliminary Ecological Appraisal (PEA) and subsequent protected species reports were broadly acceptable in terms of our recommendations regarding mitigation and enhancements on site. However, concerns have been raised with regards to the potential for barn owls to be using the site. The comment is as follows:

"No consideration for barn owls has been given on the site and in particular within the buildings. We require that buildings onsite are assessed to determine if there is potential for barn owls to be nesting within them. If barn owls are found to be nesting within any buildings on site, mitigation will be required. These surveys and any mitigation will need to be submitted as part of this application prior to determination."

The site covers approximately 6.98ha and consists of a large grassland field with tree lines, hedgerows and a woodland edge (Figure 1). The surrounding area consists of medium-density housing, agricultural land and woodland blocks. There are five records of barn owls within 2km of the site in the last 10 years, according to records from the Sussex Biodiversity Records Centre. The most recent was within 2km of the site in 2011 and approximately 1.5km away in 2010. More accurate locations could not be achieved due to the confidentiality of some records.



Figure 1: Red line boundary of the site and survey area

Legislation

Barn Owls are listed under Schedule 1 of the Wildlife and Countryside Act (1981 as amended) which means that it is an offence to:

- Intentionally kill, injure or take a barn owl;
- Intentionally take, damage or destroy the nest of a barn owl whilst that nest is in use or being built;
- Intentionally take or destroy an egg of a barn owl;
- Intentionally or recklessly disturb a barn owl while it is building a nest or is in/near a nest containing eggs or young;
- Intentionally or recklessly disturb dependent young.

Methodology

Surveyors Natalie Kay BSc (Hons) MSc ACIEEM and Jade Brennan BSc (Hons) revisited the site on 2nd November 2017 to undertake an internal and external examination of the buildings for signs of barn owl activity. The surveyors visually inspected the buildings for potential barn owl nesting sites and searched for evidence of use by barn owls such as:

- Presence of adult feathers and downy juvenile feathers;
- Regurgitated undigested pellets below perch/nest site locations. These are usually darker, larger and more compact than other owl pellets and contain most of the prey's skeleton;
- White splashing, which arises from squirted faeces.

A site walkover was also carried out to determine the site's potential to be used by foraging barn owls. Optimal foraging habitat for barn owls is rough grassland since this is where their main prey species is found (field vole). However, they can forage over a wide range of habitats so long as small mammals can be caught and this depends on whether or not the vegetation provides sufficient food and cover for small mammals.

Results

There are two buildings along the northern boundary and next to the entrance to the site (Figure 2). Both buildings are small in size with shallow pitched roofs and are currently used for storage (see Appendix 1). Only half of building 1 could be accessed internally, as the entrance to one half was locked and fully secure. The other half was open to the elements through a permanently open doorway and used for storing hay bales at the time of the survey. No barn owl evidence such as pellets or feathers was found anywhere in this portion of the building. It was also considered to be too exposed and too low to provide suitable roosting or nesting opportunities.

Building 2 was divided into two with only partial doors in place. Both rooms were used for storage and it was considered that there were no suitable perches or nesting locations anywhere inside the building (see Appendix 1). No evidence of barn owls was found inside. Therefore, neither of the buildings on site were considered suitable for barn owls.

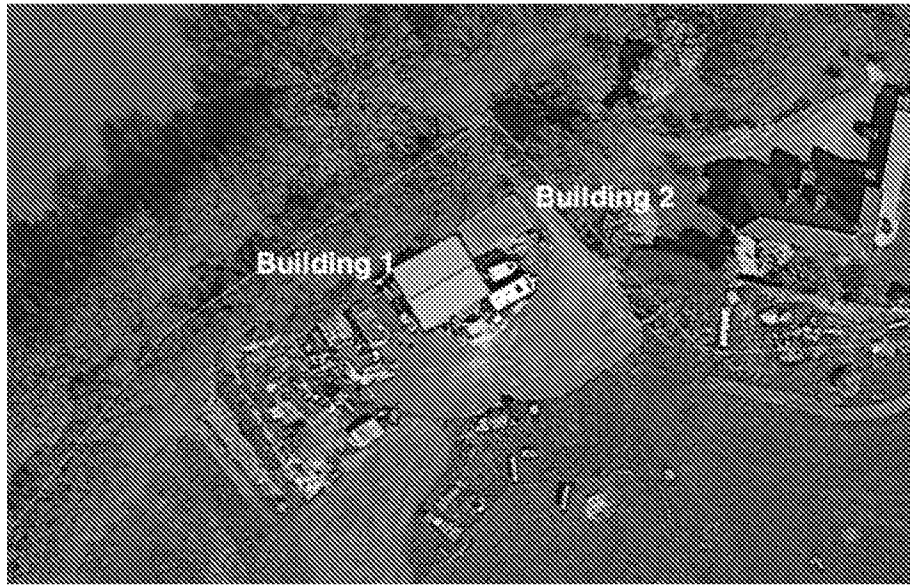


Figure 2: Location of buildings on site, numbered for ease of reference

Large trees along the boundaries of the site were also inspected for their potential to support a barn owl nest. No trees were found to contain a hole big enough (minimum 70mm diameter) for a barn owl to access.

The habitats on site consist of a large area of grassland with tree lines and hedgerows along the boundaries only. The western section of the grassland is continually grazed by a pony and sheep. Earlier in the year this area of grazing was moved slightly westward, which suggests that the grazed area is shifted periodically. This means that much of the western portion of the grassland has a very short sward height and no litter layer, meaning there is no cover for small mammals and no potential prey for barn owls.

The rest of the grassland on site is cut for hay and this was done during the summer of this year. This again means that there is no litter layer and therefore very little cover for small mammals. However, since hay meadows are not usually cut until the summer solstice, they can support a low density of voles up until this time. During one study, Taylor (1994) trapped an average of 1.5 voles in hay meadows compared with 0 in grazed pasture and 10.3-30.5 in rough grassland. There are also opportunities for foraging barn owls immediately after cutting since this makes prey easier to catch.

The tree lines and hedgerows on site are not directly beneficial to barn owls but they can be indirectly beneficial if associated with rough grassland edges. During the survey, it was not considered that there was

a significant tussocky edge present alongside these features since cutting takes place close to the boundaries. It should also be noted that parts of the southern and western boundaries do not support any hedgerows or other linear features which would normally have tussocky grassland edges.

Discussion

No evidence of barn owls, such as feathers, pellets or faecal splashing, was found in either building on site. The buildings were not considered suitable due to the lack of suitable ledges or perches for nesting and the open and exposed nature of the accessible internal spaces. They are also considered to be too low as almost all buildings in which barn owls roost or nest are 3m high or taller (Barn Owl Trust 2012). The trees along the boundaries of the site were inspected for their potential to support nesting barn owls but there were no holes found which were large enough to allow entry for barn owls. It is considered that there are no suitable barn owl roosts or nesting sites present within the red line boundary and that the buildings on site can be demolished without further consideration for this species.

In terms of foraging habitat, this is not legally protected but should still be considered. Whilst most of the site is grassland, it is not considered to be optimal rough grassland habitat. Rough grassland is defined by the Barn Owl Trust (2012) as *“permanent grassland that is for the most part ungrazed, only lightly grazed or occasionally topped (certainly never mown or grazed short)”* and *“composed of a mixed sward of palatable grasses, with a substantial ‘litter-layer’ of mostly dead grass at its base, no less than 7cm deep”*. The grassland habitats on site cannot therefore be defined as rough grassland but rather consist of a hay meadow and grazed semi-improved grassland. These are suboptimal habitats since the availability of small mammal prey is considered to be negligible within the grazed area and relatively low within the hay meadow.

Given the suboptimal nature of the habitat on site and the area to be lost (approximately 6ha), it is considered that if any barn owls were using the site for foraging, it would only form a small part of their range. Barn owls occupy large home ranges and can forage between 3-6km from their nest site in winter and 1-4km when breeding (Cayford 1992; Taylor 1994). In mixed landscapes, such as that surrounding the site where neither arable nor pastoral land is dominant, it is estimated that barn owls require between 17-26ha of rough grassland or 43km of rough grassland margin (4-6m wide) within 2km of the nest (Barn Owl Trust 2012). It is much harder to estimate the value of other habitat types, such as those on site, due to the wide range of

variables involved. However, it can be assumed that the required cover would be much greater than that of rough grassland. Therefore, it is considered that the favourable conservation status of barn owls is dependent on habitats at a landscape level rather than site level and the loss of a relatively small area of suboptimal habitat on site will not have a significant impact on foraging barn owls in the wider area.

When considering the latest plans for the site (Figure 2), it can be seen that a large buffer (up to 19m) is to be retained between the development and the southern and western boundaries. The buffer between the ancient woodland edge and the development is to be planted with a thorny edge as mitigation for dormice. However, the western part of this buffer as well as other boundaries on site should be maintained as rough tussocky grassland edges since reptiles have been found on site. Hedgerow planting has also been recommended along the boundaries of site which would help to maintain rough edges. Management of these grassland strips should be kept to a minimum so as to allow a litter layer to develop within which small mammal prey can reside.



Figure 2: Latest plans for the development

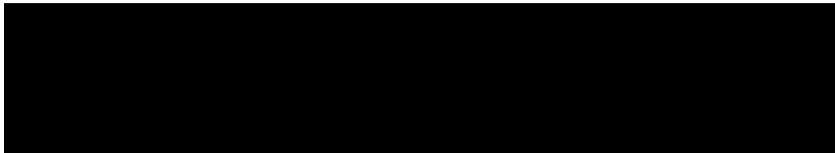
It should be noted that the installation of barn owl boxes has not been recommended for this site as it is within 1km of a major road (A27). These types of roads are associated with a high risk of barn owl mortality.

Conclusions

No evidence of barn owls was found anywhere on site and it is considered that there are no suitable roosting or nesting sites present. The buildings on site can be demolished without further consideration for this species. The habitats on site were considered to be suboptimal for foraging barn owls and the relatively small area to be lost is not considered to have significant impacts on the local barn owl population. Rough grassland edges should be maintained along the boundaries of the site post-development.

I trust this letter of report is sufficient for the LPA. If you require any further details, please do not hesitate to contact me.

Kind regards,



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Managing Director

References

Barn Owl Trust (2012) *Barn Owl Conservation Handbook*. Pelagic Publishing, Exeter.

Cayford, J. (1992) *Barn Owl Ecology on East Anglian Farmland*. RSPB Conservation Review, 6.

Taylor, I. (1994) *Barn Owls: Predator-Prey relationships and Conservation*. Cambridge University Press, Cambridge.

Appendix 1 – Site Photos

Photo 1: Building 1

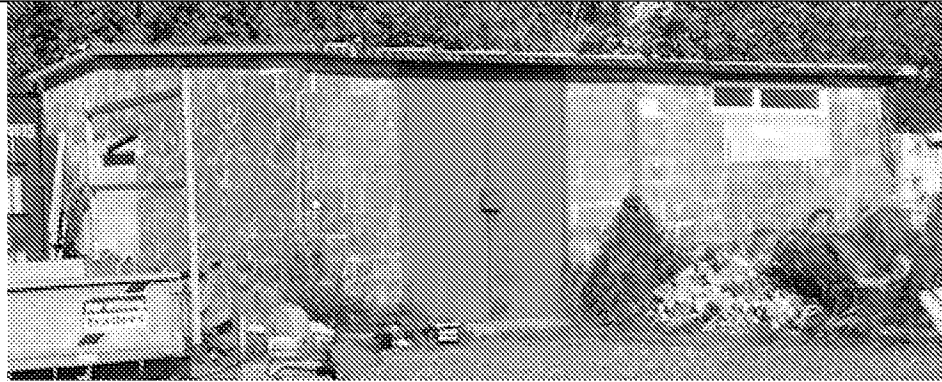


Photo 2: Inside part
of Building 1



Photo 3: Building 2



Photo 4: Inside
building 2



Photo 5: Grassland
habitat on site as
seen from the
northern boundary.
Grazed area to right
and meadow to the
left.

