

A46 Newark Bypass

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7.69 Barn Owl Nest Box Specification

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**The Infrastructure (Examination
Procedure) Rules 2010**

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Development Consent Order 202[x]

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1 Introduction

- 1.1.1 This document provides a specification for the three offsite barn owl nest boxes proposed to be provided and managed for the purposes of Requirement 21 of Schedule 2 of the Development Consent Order (DCO) [REP6-004].
- 1.1.2 The offsite barn owl nest boxes are required to be in place prior to the commencement of any site clearance works being undertaken as part of the pre-commencement works for the authorised development, as defined in Article 2(1) of the DCO [REP6-004].

2 Offsite Barn Owl Nest Box Location

- 2.1.1 Completed barn owl Stage 3 surveys confirmed the location of barn owl occupied breeding sites (OBS) and potential nesting sites (PNS). These sites require temporary blockage for the duration of construction. These sites must only be blocked following provision of alternative nesting sites (e.g. barn owl nest boxes). Two barn owl nest boxes will be erected for each OBS temporarily lost during construction and one barn owl nest box will be erected for each PNS temporarily lost during construction. The barn owl Stage 3 surveys confirmed that three offsite barn owl nest boxes are required.
- 2.1.2 Barn owl nest boxes shall be installed by a competent ecologist one year prior to construction commencing, and no later than mid-February prior to the commencement of any work. Barn owl nest boxes shall be installed on retained trees of a suitable maturity or on posts, close to confirmed nesting sites which will be lost and not within the zone of influence (as detailed below).
- 2.1.3 With reference to the *Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment*¹ and the Barn Owl Trust² the offsite barn owl nest boxes shall be located:
- Further than 175 metres from the Scheme;
 - Further than 1 kilometre from the nearest motorway (A1(M));
 - Further than 1 kilometre from unscreened sections of dual-carriageways or similar major roads (e.g. avoid the ~165-meter unscreened section of the A46 carriageway north east of the fuel stations off Friendly Farmer Roundabout);
 - Approximately 100-150 metres between a pair of barn owl nest boxes (breeding territory) per confirmed occupied breeding site (OBS) proposed for closure;
 - Approximately 500 metres between barn owl breeding territories.
- 2.1.4 The offsite barn owl nest boxes shall be provided in accordance with the following criteria (with reference to the *Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment*¹ and the Barn Owl Trust²):
- secured in a mature tree, with a thick trunk and high canopy, with few or no low branches;

¹ Shawyer C.R. (2011). Barn Owl Tyto alba Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. Available at: https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer_public/c2/62/c262d7d8-4ff7-4293-b2de-e1605fff5f91/d89_-_barn_owl_tyto_alba_survey_methodology_and_techniques_for_use_in_ecological_assessment81824167_1.pdf

² Barn Owl Trust website. Available at: <https://www.barnowltrust.org.uk/barn-owl-nestbox/owl-boxes-for-trees/>

- located on a woodland edge or an isolated / stand-alone tree;
- installed at a safe height of 4 metres above ground level (ease of future maintenance and monitoring and predation avoidance);
- lined with about 30 mm of small grade wood chippings;
- positioned so the entrance hole overlooks / is close to strips or patches of rough grassland habitat (not necessarily in it);
- not obscured by dense foliage to offer barn owls an uninterrupted flight-path into the nestbox; (potential for a passing owl to see the nest box access hole at a distance when tree is in full leaf);
- positioned so the nestboxes are backed onto the prevailing wind; and
- installed in quiet, relatively undisturbed locations and close to prime feeding habitat.

2.1.5 Prior to construction any existing confirmed nest sites will be closed, a year after barn owl nest box installation and outside of the core nesting period to reduce risk of the nest being active. Checks of OBS and PNS (pre-commencement surveys) will be undertaken immediately prior to their temporary closure, by an experienced ornithologist who holds a Natural England class 1 barn owl licence. If barn owls are present and confirmed to be nesting during these pre-commencement surveys, the nest site will need to be monitored and will only be closed once individuals have naturally fledged. Until the chicks have fledged and the nests become inactive, it may be necessary to employ 'no-working' buffers around the nest(s), if active breeding overlaps with the pre-commencement or main construction works, to avoid disturbance of any actively breeding birds. The need for and the design of 'no-working' buffers would be confirmed by an ecologist and would be subject to the works proposed in the area around the active nest.

3 Offsite Barn Owl Nest Box Specification

3.1.1 The offsite barn owl nest box shall be provided in accordance with the following design specification, with reference to the aforementioned guidance^{1,2}:

- A large single-chamber nest box with an entrance hole at the top of the front panel;
- A landing/exercise/roosting platform in front on the entrance hole;
- Two large inspection/access hatches with covers to sides;
- The back panel extends above and below the box for handling and fixing;
- Canopy across the front for weather protection;
- Drained floor.

3.2 Materials

3.2.1 The barn owl nest boxes will be made from precision-cut interlocking panels of exterior grade Forest Stewardship Council (FSC) Certified birch plywood, treated with non-toxic water-based preservative/stain. Key panel joints will be silicon sealed to reduce water ingress, inspection hatch/access covers will be held to box with toggle fasteners and panels will be stapled together with surface sunk staples.

3.3 Dimensions

3.3.1 The dimensions and weight of the offsite barn owl nest box design are summarised in Table 1 and the design is shown in Figure 1.

Table 1 Barn owl nest box dimensions and weight

Feature	Dimension and Weight
External dimensions	740 x 590 x 500 mm
Internal depth (from entrance hole to floor)	440mm
Depth of enclosed box	340 mm
Entrance hole	130 x 120 mm
Inspection hatches	280 x 330 mm
Weight	7-8kg

Figure 1 Barn owl nest box design



Source: Wildcare

4 Duration and Management of Offsite Barn Owl Nest Boxes

- 4.1.1 A section 253 agreement will be entered into with the relevant landowner to ensure the offsite barn owl nest boxes are provided prior to the commencement of any site clearance works being undertaken as part of the pre-commencement works as part of the authorised development. The latest that any offsite barn owl nest box will be installed will be the mid-February prior to the commencement of any work, to allow sufficient time for the structures to weather-in and barn owls to explore them, to increase the likelihood of uptake during nesting site selection.
- 4.1.2 The offsite barn owl nest boxes will be monitored and maintained by the Applicant annually from the date of installation, throughout construction, and for a period of five years post-construction. After this period the barn owl nest boxes will remain permanently in situ with no further requirement for monitoring and maintenance from the Applicant. The monitoring, maintenance and retention of these barn owl boxes after the aforementioned period will also be secured by the section 253 agreement.
- 4.1.3 During the aforementioned monitoring period, the offsite barn owl nest boxes will be managed and maintained in accordance with the following measures:
- An ornithologist who holds a Natural England class 1 barn owl licence will undertake checks of the barn owl nest boxes.
 - Nest boxes should be cleaned out between November and January, and preferably in dry, calm weather, so that any roosting owl is not flushed out into the rain or wind.
 - The box depth is maintained (to ensure nestling barn owls do not fall out) by clearing out the box once it has more than about 75-80 mm of nest debris.
 - If jackdaws use a barn owl nest box, it must be cleaned out every year.
 - Appropriate personal protective equipment must be worn when clearing debris from the barn owl nest boxes (for example, safety gloves and a dust mask).
 - Replacement of barn owl nest box, if deteriorated beyond use during monitoring and maintenance period.
 - Records of barn owl nest box usage will be submitted by the Applicant to Local Record Centre (LRC).

- 4.1.4 Records of any barn owls identified should be submitted to the local record centre (Nottinghamshire Biological and Geological Records Centre).