

Penny Clements
Roger Balmer Design Ltd

Date: 12 December 2022

Dear Penny,

Ecological survey update – Land to rear of Three Bridges, Norton Little Green, Suffolk. IP31 3NQ

A previous ecology survey of the site was undertaken by Aspen Ecology (2021) to support an approved scheme for the conversion of some outbuildings into a dwelling (Ref: DC/21/03505). A subsequent planning application for the demolition of the outbuildings and build a detached dwelling (Ref: DC/21/05985).

I am writing to provide a summary of the findings following a survey of the site by myself on the 4 November 2022, to inform the new planning application for the demolition of some existing outbuildings and the construction of a detached dwelling to the rear of the existing property (TL 97961 66430, Figure 1).

Introduction

The purpose of the visit was to identify potential ecological features of relevance to the scheme, to enable an assessment of potential ecological impacts on bats and other protected species. The desk and field assessment completed were made with reference to the CIEEM Guidelines¹.

Methodology

a) Site walkover

The site was walked with all distinct vegetation and habitat types, and any features of interest identified. Care was taken to record as many species as possible.

b) Amphibians and reptiles

The terrestrial habitat suitability of the site was assessed with respect to refugia and foraging habitat based on the known habitat preferences of GCN and widespread amphibians such as common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*), and common toad (*Bufo bufo*). Ordnance survey maps (Figure 2) show there to be 9 ponds located within 250m of the application site.

c) Bats

The existing buildings were assessed with regards to their suitability for supporting roosting bats with reference to the NE Bat Mitigation Guidelines (Mitchell-Jones, 2004) and the Bat Conservation Trust (BCT) "Bat Surveys: Good Practice Guidelines, 3rd edition" (Collins, 2016).

Any trees present which require felling were visually checked to assess their suitability for use by roosting bats using the following criteria:

1. All potential roosting cavities (e.g., natural cavities, rot holes, woodpecker holes, splits, peeling bark) were inspected from the ground, using binoculars where necessary;
2. All potential niches would be assigned a category according to Bat Conservation Trust (BCT) protocols (Collins, 2016). These categories are listed below:
 - **High Suitability:** Trees with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat;
 - **Moderate Suitability:** Trees with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation;
 - **Low Suitability:** A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential. However, the tree(s) are of a size and age that elevated surveys may result in features being found; or features which may have limited potential to support bats; and

¹ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

- Negligible Suitability: Trees with negligible bat roost potential.
3. Where potential niches existed, niches below 5m high were physically inspected, using ladders where appropriate. Any cavities; and
 4. Any potential roosting niches were checked for the presence of bats (alive or dead), faecal staining, fur and/or scratch marks around the entrance and droppings within the cavities or attached to the trunk/bough below the entrance.

d) Breeding birds

The buildings were inspected for evidence of nesting birds² such as barn owl (*Tyto alba*) and small passerines including swallow (*Hirundo rustica*).

e) S. 41 (NERC Act 2006) habitats and species

The value of the site for S. 41 list species such as hedgehog (*Erinaceus europaeus*) was assessed. Any S. 41 habitats such as native hedgerows would be recorded.

Surveyor

The site walkover was undertaken by Christian Whiting BSc MSc MCIEEM a licensed surveyor (Natural England) for bats (Level 2 licence 2015-14745-CLS-CLS) and barn owl (CL29/00213) and following standard methodology³.

Results

Habitat descriptions

The site (Figure 1) comprises an area of lawn (Photo 1) with an existing access drive (Photo 2), with some outbuildings B1 and B2 (Photos 3 to 5, Figure 1) which will require demolition. A fenced vegetable and fruit growing area (Photo 6) exists to the east of the application site. Some scattered trees and shrubs exist in the lawn, with some areas of longer grassland to the south which are managed for wildlife (Photo 7). No notable plant species are present.

Amphibians and reptiles

There are 9 ponds within 250m of the site (Figure 2) and the previous ecological assessment (Aspen Ecology, 2021) did not survey any of the ponds for Habitat Suitability. Given the dwelling is to be constructed within an area of short mown grassland with areas of hard standing around the building, limited refuge habitat exists, whilst the mown lawn provides potential foraging habitat during warm wet nights (C. Whiting *pers obs.*).

Bats

B1 (Photos 3 and 4) is a former stable constructed from brick walls and a corrugated cement fibre - asbestos roof with steel doors. Building B2 comprises a garage with a pitched roof with corrugated cement fibre – asbestos sheet and block work wall with some timber cladding, with a timber framed lean-to outbuilding attached at the southern end (Photo 5). Some common pipistrelle droppings (Photo 6, Appendix A2) were present within the ridge of the northern most stable of B1, with no evidence of roosting bats in B2 with 2 scattered old brown-long eared droppings indicating a single flight with no suitable roosting niches present.

Nesting birds

No evidence of nesting birds was recorded in B1. A robin (*Erithacus rubecula*) and a wren (*Troglodytes troglodytes*) nest (Photos 9 and 10) were present in building B2. No swallow (*Hirundo rustica*) nests were present in any of the outbuildings, though the remains of an old nest were found during the Aspen Ecology survey.

S. 41 list habitats and species

The site supports limited habitat for hedgehog (*Erinaceus europaeus*) which may forage within the site.

Discussion

Habitats

No habitats of conservation value will be impacted with mostly species poor lawn to be lost and a small number of immature trees to be compensated as part of the proposed landscaping with a 5m native tree/shrub buffer proposed to the north of the new dwelling.

² All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.

³ Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition), Bat Conservation Trust, London.

Amphibians and reptiles

A precautionary working method statement is recommended to avoid impacts on GCNs and common amphibians as follows:

1. The lawn areas should be kept short with regular mowing prior to and during construction.
2. Longer vegetation should be cleared sensitively if >300 mm in height and amphibians are active (i.e., early February to October inclusive) as follows:
 - A first cut to be taken to 150mm above ground level with brash raked prior to being removed from site;
 - After at least 1 hour (preferably overnight), a second cut to ground level; and
 - Maintained near to ground level until works commence.
3. Excavations should be filled on the same day they are dug or covered overnight with ply boarding and any gaps filled with damp sharp sand;
4. If this is not feasible access ramps should be created to allow animals to escape and the excavations should be inspected daily and immediately prior to infilling. Any animals (except for GCN) present should be moved into retained hedgerows and/or other boundary habitats providing adequate cover;
5. Footings and concrete slabs should be poured during the morning where possible to ensure it has solidified prior to dusk to reduce the risk of animals coming into contact with wet concrete;
6. Any hand mixing of mortar or concrete should be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact;
7. Any excess concrete should be poured into a concrete skip, so it can then set to prevent animals coming into contact;
8. All building materials and waste materials should be stored on hard standing or stored off the ground on pallets to reduce risk of animals seeking refuge;
9. The GCN poster in Appendix A3 should be erected in the welfare facilities provided for construction staff onsite;
10. Should any GCNs be encountered, works should stop immediately, and advice be sought from a suitably experienced ecologist. Any other animals should be allowed to move out of the works area, or safely relocated;
11. **Permeable paving should be used preferentially to avoid the need for gully pots;**
12. **Downpipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen⁴ to prevent amphibians entering drains; and**
13. **If gully pots are required, they should use small diameter (6mm) grates where possible. Any installed gully pots should be situated ≥ 100 mm from the roadside, OR a wildlife-kerb⁵ must be installed adjacent to each gully pot AND a gully pot ladder⁶ placed into each gully pot.**

Bats:

Based on the observations made on site, the proposed works will result in the loss of a common pipistrelle day roost the loss of which would be a significant negative effect at the local level. Given the nature of the roost the site should be registered on the Bat Mitigation Class Licence prior to the demolition of the stables B1. The other outbuildings can be demolished without a bat licence with the roof and fascia stripped by hand as good practice.

A bat friendly roofing membrane (e.g., bitumastic Type 1F or a breathable roofing membrane that has passed a snagging propensity test as defined by Natural England and the Bat Conservation Trust⁷) should be used for any pantile or plain tile roofs to ensure no entanglement issues if bats roost under roof tiles in the future.

Lighting on the proposed dwelling should avoid illumination of bounding habitats such as trees, shrubs and hedgerows to the east and the proposed tree/shrub planting to the north, whilst any lighting on B2 should be PIR operated with a short-lit time and use a bulb on warm white spectrum with peak wavelengths >550nm (2700 or 3000°K) and no UV component.

Breeding birds:

Small passerines such as robin and wren have nested in B2 and therefore, birds could nest in the outbuildings prior to works commencing. Demolition of the buildings should be undertaken outside of the bird breeding season, or a nesting bird check should

⁴ <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

⁵ e.g. <https://www.aco.co.uk/products/wildlife-kerb>

⁶ <https://www.thebhs.org/the-bhs-amphibian-gully-pot-ladder>

⁷ <https://www.bats.org.uk/our-work/buildings-planning-and-development/non-bitumen-coated-roofing-membranes>

be carried out during February (if mild)/March to August inclusive. If any nests are found, exclusion zones must be established until young have fledged. The builder's compound should be sited on existing gravel hard standing and away from any trees and boundary hedgerows/scrub.

To compensate for the loss of some bird nesting sites within the outbuildings, some small passerine boxes a minimum of x2 robin/wren boxes (Appendix A5) could be erected on the external walls of the garage and/or the new dwelling.

Other species:

Vegetation clearance, ground-breaking and construction activities will result in losses of areas of foraging (e.g., lawn) for hedgehogs with potential entrapment, injury and mortality of individuals due to presence of trenches as well as caustic and building materials. Such impacts would result in negative effects upon individuals at the local level.

Site clearance should always consider the potential presence of hedgehogs with vigilance and any animals encountered moved to suitable cover, e.g., base of nearby hedgerows or scrub habitat (e.g., east of application site).

During construction, concrete should be poured early in the day or covered with ply boarding or membrane overnight to prevent animals coming into contact. Trenches should be covered overnight, or mammal ladders (large rough planks placed at shallow angles) placed to allow animals escape. Uncovered trenches must be checked daily, and any animals encountered be relocated out of the works area.

Timber panel fences are proposed along the north site boundary with mixed native tree and shrub planting proposed to create a 5m buffer as part of the site landscaping and biodiversity enhancements. Hedgehog highways should be provided (a minimum of 3) within the gravel boards.

Biodiversity enhancements

Landscaping proposed includes native tree and shrub planting which utilised a minimum of 8 species (Table 1) including species which provide a food source for birds, mammals and invertebrates as follows:

Table 1 Tree and woody shrub planting species and composition

Common name	Scientific name
Common hawthorn	<i>Crataegus monogyna</i>
Oak	<i>Quercus robur</i>
Small-leaved lime	<i>Tilia cordata</i>
Hornbeam	<i>Carpinus betulus</i>
Beech	<i>Fagus sylvatica</i>
Field maple	<i>Acer campestre</i>
Common dogwood	<i>Cornus sanguinea</i>
Holly	<i>Ilex aquifolium</i>
Hazel	<i>Corylus avellana</i>
Guelder rose	<i>Viburnum opulus</i>
Crab apple	<i>Malus sylvestris</i>
Spindle	<i>Euonymus europaea</i>
Sapporo 'Autumn Gold' Elm*	<i>U. davidiana</i> var. <i>japonica</i> x <i>U. pumila</i>

*A non-native hybrid cultivar of elm known to be resistant to Dutch Elm Disease and to support native elm-dependent invertebrates such as white letter hairstreak (*Satyrrium w-album*) (Butterfly Conservation, 2012⁸).

In addition, the following biodiversity enhancements are recommended:

- Nectar rich native climbers such as traveller's joy (*Clematis vitalba*) and honeysuckle (*Lonicera periclymenum*) will be planted at 5 to 10m intervals along proposed hedgerows for the benefit of pollinators and associated predators (e.g., foraging bats and hedgehogs).
- Sparrow terraces (Appendix A5) could be erected on the west elevation of the proposed garage;
- Two bat boxes should be mounted on the south gable end and east elevation of the garage;
- Log/brush piles (Appendix A6) could be created using any trees that require felling and could be positioned within an area of

⁸ Butterfly Conservation (2012). Disease-resistant elm cultivars. Butterfly Conservation trials report, 2nd revision.

- wildflower meadow grassland to the south; and
- A wildlife friendly composting area (Appendix A7) could be created.

Good practice advice⁹ should be followed in relation to the positioning of boxes.

It is generally advised that subject to no significant change in site management regimes, and dependent on the species present, baseline survey results typically remain valid for approximately 12 – 18 months (CIEEM, 2019).

Kind regards,

Christian Whiting BSc (Hons) MSc
Ecologist, MHE Consulting Ltd

⁹ <https://www.nhbs.com/blog/nhbs-guide-where-to-hang-and-how-to-maintain-your-bat-box> and <https://www.rspb.org.uk/birds-and-wildlife/advice/how-you-can-help-birds/nestboxes/nestboxes-for-small-birds/making-and-placing-a-bird-box>

Figures



Legend

Survey area

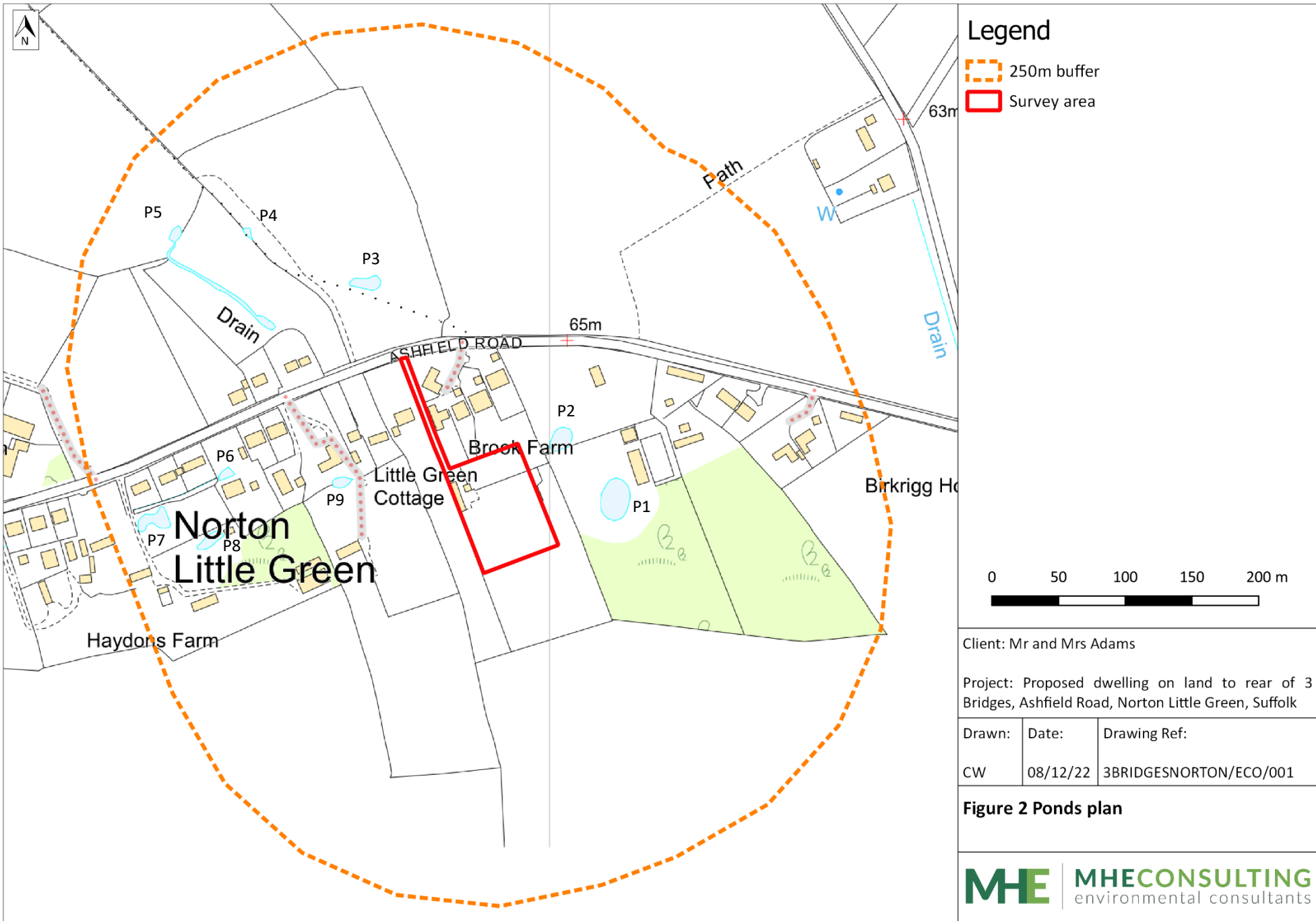


Client: Mr and Mrs Adams

Project: Proposed dwelling on land to rear of 3 Bridges, Ashfield Road, Norton Little Green, Suffolk

Drawn:	Date:	Drawing Ref:
CW	08/12/22	3BRIDGESNORTON/ECO/001

Figure 1 Location plan



Legend

- 250m buffer
- Survey area

Client: Mr and Mrs Adams

Project: Proposed dwelling on land to rear of 3 Bridges, Ashfield Road, Norton Little Green, Suffolk

Drawn:	Date:	Drawing Ref:
CW	08/12/22	3BRIDGESNORTON/ECO/001

Figure 2 Ponds plan

Appendices

Appendix A1 Photos



Photo 1 Area of lawn where the new dwelling is proposed



Photo 2 Proposed driveway access



Photo 3 Building B1 – N and W elevations



Photo 4 Building B1 south gable end



Photo 5 Building B2 South and east elevations



Photo 6 Fenced vegetable and fruit garden



Photo 7 Area of lawn and longer grassland with scattered trees



Photo 8 Bat droppings in B1



Photo 9 Birds nest in B2



Photo 10 Wren nest in south elevation of B2

Appendix A2 Bat droppings eDNA results

Folio No: E16123
 Report No: 1
 Purchase Order: 3 Bridges Norton
 Client: MHE CONSULTING LTD.
 Contact: Christian Whiting

TECHNICAL REPORT

ANALYSIS OF BAT DROPPINGS FOR SPECIES OF ORIGIN IDENTIFICATION

SUMMARY

The droppings of bats contain small amounts of DNA belonging to the organism from which they originated. By analysing droppings collected from a bat roost or colony for the presence of DNA, a robust identification of the species present can be made. Recent advancements in molecular methods including PCR (polymerase chain reaction) and DNA sequencing mean that 92% of bat species worldwide can be identified including all 17 UK resident bat species.

RESULTS

Date sample received at Laboratory: 29/11/2022
Date Reported: 07/12/2022
Matters Affecting Results: None

Lab Sample ID.	Site Name	O/S Reference	Genetic Sequence	Common Name	Result	Sequence Similarity
B1550	3 Bridges Stables	TL 97942 66430	CATTTCTCGTATAAATAATA TAAGTTTCTGACTCTGCT CCTCTTTTCTACTACTACTA GCCTCCTCTATAGTAGAAGC GGGAGGGGTACAGCCTGA ACACTCTACCCCTCTAGC AGGAAA	Common pipistrelle	<i>Pipistrellus pipistrellus</i>	99.21%

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Chelsea Warner

Approved by: Gabriela Danickova



Appendix A3 GCN poster

Great Crested Newt

If seen by any employee, works must cease immediately and an ecologist be contacted for advice

It is an offence to intentionally or recklessly disturb, injure or kill great crested newts

Further information can be found at www.arguk.org



Appendix A4 Bat boxes



Integrated eco bat box (crevice)



Ibstock integrated bat box



Vincent Pro bat box



Eco Kent bat box

Appendix A5 Bird boxes



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Print



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Product ID: R401640

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- Loyalty points can be collected/redeemed as usual
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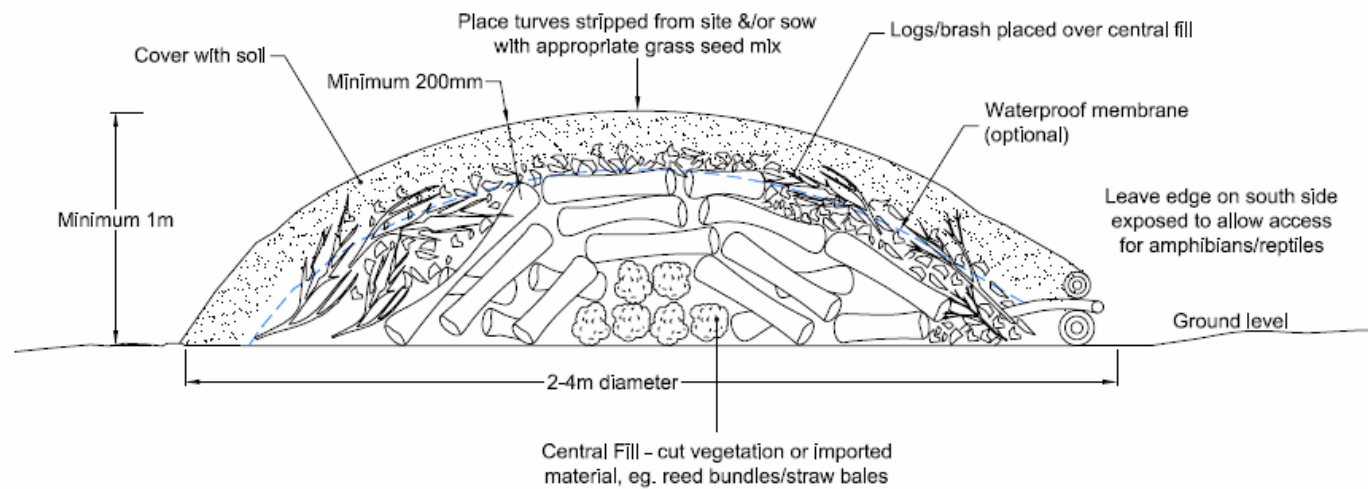
RSPB nest boxes provide a safe and snug place for birds to roost and nest. Unlike cheaper alternatives, our [bird houses](#) are made from sustainable FSC® certified timber and have excellent insulation properties. This makes them warm in winter and cool in summer. RSPB nest boxes are carefully designed with correct dimensions and ventilation, without perches for intruders to grip onto and threaten the occupants.

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Appendix A6 Herptile hibernaculum & brash piles



Brush/log pile recently created



Brush/log pile (c. 2 years old) with vegetation growing through and over

Appendix A7 Wildlife friendly compost heap

How to build a wildlife friendly compost heap...

- Clear an area.
- Stand a pallet up so its long edge sits on the ground.
- At either end of the pallet, hammer a stake between the two layers of the pallet.
- Place two pallets at right-angles to the first and once again secure with stakes.
- Secure the remaining pallet to the front using wire or string - this will allow you to remove it when you need to turn or empty your compost.



Shaggy ink cap - fungi help breakdown the contents of your compost heap.



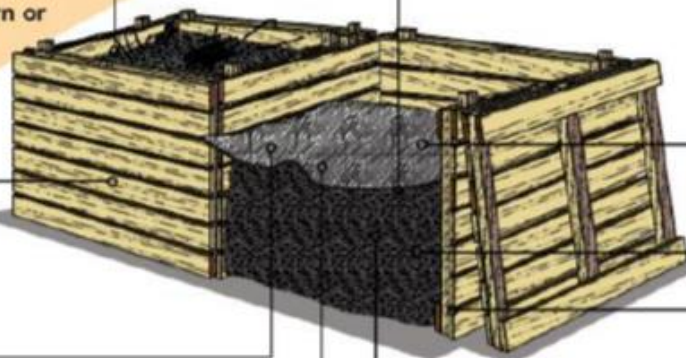
Snail - will feed on the compost and provide food for many different birds.



Grass snake - if you are lucky a female may lay eggs in your heap during June or July.



Woodlouse - minibeast are vital to a compost heap.



Millipede - they munch their way through the ingredients, turning it into a rich compost.



Slow worm - may breed and have their young in the heap.



Common toad - will find shelter in the damper parts of the heap.



Worm - a healthy compost heap needs worms.



Hedgehog - may visit at night to feed on snails and other invertebrates.

The compost heap's ingredients

Balance is the key to a good compost heap. To make a good mix you need more or less equal amounts of 'greens' and 'browns' plus small amounts from the 'others' list.

The Greens

Nitrogen-rich ingredients

- Comfrey leaves, nettles, young green weeds - avoid weeds with seeds, coffee grounds, grass cuttings, urine - diluted using 20 parts water to 1 part urine, raw vegetable peelings, tea bags and leaves, soft green prunings.

The Browns

Carbon-rich ingredients

- Cardboard - cereal packets and egg boxes, waste paper - even shredded, old bedding plants, newspaper - although it is better to recycle them, hay and straw, wood shavings, fallen leaves.

Other Compostable Items

- Wood ash - in moderation, hair, crushed egg shells, natural fibres - such as wool or cotton.