Ecological appraisal of land at The Green, Kings Caple, Herefordshire, HR1 4TZ

NKM Associates

9th February 2016

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SUMMARY

At land off The Green, in Kings Caple, Herefordshire, planning permission is being sought for a small residential development (construction of three new dwellings).

In February 2016, a visit was made to the site to assess the grounds for the presence (actual or potential) of important or protected species and/or priority habitats which might be impacted on by the proposed development.

The Phase 1 visit was carried out on 9th February 2015, in bright and sunny conditions with a moderate westerly wind.

The site comprised a hard standing track that skirted a small, rectangular shaped plot of improved grassland.

A single broadleaved tree was present towards the centre of the plot, whilst a block of woodland bordered the application site immediately to the west.

Small pockets of tall ruderal vegetation were noted along the margins of the grassland.

Wire fencing/sheep netting enclosed the plot along the northern and eastern perimeters.

Just two species of bird were observed; a Wood Pigeon *Columba palumbus*, and a Blackbird *Turdus merula*.

No old or in-use nests were noted; however the single tree provided cover and nesting habitat.

Since all in-use bird's nests and their contents are protected from damage or destruction, any tree/scrub removal should be undertaken outside the period 1st March to 31st August inclusive.

If this time frame cannot be avoided, a close inspection of the trees to be removed should be undertaken prior to clearance. Work should not be carried out within 5.0 metres of any in-use nest, although this distance could be greater depending on the sensitivity of the species.

The single tree contained one potential feature suitable for bat roosting and/or hibernation; a cavity in the lower trunk. It is recommended the tree is retained and incorporated into the development, indeed the current proposal is for the tree to be retained.

However, if this is not possible, an inspection of the cavity for evidence of bat occupation will be required.

The presence of reptiles and amphibians in the proposed construction zone was considered unlikely, as it consisted of hardstanding (track) and improved grassland with no obvious refugia or hibernacula.

There were no signs of Badger *Meles meles* activity on the site.

Taking everything into account, from an ecological perspective, the proposed development is thought to have very little impact on wildlife or habitats.

1. INTRODUCTION

In February 2016, NKM Associates was instructed by Procuro Planning Services Ltd, on behalf of their client E Brooke, to undertake a protected species and habitat survey of land at The Green, in Kings Caple, Herefordshire (Ordnance Survey Grid Reference SO 55725 28702).

On 9th February 2016, a visit was made to the site to carry out the survey, with particular attention paid to the presence or absence of Badgers, bats, birds, reptiles and amphibians.

The result of this survey is contained in this report.

Badgers are protected in Britain by the Protection of Badgers Act 1992. The purpose of this Act is to protect the animals from deliberate cruelty and from the incidental effects of lawful activities which could cause them harm. Under this legislation it is an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or attempt to do so;
- Interfere with a sett by damaging or destroying it;
- Obstruct access to, or any entrance of, a Badger sett;
- Disturb a Badger when it is occupying a sett.

Note that if any of the above resulted from a person being *reckless*, even if they had no intention of committing the offence, their action would still be considered an offence. A person is not guilty of an offence if it can be shown that the act was *'the incidental result of a lawful operation and could not have been reasonably avoided'*; only a court can decide what is 'reasonable' in any set of circumstances.

Penalties for offences under this legislation can be up to six months in prison and a fine of up to £5,000 for each offence.

A Badger sett is defined in the Act as *'any structure or place which displays signs indicating current use by a Badger*'. This can include culverts, pipes and holes under sheds, piles of boulders, old mines and quarries, etc.

'Current use' does not simply mean 'current occupation' and for licensing purposes it is defined as *'any sett within an occupied Badger territory regardless of when it may have last been used'*. A sett therefore, in an occupied territory, is classified as in current use even if it is only used seasonally or occasionally by Badgers, and is afforded the same protection in law.

In England, Scotland and Wales, all **bat** species are fully protected under the Wildlife and Countryside Act 1981 (WCA) (as amended), through inclusion in Schedule 5.

In England and Wales this Act has been amended by the Countryside and Rights of Way Act 2000 (CRoW), which adds an extra offence, makes species offences arrestable, increases the time limits for some prosecutions, and increases penalties.

All are also included in Schedule 2 of the Conservation (Natural Habitats, & c.) Regulations 1994, (or Northern Ireland 1995) (the Habitats Regulations), which defines ‘European protected species of animals’.

The above legislation can be summarised thus (Mitchell-Jones and McLeish, 2004):

- *Intentionally or deliberately kill, injure or capture (or take) bats*
- *Deliberately disturb bats (whether in a roost or not)*
- *Recklessly disturb roosting bats or obstruct access to their roosts*
- *Damage or destroy roosts*
- *Possess or transport a bat or any part of a part of a bat, unless acquired legally*
- *Sell (or offer for sale) or exchange bats, or parts of bats*

The word 'roost' is not used in the legislation, but is used here for simplicity. The actual wording is 'any structure or place which any wild animal…uses for shelter or protection' (WCA), or 'breeding site or resting place' (Habitats Regulations).

As bats generally have both a winter and a summer roost, the legislation is clear that all roosts are protected whether bats are in residence at the time or not.

In Britain, all wild **birds**, their nests and eggs are protected under the Wildlife & Countryside Act 1981(as amended), with the Countryside and Rights of Way Act 2000 extending this protection. There are penalties for:

- *Killing, injuring or capturing them, or attempting any of these*
- *Taking or damaging the nest whilst in use*
- *Taking or destroying the eggs*

Schedule 1 species carry special penalties and it is an offence to even disturb these near the nest.

All common **reptiles** (Common Lizard *Zootoca vivipara*, Grass Snake *Natrix natrix*, Slow-worm *Anguis fragilis* and Adder *Vipera berus*) are afforded legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) largely as a consequence of a national decline in numbers associated with persecution and habitat loss. Under the terms of the Act it is illegal to intentionally kill or injure a reptile.

There is no special protection afforded to the four commoner species of **amphibian** (Common Frog, Common Toad, Smooth Newt, and Palmate Newt).

However they are subject to a very limited degree of protection under Section 9(5) of the Wildlife and Countryside Act 1981.

This means that the sale, transportation or advertising for sale for these species is prohibited. Consequently catching them or keeping them as pets, or even killing them is not prohibited (subject to the controls relating to animals welfare).

Great Crested Newts are protected under Schedule 5 of the Wildlife & Countryside Act (1981) as amended, and Schedule 2 of the Conservation (Natural Habitats, etc.) Regulations 1994 (Regulation 38).

As a result of their rarity across Europe, they are also protected under Annexes IIa and IVa of the Habitats and Species Directive, and under the Berne Convention (the Convention on the Conservation of European Wildlife and Natural Habitats).

The above legislation can be summarised thus (Langton *et al*, 2001):

- *Intentionally or deliberately capture or kill, or intentionally injure Great Crested Newts*

- *Deliberately disturb Great Crested Newts or intentionally or recklessly disturb them in a place used for shelter or protection*
- *Damage or destroy a breeding or resting place*
- *Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection*
- *Possess a Great Crested Newt, or any part of it, unless acquired lawfully*
- *Sell, barter, exchange or offer for sale Great Crested Newts or parts of them.*

2. METHODOLOGY

2.1 Desk study

A desk study was not considered necessary given the current use and nature of the site, and the small scale of the proposed development.

2.2 Habitat survey

A Phase 1 Habitat Survey was carried out across the whole of the survey site. It was conducted using standard JNCC (2003) techniques and methodologies.

The Phase 1 visit took place on 9th February 2016, in bright and sunny conditions with a moderate westerly wind.

2.3 Protected species survey

During the surveys the potential for other protected and important species was assessed. This included European Protected Species, legally protected species and Local Biodiversity Action Plan Species (and habitats).

2.3.1 Badgers

Badgers are generally nocturnal and evidence of their presence in an area often comes from field signs rather than sightings of the animals. Useful field signs include:

- Setts (main, outlying, annex or subsidiary)
- Tufts of hair caught on barbed wire fences;
- Conspicuous Badger paths;
- Footprints;
- Latrines – small excavated pits in which droppings are deposited;
- 'Snuffle holes' – small scrapes where Badgers have searched for insects and plant tubers;
- Day nests – bundles of grass and other vegetation where Badgers may sleep above ground;
- Scratch marks on trees (usually near the sett).

Daytime surveys looking for field signs can be carried out at any time of the year, and should be non-intrusive, but nocturnal surveys of setts (if required), are only likely to be effective from April to November, when Badgers are most active, and any cubs present will have emerged

2.3.2 Bats

In order to fully assess bat occupation of a particular site, the Bat Conservation Trust (2012) recommends that information gathered from a desk study of known bat records, and a daytime site walkover, is used to inform the type and extent of future bat survey work, potentially including nocturnal surveys.

The diurnal walkover provides an opportunity to check for signs of occupancy, such as droppings, scratch marks, feeding remains, carcasses, or even animals in residence, whilst nocturnal surveys (if required) allow numbers and species of bats to be confirmed. The latter are also used to determine the presence or absence of

bats, where signs of bat activity are indeterminate or absent but potential for roosting is considered to be medium to high.

Roosting places vary depending on the species. Pipistrelles *Pipistrellus spp* usually inhabit narrow cracks or cavities around the outside of buildings, but they will roost in similar niches inside larger barns. Typical sites include soffit spaces, gaps behind fascia boards and end rafters, crevices around the ends of projecting purlins, under warped or lifted roof and ridge tiles, or in gaps in stone and brickwork where mortar has dropped out.

Larger species such as Brown Long-eared Bats *Plecotus auritus*, Myotis bats (Natterer's *Myotis nattereri* and Whiskered/Brandt's *M. mystacinus/M. brandtii*), and Lesser Horseshoes *Rhinolophus hipposideros*, like to roost in the roof voids of buildings, and can often be found hanging singly or in small groups from ridge boards or roof timbers, especially where these butt up against gable walls or chimney breasts.

They especially favour older structures with timber frames. Here they squeeze into tight crevices making them difficult to observe.

Diurnal walkovers can be carried out at any time of the year, but nocturnal surveys should only be undertaken when bats are out of hibernation and in their summer roosts. The recommended period is from May to September inclusive, with June to August optimum, and a minimum of 2 or 3 surveys are required. The season can be extended into October, although particularly cold weather will render this inadvisable.

At moderate to high value sites, one of the nocturnal visits should comprise a dawn re-entry survey. For sites < 5 ha in size, two surveyors should be present, with more surveyors at complex buildings, e.g. those with multiple elevations and/or roof structures.

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10x42 binoculars and a Clulight CB2 torch were used for the inaccessible/unreachable areas.

An inspection of the trees on site was made, including any gaps in the bark, patches of exfoliating bark, fissures, splits, cracks and cavities, including woodpecker holes.

2.3.3 Birds

Most resident and migrant birds breed in the spring and summer, although Woodpigeons *Columba palumbus* and Collared Doves *Streptopelia decaocto* nest throughout the year, and as a result could be on eggs in almost any month.

In season, signs of breeding include singing males, display and copulation, birds gathering nesting materials, adults carrying food, calling chicks, etc.

In winter none of these activities may be occurring, so a survey for old nests and/or nest holes is the most reliable method of determining the presence or absence of breeding birds.

2.3.4 Reptiles and Amphibians

Commoner reptiles which may be encountered in rural areas include Grass Snake, Slow-worm, and Common Lizard.

During the winter months, from mid-October to late February or early March, they are in hibernation, usually deep in underground hibernacula, such as holes and cracks in the ground, among rocks or the roots of large trees, down animal burrows, or in piles of rubble or stone.

In the spring and summer they live above ground in well-vegetated places, with Grass Snakes often near or in water. Being cold-blooded all reptiles like to bask, and can often be found in open places.

There are very few signs of reptile presence, but these include:

- Shedded skin (snakes);
- Eggs (but not Common Lizard which gives birth to live young).

A survey for Great Crested Newts may be indicated when background information on distribution suggests that they may be present. More detailed indicators are:

- *Any historical records of Great Crested Newts on the site or in the general area*
- *A pond on or near the site (within around 500 m), even if it holds water only seasonally*
- *Sites with refuges (such as piles of logs or rubble), grassland, scrub, woodland or hedgerows within 500 m of a pond*.

There are several field survey methods which can be employed depending on the time of year:

- *Bottle or funnel trapping – adults ideally February to May, with June and July sub-optimal, and August to September for detection of larvae (i.e. young)*
- *Egg search – April to June ideally, with March and July sub-optimal*
- *Torch survey – March to May for adults, with February and June to July sub-optimal, and August to September for larvae*
- *Netting – March to May for adults, with February and June to July sub-optimal, and August to September for larvae*
- *Pitfall trapping – March to May and September for adults, with February, June to August and October sub-optimal*
- *Refuge search – April to September ideally, with March and October sub-optimal.*

The latter two methods involve terrestrial habitats, the others aquatic habitats, for which a minimum of 4 visits per year are recommended, with at least 2 visits between mid-April and mid-May to record peak numbers (English Nature, 2001).

Outside the optimum survey period, a Habitat Suitability Index (HSI) for a particular water body can be calculated.

This is a scoring system devised by Oldham *et al* (2000) which can produce a figure that indicates the suitability of a pond for Great Crested Newts. The index is based on an analysis of ten factors that affect Great Crested Newts. A figure of '0' indicates unsuitable habitat and '1' represents optimal habitat.

None of these methods were employed at The Green, as there was nothing to suggest that Great Crested Newts would be present.

There was a small pond in the garden, but this was not considered suitable for Great Crested Newts.

2.4 Constraints

The survey was carried out early in the season; however it was considered the habitats present could be accurately assessed.

The result of the survey is detailed in Section 3.

3. RESULTS

3.1 Habitat survey

3.1.1 Habitat descriptions

The following habitats were recorded across the site:

- Scattered tree;
- Improved grassland;
- Tall ruderal vegetation;
- Fence;
- Hardstanding.

These are shown on the Phase 1 Habitat Survey map in Appendix 1, with the target notes (where applicable) in Appendix 2.

Scattered tree

Just a single broadleaved tree was present on the plot, this a mature Sweet Chestnut *Castanea sativa* (Figs. 1 and 2).

Figs. 1 & 2 Sweet Chestnut tree

Improved grassland

The plot was dominated by a rectangular shaped area of improved grassland. This contained a small number grasses including Meadow-grasses *Poa Spp*., Perennial Ryegrass *Lolium perenne*, Creeping Fescue *Festuca rubra*, and Cocksfoot *Dactylis glomerata*. Forbs were scarce amongst the sward, but those present included Creeping Thistle *Cirsium arvense*, Dandelion *Taraxacum section vulgaria*, White Clover *Trifolium arvense* and Common Mouse-ear *Cerastium fontanum* (Figs. 3 and 4).

Figs. 3 & 4 Improved grassland

Tall ruderal vegetation

Growing along the margins of the plot were small pockets of tall ruderal vegetation (Fig. 5). This species present included Common Nettle *Urtica dioica*, Broadleaved Dock *Rumex obtusifolium* and Hogweed *Heracleum sphonylium*.

Fig. 5 Tall ruderal vegetation

Fence

Running along the northern and eastern perimeters of the plot, were sections of metal fencing/sheep netting (Fig. 6).

Fig. 6 Sheep netting fence

Hardstanding

A gravelled track/driveway skirted around the southern perimeter of the plot (Fig. 7).

Fig. 7 Access track

3.1.2 Flora

The botanical composition of each habitat was typical, and all species recorded were common and widespread.

No rare vascular plants were found.

3.2 Protected species survey

3.2.1 Bats

The single tree contained one potential feature suitable for bat roosting and/or hibernation; a cavity in the lower trunk (Fig. 8).

Fig. 8 Cavity in tree trunk

3.2.2 Badgers

There were no signs of Badger activity.

3.2.3 Otters

No evidence of Otter *Lutra lutra* presence was found.

3.2.4 Water Voles

No evidence of Water Vole *Arvicola amphibius* presence was found.

3.2.5 Birds

Just two species of birds were observed on the site, both of which were species of low conservation concern (RSPB Green List).

There was potential for all of the species observed on the site to be nesting within the tree.

A full list of species noted is given in Appendix 3.

3.2.6 Reptiles

The land offered no suitable habitat for reptiles, with no obvious refugia or hibernacula.

3.2.7 Great Crested Newts

With an absence of aquatic habitats and poor terrestrial habitats present on the site, the presence of Great Crested Newt and other amphibian species was considered unlikely.

3.2.8 Invertebrates

Since much of the site was dominated by improved grassland, it was concluded that there was no potential for significant invertebrate assemblages, in particular those species listed as a priority in the UK Biodiversity Action Plan and/or Local Biodiversity Action Plan.

3.2.9 Other species

No other protected or LBAP species were observed during the site visit.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Site evaluation

The site offered little habitat of value to wildlife. This was largely due to it being dominated by improved grassland with limited floristic diversity, comprising a relatively small number of grasses and wildflowers.

However, the mature Sweet Chestnut tree provided potential nesting opportunities for birds.

The tree also supported a single cavity in the trunk with the potential to support roosting and/or hibernating bats.

The whole site appeared to have relatively low value to foraging bats due to its open nature.

There were no signs of Badger activity, nor were there any signs of Rabbits *Oryctolagus cunniculus* or other mammals.

Given the lack of suitable habitat across the site, the presence of reptiles and amphibians was considered to be negligible or most probably absent.

It was concluded that the site had no potential for significant invertebrate assemblages, in particular those species listed as a priority in the UK Biodiversity Action Plan and/or Local Biodiversity Action Plan.

The main impact of any development will be on the mature sweet chestnut tree.

This provided potential nesting and feeding cover for nesting birds. Since all in-use bird's nests and their contents are protected from damage or destruction, any tree or shrub removal should be undertaken outside the period March to August inclusive. If this time frame cannot be avoided, a close inspection of the trees or shrubs to be removed should be undertaken prior to clearance. Work should not be carried out within 5.0 metres of any in-use nest, although this distance could be more depending on the sensitivity of the species.

None of these birds are thought to be impacted detrimentally by the proposed development, as there is an abundance of other nesting habitat in the surrounding land and gardens.

The tree contained one potential feature suitable for bat roosting and/or hibernation; a cavity in the lower trunk. It is recommended the tree is retained and incorporated into the development, indeed the current proposal is for the tree to be retained.

However, if this is not possible, an inspection of the cavity for evidence of bat occupation will be required.

The presence of amphibians was considered unlikely, as it consisted of heavily grazed grassland with no refugia or hibernacula, no cover and very poor foraging opportunities. For similar reasons the presence of reptiles was equally unlikely.

At all times care will be taken when removing vegetation and stripping topsoil, as small mammals could be present. Any small mammals disturbed or uncovered will either be caught by hand and relocated to a safe area, or left to vacate the work site in their own time.

Finally, it should be noted that open trenches could potentially trap wildlife, especially if these fill up with water. Escape routes should therefore be provided if trenches cannot be infilled immediately. These can be in the form of branches or boards placed on the bottom of the trench, with their upper ends above ground level and touching the sides, or sloping ends left in trenches.

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Taking everything into account, from an ecological perspective, the proposed development is thought to have very little impact on wildlife or habitats.

4.3 Further surveys

If any tree or shrub/hedge removal cannot be timed appropriately to avoid the bird nesting period (considered to be March to August inclusive), then further surveys of the trees and/or shrubs to be removed will be necessary.

An inspection of the cavity to check for signs of bat occupation will be required if the mature sweet chestnut tree is to be felled.

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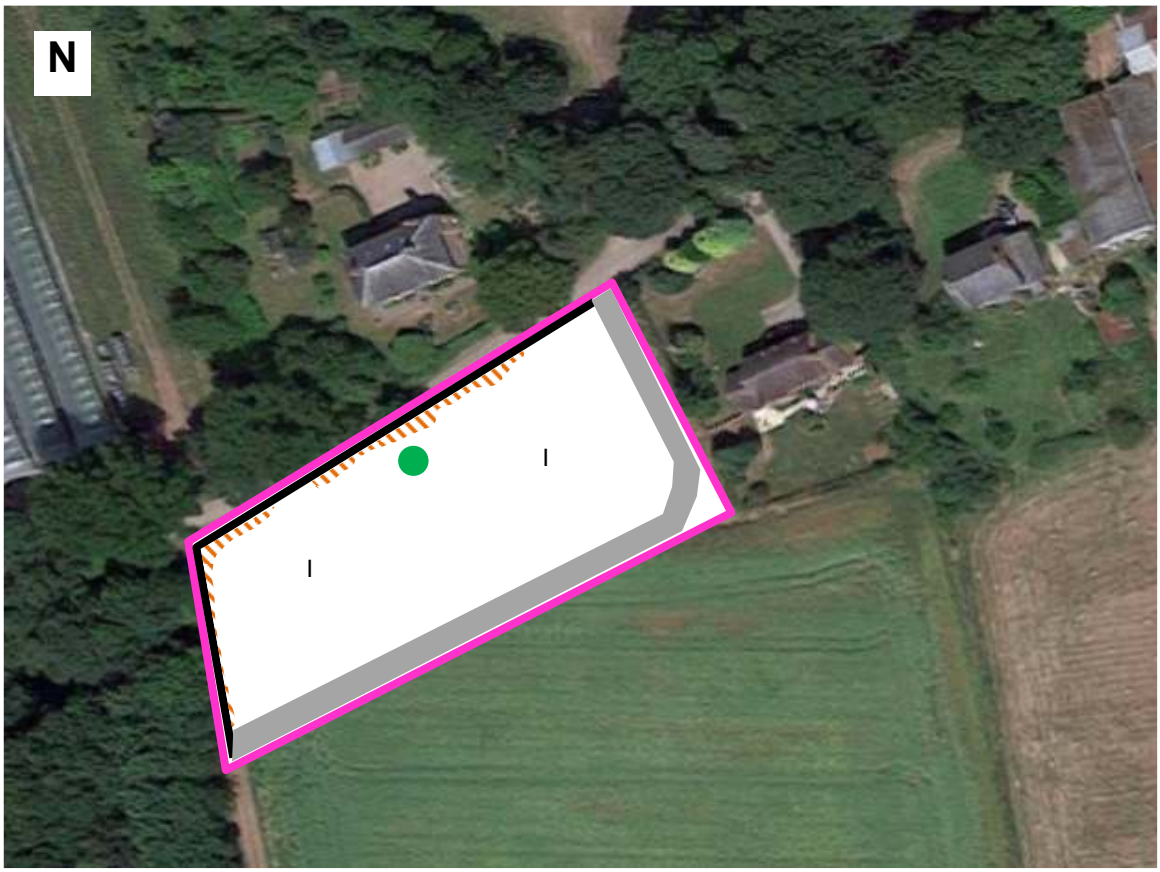
APPENDICES

Appendix 1: Phase 1 Habitat Survey Map

Appendix 2: Target Notes

Appendix 3: Bird species list

Appendix 1: Phase 1 Habitat Survey Map



Not to scale

Legend

- Site boundary
- Fence
- Hardstanding
- Scattered trees
- I Improved grassland
- Tall ruderal vegetation

Appendix 2: Target Notes

No Target Notes

Appendix 3: Bird Species List

Common name	Latin name
Blackbird	*Turdus merula*
Wood Pidgeon	*Columba palumbus*

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