



**BROOK COTTAGE,
IPSTONES, STAFFORDSHIRE**

PRELIMINARY ECOLOGICAL APPRAISAL

**Prepared for
Nicola White**

December 2022

Apex Ecology Limited
Synchro House
512 Etruria Road
Newcastle-under-Lyme
Staffordshire
ST5 0SY

01782 346494
enquiries@apexecology.com

Client	Nicola White
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Report author	Carrie Alcock, BSc
Report reviewer	Helen Ball, MSc, CEnv, CMIEEM

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1. INTRODUCTION

- 1.1 This report has been prepared for Ms. N White. It presents the results of Preliminary Ecological Appraisal carried out during September 2022 on land at Brook Cottage in Ipstones, Stoke-on-Trent, Staffordshire.
- 1.2 The proposal is to construct a new dwelling on site. No plans detailing the proposals were available at the time of preparing this report.
- 1.3 The site is used for domestic purposes and to graze livestock. It is dominated by grassland, with areas of ornamental planting, hardstanding, scrub embankments, an apiary and outbuildings. Shay Lane runs along the northern edge of the site.
- 1.4 The site is located to the east of Ipstones village. To the north, east and south is farmland consisting of meadow and pasture bounded by hedgerows. The south of the site runs adjacent to woodland (Massey's wood). The OS grid reference for the site is SK 02372 49532.
- 1.5 The report describes the methods used for the survey and any constraints encountered, along with the results of the survey, including a description of the habitats present, their potential to be used by protected species and any evidence of protected species found. The findings are then assessed in light of the proposals, impacts are considered and recommendations for further survey or action are given where appropriate.
- 1.6 The legislation relating to the protected species discussed in this report is given in Appendix I.

2. METHODOLOGY

Search of Existing Ecological Records

- 2.1 The local record centre, Staffordshire Ecological Record, was contacted for existing records of protected and notable species, as well as statutorily protected and locally designated sites for nature conservation within 2km.
- 2.2 The results of a record search can help to set a site into the context of its surroundings, as well as provide valuable information on the known presence of protected species in the local area.

Survey Methodology

- 2.3 The survey visit was undertaken on the 16th September 2022 by Helen Ball and Carrie Alcock. Helen holds 20 years' experience working in the ecology sector.
- 2.4 A Preliminary Ecological Appraisal was undertaken of the site as shown on Figure 1.
- 2.5 The approach to the Preliminary Ecological Appraisal was based on *Guidelines for Preliminary Ecological Appraisal* (CIEEM Technical Guidance Series, April 2013) and follows the methods set out in *The Handbook for Phase 1 Habitat Survey* (Nature Conservancy Council (JNCC, 2010), although where relevant, mosaics of habitats were mapped in finer detail and modified habitat classifications have been used where these better describe the habitats present.
- 2.6 The surveyors walked slowly through the habitats, or around the edges of the habitats classifying, describing and mapping their extent. Instead of numbered target notes, descriptions of site features and habitats are included within the survey findings.
- 2.7 A list of plant species was compiled for the site and plant abundance was classified using the DAFOR scale¹.
- 2.8 Where relevant, a note was made about important and pertinent features, such as the suitability of a feature for a protected or notable species (e.g., Species of Principal Importance) or presence of a notable tree. Notes were made on any other apparent ecological issues observed incidentally as part of the survey. A record of any faunal species encountered incidentally was also taken.
- 2.9 Preliminary Ecological Appraisal provides a means to evaluate ecological features and scope for notable species or habitats. By doing so, the baseline ecological conditions and valuable, or potentially valuable, parts of a site can be identified at an early stage, enabling potential constraints to the proposals to be highlighted and recommendations for design options to be made that avoid effects on important ecological features or ecologically sensitive areas (CIEEM, 2012). Preliminary Ecological Appraisal also

¹ DAFOR relates to the occurrence of each species on site i.e. D = dominant; A = abundant; F = frequent; O = occasional; and R = rare

identifies whether further, targeted surveys, such as for protected species are necessary.

Constraints

- 2.10 Preliminary Ecological Appraisals are not intended to provide comprehensive assessment of use of a site by protected or notable species and follow-up surveys targeted at specific species and groups of species may be necessary to fully assess a site and evaluate impacts.
- 2.11 No site constraints encountered.

3. SURVEY FINDINGS & INTERPRETATION

Review of Existing Ecological Records

- 3.1 Staffordshire Ecological Record Centre provided information on statutorily protected and locally designated sites, as well as protected and notable species that have been recorded previously in the local area.
- 3.2 There are two statutorily designated site in the local area - the *Churnet Valley Site of Special Scientific Interest (SSSI)* and *Consall Local Nature Reserve (LNR)*. There are many locally designated sites, including 27 Local Wildlife Sites (LWSs) and two retained biodiversity alert sites (BASs). There is also a Staffordshire Wildlife Trust nature reserve. The sites are detailed in the table below.

Site Name	Designation	Habitat	Distance (approximate)
Moseymoor Wood (north of)	Ancient & Semi-Natural Woodland	An Ancient Woodland Inventory (AWI) site on a steep sided valley containing a good assemblage of ancient woodland indicator species and a man-made pool.	On site
Moseymoor Wood (north of)	Local Wildlife Site	An Ancient Woodland Inventory (AWI) site on a steep sided valley containing a good assemblage of ancient woodland indicator species and a man-made pool.	Runs adjacent to the site on the south boundary line
Brookfields Road (east of)	Local Wildlife Site	Gently undulating cattle grazed pasture dissected by shallow incised stream valleys the site supports a number of UKBAP habitats including lowland meadow, lowland dry acidic grassland, lowland heath and lowland mixed deciduous woodland.	25m northwest
Churnet Valley	SSSI	The Churnet Valley SSSI includes the steep-sided main valley of the River Churnet and a number of tributary valleys. These valleys retain the largest remaining concentration of Semi-natural Ancient woodland in Staffordshire, intermixed with scrub, unimproved neutral and acid grassland and large areas of mire, marsh and carr. The area supports an outstanding assemblage of woodland birds.	400m south

Park Farm (south of)	Local Wildlife Site	Gently sloping fields on the upper reaches of the Churnet Valley dominated by semi-improved neutral grassland with some semi-improved acidic grassland. In parts the sward is to be representative of species rich MG5 grassland.	640m east
Newhouse Wood (part of)	Local Wildlife Site	A small linear ash woodland is on a steep slope with a stream running centrally through. There are lesser contributions from pedunculate oak and silver birch; sycamore provides a localised stand.	790m southwest
Whieldon's Wood	Local Wildlife Site	An area of mixed broadleaved woodland with planted larch of various ages. Two coppiced examples of small-leaved lime were noted on the stream bank.	825m southeast
Massey's Wood (south-west of)	Local Wildlife Site	Species-rich semi-improved neutral grassland with some floral interest, together with a small area of marshy grassland in a hollow at the bottom of the field. The field is currently grazed by cattle.	850m southwest
Noonsun Common	Retained BAS	A sloping field with some terracing of the slope where a range of vascular plant species typical of acidic soils is present. The field grades into more improved areas where grasses such as Yorkshire-fog feature more frequently.	860m northwest
Park Lane, Ipstones	Local Wildlife Site	Species rich verges along Park Lane, predominantly unimproved neutral grassland.	950m north
Greenstiles (north of)	Local Wildlife Site	An array of habitats, predominantly semi-improved acid grassland/dry heath mosaic, particularly along its slopes, with a diverse flora with some species	1330m northwest

		present that are considered uncommon within the county.	
Foxt Wood (north of)	Local Wildlife Site	An area of birch woodland on the steepest part of the slope in the centre of the site, with some areas of bracken in the lowest-lying part of the field. On the edge, on wetter soils is a marshy grassland community.	1450m southeast
The Clough	Local Wildlife Site	Broad-leaved woodland in a narrow stream valley together with an adjacent field to the east. The field contains neutral, acid and wet grassland communities, the woodland has wet vegetation with Creeping Soft-grass and Bluebell in dry areas.	1500m northwest
Foxt Wood	Local Wildlife Site	A mixed broad-leaved woodland dominated by birch with occasional oak, ash and a single yew. Alder occurs in the damper regions. Additionally, there is an area of semi-improved neutral grassland, with a rank sward - Yorkshire-fog and rye-grass dominate.	1550m southeast
Park Gate (south of)	Local Wildlife Site	A field dominated by soft rush with a flush of little interest, being dominated to the west also by soft rush. An area to the north-east of the field is very wet.	1560m northeast
Fernylee Farm (south of)	Local Wildlife Site	A gently sloping field with some terracing of the slope. The field exhibits banding and variation in the quality of the grassland, with the slopes holding high quality and species rich habitat.	1690m southeast
Sexton Farm (by)	Local Wildlife Site	Spoil mounds with dry acid grassland dwarf shrub heath mosaic. Scrub is scattered across the site and is quite dense in parts, species-rich neutral grassland predominates in the areas between the mounds.	1690m northeast

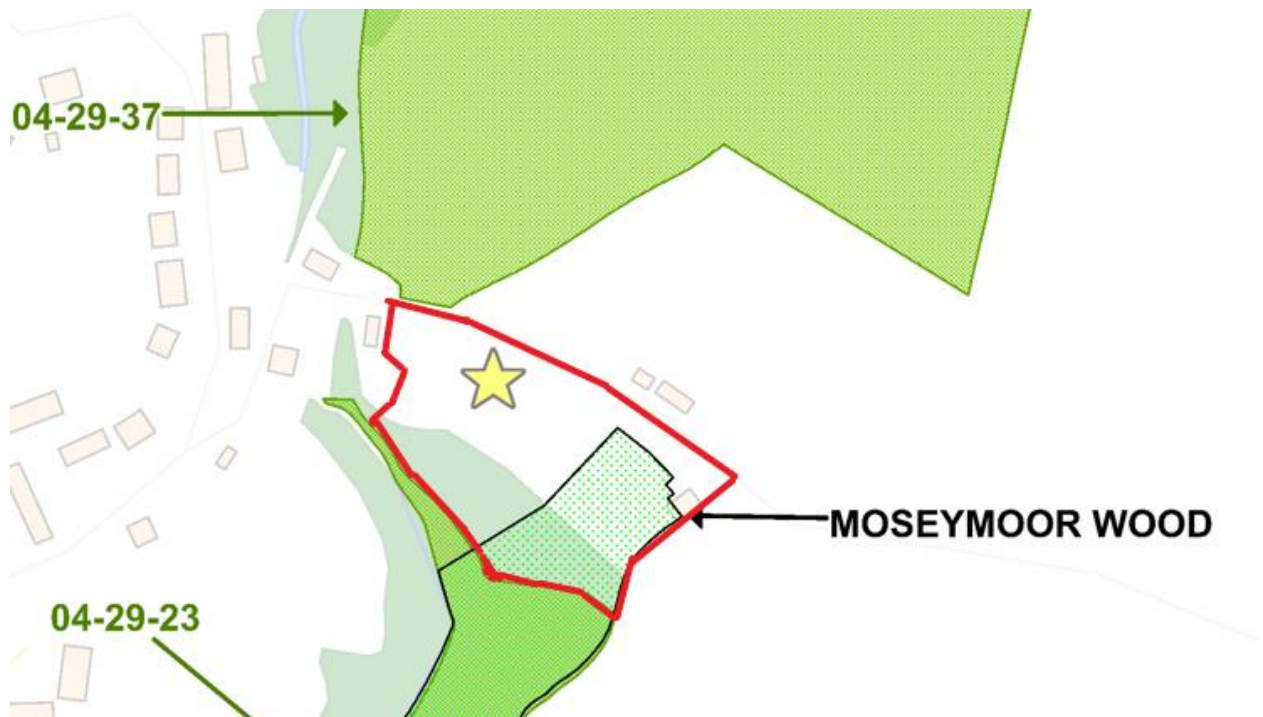
Summerhill (south-west of)	Local Wildlife Site	Large grazed upland grassland field crossed by several streams, and featuring several gritstone outcrops that support heathy vegetation.	1700m northwest
Intake Farm (south of)	Local Wildlife Site	A series of four fields, consisting of acid grassland, semi-improved neutral grassland and marshy grassland.	1725m east
Ruelow wood	Ancient & Semi-Natural Woodland & Ancient Replanted Woodland	Broadleaf woodland	1795m south
Blackbank Wood	Local Wildlife Site	A block of semi-natural woodland, a good example of oak-birch woodland on acidic soils. The woodland is dominated by various mixtures of the two species, with rowan, holly, ash and yew the main associates within the understorey	1800m northwest
Foxt Banks	Local Wildlife Site	A damp grassland with scattered scrub and mature trees.	1870m southeast
Glenwood House (north of)	Local Wildlife Site	A small section of sycamore woodland, with only locally frequent silver birch, occasional ash with oak being rare. The understorey is poorly developed; however, the ground flora is well developed with good populations of ancient woodland indicators.	1900m southwest
Crowgutter and Booth's woods	Ancient & Semi-Natural Woodland	Broadleaf woodland	1900m southwest
Coldley Banks	Local Wildlife Site	Small marsh near to River Churnet.	1980m southwest
Newfields Farm (north of)	Retained BAS	Species rich verges along Shaw-Wall Lane, predominantly unimproved neutral grassland.	1980m east
Harston Wood	SWT Nature Reserve Ancient & Semi-Natural Woodland	In the heart of the Churnet Valley, the reserve has one of the largest remaining concentrations of semi-natural woodland in Staffordshire	2km southeast

Hazles wood	Ancient & Semi-Natural Woodland	Broadleaf woodland	2km southwest
Consall	LNR	This is a post-industrial site which has retained the largest remaining concentration of semi-natural ancient woodland in Staffordshire, intermixed with scrub, unimproved neutral and acid grassland and large areas of mire, marsh and carr.	2km southwest
Bank Sprink	Ancient & Semi-Natural Woodland	A woodland of mainly deciduous trees that form the canopy. However, by far the most abundant is sycamore; areas of the wood contain either silver birch, beech or scot's-pine, whilst larch, ash and oak are only minor components of this woodland layer.	2km south
Belmont Pastures	Local Wildlife Site	Two semi-improved neutral fields, both containing small areas of marshy grassland.	2km west
Harston Hill, Froghall Wharf	Local Wildlife Site	A steep moderately grazed meadow with scattered scrub around the edge. A wet flush occurs on the southern side of the meadow.	2km southeast
Shirley Hollow	Ancient & Semi-Natural Woodland	Broadleaf woodland	2k southeast
Ipstone Edge Verges	Local Wildlife Site	The diverse verges with dry ditches which still support wet flora in places.	2k northeast
Whitehough Wood (near)	Local Wildlife Site	A group of fields with a range of grassland types, including extensive areas of marshy grassland and wet flush, which have a diverse flora including locally rare and uncommon species.	2km northwest
Stakebank Wood	Local Wildlife Site	Broadleaved woodland with wet ground flora by a stream and swamp vegetation around 3 ponds. Some of the slopes are covered by extensive bracken	2k northwest

		stands, in open areas there is an ancient woodland ground flora.	
Parkhead Farm	Local Wildlife Site	Fields with a mosaic of semi-improved neutral grassland and unimproved acid grassland.	2k northeast
Belmont Farm	Local Wildlife Site	Species-rich Pasture suitable as a seed source (MG5c).	2km west

3.3 Part of the site is classed as Ancient Semi-natural Woodland as shown on the drawing below provided by the SER (area outlined in black). This covers an area in the east of the site, including G2, part of grassland G1 and some of the wooded embankment.

3.4 Moseymoor Woods LWS sits adjacent to the site to the immediate southwest.



3.5 Brookfields Road (east of) LWS lies close by on the opposite side of Shay Lane to the north. The other LWS are located over 500m from site.

3.6 The Churnet Valley SSSI lies 400m to the south. This is a large SSSI covering four areas. The designation includes the steep-sided main valley of the River Churnet and several tributary valleys. These valleys retain the largest remaining concentration of Semi-natural Ancient woodland in Staffordshire, intermixed with scrub, unimproved neutral and acid grassland and large areas of mire, marsh and wet woodland.

- 3.7 Bats have been recorded within 2km of the site on 127 occasions, with seven species known to be present: common pipistrelle *Pipistrellus pipistrellus*, brown long-eared bat *Plecotus auratus*, noctule *Nyctalus noctula*, Daubenton's *Myotis daubentonii*, whiskered bat *Myotis mystacinus*, Brandt's bat *Myotis brandtii* and Natterer's Bat *Myotis nattereri*. Many records are of bats which have not been identified to species levels. The records are dispersed throughout the local area. Ten bat roosts have been recorded all within 2km from the site. A common pipistrelle colony was recorded in 1993 at Brook Cottage, which lies 20m to the north-west on the opposite side of Shay Lane. A pipistrelle maternity roost is known from a site 175m to the southwest, and 620m to the southwest another pipistrelle maternity roost was recorded as present between 1981 to 1995. Approximately 2km to the south at Froghall Wharf, Daubenton's, Natterer's and brown long-eared are known to roost. The remaining records describe bats in flight, either foraging or commuting.
- 3.8 Great crested newts *Triturus cristatus* have not been recorded within the search area. A search of the area to determine the presence of other nearby waterbodies using the OS Explorer map, Google Earth, and MAGIC maps shows there to be a large waterbody 255m to the south of the site.
- 3.9 Reptiles have been recorded on 19 occasions locally, including grass snake *Natrix helvetica* slow-worm *Anguis fragilis* and common lizard *Zootoca vivipara*. The closest record is of a grass snake identified in 1979, 881m to the south within the Massey woods. All the other records were made over 1400m from the site.
- 3.10 Otter *Lutra lutra* have been recorded on four occasions. All records are located from the River Churnet or its tributaries, with the closest from a location 1.9km to the west. The European water vole *Arvicola amphibius* has been recorded twice within the search area, approximately at a 2km distance south. It is highly unlikely that the proposals would affect these species.
- 3.11 White-clawed crayfish *Austropotamobius pallipes* have been recorded 11 times at Crowgutter Brook and once at the JCB pool. These are located to the west of the site at approximately 1900m. However, as with water vole and otter, no suitable habitat is found at the site and the species should not be impacted by the proposals.
- 3.12 Badgers *Meles meles* occur in the local area and have been recorded on various occasions. Due to restrictions with use of the data, in particular making them public, reference to individual records is not made in this report. The search results have revealed that badgers are known to inhabit the local area, with badgers recorded from sites nearby but no further details are given.
- 3.13 The majority of the records are of birds, with the species noted being typical of the habitats found in the local area including other species recorded include skylark *Alauda arvensis*, redwing *Turdus iliacus*, fieldfare *T. pilaris*, song thrush *T. philomelos*, spotted flycatcher *Muscicapa striata*, bullfinch *Pyrrhula pyrrhula*, house sparrow *Passer domesticus*, tree sparrow *P. montanus*, dunnock *Prunella modularis*, starling *Sturnus vulgaris* and barn owl *Tyto alba*. These bird species have either European or UK protected status and many are 'red' or 'amber' listed species of conservation concern whose populations have declined significantly in recent years (Stanbury *et. al*, 2021)

Survey Findings

- 3.14 Descriptions of the habitats present are given below, and a list of the plants recorded is given in Table 1. The site is shown on Figure 1 and is depicted in the Plates.
- 3.15 The site is located on sloping ground. It is dominated by grassland, with woodland, ornamental scrub and flower beds and hedgerows also present.
- 3.16 The upper part of the site adjacent to Shay Lane comprises of a large 'field', G1. It is used for amenity purposes as a garden associated with Brook Cottage having been used previously as a campsite. It has been landscaped in places and includes a hard surfaced track/path, low drystone retaining walls and ornamental shrub planting. At the eastern end is a breezeblock outbuilding and small wooden shed. An apiary resides to the far west.
- 3.17 Areas of the grassland are subject to regular mowing, with other areas left to attain a longer sward. The grassland is a mosaic poor semi-improved and semi-improved. The sward is dominated by grasses, including perennial rye-grass, crested dog's tail and red fescue. Meadow herbs present include black knapweed, creeping buttercup, white clover and dandelion, with localised patches of ribwort plantain, bird's-foot trefoil, self-heal and common bent.
- 3.18 Ornamental plantings are grouped sporadically within this area and support Japanese rose, holly, cotoneaster and rose of Sharon. The locations of the invasive plant species have been shown on figure 1.
- 3.19 A hedgerow, H1, marks the northern perimeter of the site, adjacent to of Shay Lane. It is 2m high, largely well established and dense. It is dominated by native species including hawthorn, field maple, dogwood and holly. A short section has been replanted recently with crack willow. A dry-stone wall sits behind the hedge on the roadside. The eastern boundary is bordered by a hedgerow, H2. It contains hawthorn, bullace and blackthorn. The hedgerow is undamaged and contains many gaps. Hedgerow, H3, is 1.5m tall containing hawthorn, grey willow, which merges into a line of bracken.
- 3.20 The lower part of the site contains a small field on steeply sloping ground that is bounded on the eastern and southern sides by the woodland of Moseymoor Wood. Gain it supports a mosaic of semi-improved and poor semi-improved grassland. It is used to graze livestock, with the bracken and soft rush cut back and cleared. Patches of creeping bent, cuckoo flower, bush vetch and Yorkshire fog are present. Established woodland over hangs the boundary on the southern and eastern sides. Himalayan balsam is present within this woodland.
- 3.21 A small patch of woodland and scrub is present on an embankment in the lower part of the site. Grey willow, sycamore, rowan and pedunculate oak are present. The sparse understory contains patches of bracken. The southern fence-line borders with the Moseymoor Wood, which slopes steeply downwards towards the base of the valley.

Assessment of Site and Potential for Protected Species

- 3.22 The site lies approximately 400m upstream from the Churnet Valley SSSI and is connected to it by continuous woodland cover. It falls within the Impact Risk Zone (IRZ) for the SSSI. Natural England may need to be consulted on the proposals. Direct and indirect effects will need to be considered in relation to the proposals, including anything that could cause impacts downstream in the SSSI. Should impacts be identified, these would need to be avoided where possible (by design changes for instance) and where unavoidable, mitigated to remediate the impact.
- 3.23 The site adjoins *Moseymoor Wood (north of) LWS*. Local Wildlife Sites are the equivalent of Sites of Biological Importance. LWSs are ecologically important at the County level. Although they have no statutory protection, their importance is of 'substantive nature conservation value' in a county context and they are given a degree of protection through the planning system. *Guidance for the Selection of Local Wildlife Sites in Staffordshire* (2017) states the following:
- "Generally, these sites are the best remaining examples within the County of habitats which rate highly on the basis of such factors as naturalness, diversity, or rarity of species or communities. These sites are frequently the remnants of larger areas of semi-natural vegetation, which may not be either sufficiently extensive or undisturbed to warrant SSSI status, but they are important examples of characteristic or notable vegetation types or habitat complexes, sometimes with associated dependant plant or animal species. As such, they provide an invaluable complement to the SSSIs and contribute the most significant element in the County's nature conservation resource, most of which is irreplaceable in the event of loss or damage."*
- 3.24 Part of the site is identified as Ancient Semi-natural Woodland (ASNW), which is a Priority Habitat under the NERC Act. However, other than the wooded embankment, there is no woodland on site. The ASNW listing may relate to previous woodland cover. Using google earth the oldest picture evidenced was in 2003 and no woodland appears to be present. The Mosey Woods ASNW is listed in the Ancient Woodland Inventory.
- 3.25 The habitats on site especially the wooded embankment help buffer the adjacent LWS.
- 3.26 The fields support poor semi-improved to semi-improved grassland. The sward is dominated with grasses, with localised areas supporting a range of meadow herbs.
- 3.27 Hedgerow (H1) may qualify as 'Important' (ecologically) under the Hedgerow Regulations. The other hedgerows would unlikely qualify as they lack the required abundance of woody species or number of qualifying features. All the hedgerows are classified as a Priority Habitat as they consist predominantly (i.e., 80% or more cover) of at least one woody UK native species.
- 3.28 Himalayan balsam, a non-native invasive plant, is present in the woodland adjacent to the site. It is present throughout the woodland forming a carpet throughout and overtops the native woodland ground flora vegetation. It is highly likely that seeds of this species are present in the soil on site particularly those areas adjoining the woodland. Japanese rose and cotoneaster are also present. The Japanese rose was located in G1 in the east

of the site, close to the buildings within a flowerbed as a single plant. The cotoneaster was also located within G1, amongst some ornamental shrubs, in the centre of the site. This shrub was around 1m in height and 1.5m in width.

- 3.29 There is a large sycamore that has the potential to support features suitable for use by roosting bats. This is situated within the wooded embankment. Bats will use the local area, including the site for foraging and commuting. Trees are a key resource for bats, both as food sources and as part of commuting routes.
- 3.30 The outbuilding located at the eastern end of G1 is constructed from breezeblock and has a pitched roof clad in corrugated metal. A small wooden shed is also present in this area. The outbuilding has the potential to be used by bats for roosting.
- 3.31 No signs of badgers were observed during the survey. It is likely badgers are present very locally, potentially in the adjacent Moseymoor Wood.
- 3.32 Bird species recorded incidentally during the survey include blue tit *Cyanistes caeruleus*, magpie *Pica pica*, nuthatch *Sitta europaea*, robin *Erithacus rubecula*, chaffinch *Fringilla coelebs* and blackbird *Turdus merula*. Birds will likely make use of the habitats on site for nesting, foraging and shelter. Consideration of nesting birds as part of works will be necessary as set out in the following chapter.
- 3.33 The site offers habitat suitable for use by reptiles, including areas of longer sward grassland and hedgerows. The stone retaining walls also offer potentially suitable areas for reptiles to use for shelter and hibernation.

4. RECOMMENDATIONS

Habitats

- 4.1 The site lies approximately 400m upstream from the Churnet Valley SSSI and is connected to it by continuous woodland cover. It falls within the Impact Risk Zone (IRZ) for the SSSI. Natural England may need to be consulted on the proposals. Direct and indirect effects will need to be considered in relation to the proposals, including anything that could cause impacts downstream in the SSSI. Should impacts be identified, these would need to be avoided where possible (by design changes for instance) and where unavoidable, mitigated to remediate the impact.
- 4.2 The proposals would need to take account of the presence of the adjacent LWS. It is recommended that an ecological 'buffer' of undeveloped land is retained along the edge of the site, adjacent to Moseymoor Wood, that is of sufficient width to protect the woodland habitats from direct impacts (such as on tree root zones and canopies), as well as indirect impacts such as noise and disturbance associated with the site
- 4.3 Part of the site are identified as Ancient Semi-natural Woodland (ASNW), a Priority Habitat under the NERC Act. Planned operations that affect ASNW need to follow Natural England's 'Standing Advice' for ancient woodland and would form a material planning consideration. Planning permission must be refused if a development proposal will result in the loss or deterioration of ancient woodland unless both of the following applies:
- there are wholly exceptional reasons
 - there's a suitable compensation strategy (following planning practice guidance) in place (this must not be a part of considerations of wholly exceptional reasons).
- 4.4 However, there is no woodland habitat on site within the area identified as ASNW, apart from the wooded embankment. It is recommended the wooded embankment be retained and protected as part of the proposals.
- 4.5 Should it be necessary to remove the hedgerows in full or in part, the loss would need to be compensated for by replacement hedgerow planting on a like-for-like basis with at least an equivalent length of hedgerow replacing that being lost, preferably, at least double the length. To ensure that hedgerow planting has maximum ecological benefit and is characteristic of the local area, the species used would need to be native and of locally suitable species (and preferably of local provenance). This is particularly important given the recent prevalence of serious tree diseases such as ash dieback. Suitable species include hawthorn, field maple, hazel, holly, and dog-rose. Although widely planted as part of landscaping schemes, species such as guelder rose and variegated dogwood are not recommended for such a location.

Invasive Non-Native Plants

- 4.6 The presence of Himalayan balsam in the adjacent Moseymoor Wood, and a likely seedbank in the soils on site, particularly in the vicinity of the woodland, pose a

constraint to any works that would result in disturbance and/or transport of plant material around the site and potentially off site. This includes disturbance and movement of soils.

- 4.7 There are likely to be seeds of Himalayan balsam throughout the site on the ground and buried in soils, including at distance from the parent plants (the seed pods explode when dry, sending out seeds for metres from the parent plant) and seeds can persist for 2-4 years in soils.
- 4.8 Both Japanese rose and a cotoneaster (the species of which could not be identified as no flowers or fruit were present) are present on site, both as individual/small groups of plants. These are located in the ornamental planting areas in G1.
- 4.9 The Wildlife and Countryside Act, 1981 provides the primary controls on the release and spread of non-native species into the wild. It is an offence under the Act to cause this species to spread (see previous chapter). It is not illegal to have invasive plant species present on land, but it is illegal to cause them to spread off site. It is, therefore, important that any works proposed on site consider the presence of these species and work within the law.
- 4.10 A method statement would need to be prepared that details the biological control methods that will be put in place to ensure the management, treatment and disposal of invasive plant material follows best practice advice and any legal requirements. This may need to be supported by an up-to-date invasive plant survey that precisely maps the locations of the invasive plants on site.

Bats

- 4.11 Should the proposals affect the outbuilding, assessment of use by bats would become necessary. This would include a visual inspection of the interior and exterior of the building where safe and accessible to do so during daylight hours for evidence of bats. In addition, should any trees be affected by the proposals, either directly through complete felling of the trees or the lopping of limbs or indirectly (such as lighting, noise, etc.) they would need to be subject to a ground-based assessment for Potential Roost Features (PRFs). Such surveys may need to be followed up with evening surveys to watch for emerging bats. Such surveys are seasonally constrained. They can be undertaken between May and September according to Bat Surveys for Professional Ecologists – Good Practice Guidelines (Collins, 2016), with May to August being the optimal period (September is considered sub-optimal).
- 4.12 Any lighting proposals (temporary or permanent) would need to take account of the requirements of bats. There should be no light spill onto the adjacent Moseymoore Woodland and watercourse, with these areas remaining as 'dark zones'. The acceptable maximum lighting for bats is 0.4lux outside the 'dark zone'.

Badger

- 4.13 Should the proposals affect areas of the site within 30m of Moseymoore Woodland, it is advised the woodland here be surveyed for signs of occupation by badgers. Survey is

optimally undertaken when vegetation cover is low ideally between late autumn and early spring.

Reptiles

- 4.14 It is recommended precautionary measures be implemented to help avoid impacting on reptiles should they be present. This would need to be covered by a method statement and include the following:
- Tall vegetation, including tall herb would need to be strimmed at a time of year when reptiles are active (late spring to early autumn) and at least 1-2 weeks prior to works commencing and maintained at a low level. This would help to encourage any reptiles present in these areas to disperse into more dense vegetation away from the site. The arising would need to be removed to an area of site away from the proposed area of work.
 - Careful dismantling and searching of the drystone retaining walls (should these need to be removed) during the period when reptiles are active (c. late April to late September).
 - A risk to reptiles is open trenches into which small numbers of individual animals may fall, particularly at night. It is recommended that no trenches or pits therefore be left open overnight. This would mean that backfilling of trenches or pits is completed prior to the end of the working day so that no pits exist overnight.
 - An ecologist would need to be consulted should reptiles be found. Should reptiles be discovered when the ecologist is not present, they should be left *in situ* and if found under materials, they should be carefully re-covered with similar material to that removed. Care should be taken to not crush and injure the animals. The ecologist should be contacted to assess the situation. Any reptiles found would, where possible need to be moved into nearby areas of suitable habitat.
 - Site operatives should be able to recognise different species of reptiles. Information on reptile identification for non-experts is freely available and can be downloaded from the Amphibian and Reptile Conservation website (<http://www.arc-trust.org/>).

Birds

- 4.15 The removal of habitat (such as trees, shrubs, and dense vegetation) that could be used by birds for nesting would need to take account of the presence of nesting birds. The presence of nesting birds can be avoided as a constraint to the proposals by timing relevant works to avoid the bird nesting season. Should the works need to be carried out during the bird nesting season then a watching brief would need to be carried out during works to check for the presence of nesting birds. The findings of the watching brief would be used to ascertain the best method to proceed to avoid impacting upon nesting birds. The bird nesting season is generally deemed to run from March to July/August inclusive, although some species can nest outside this period, particularly in years with a warm and early Spring.

Biodiversity Net Gain

- 4.16 Section 40 of the Natural Environment and Rural Communities (NERC) Act places a duty on decision-makers such as public bodies, including local and regional authorities, in implementing their duty to have regard to the conservation of biodiversity in England, when carrying out their normal functions. The impact that this legislation has on the Planning system is also outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory obligations and their Impact within the Planning System. Paragraph 99 of this states that ‘it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted’.
- 4.17 By fully considering biodiversity, protected species and habitats and species of Principal Importance in the decision-making process, the planning authority will have demonstrated that it has discharged its duties to conserve biodiversity.
- 4.18 Developments must strive for (as a minimum) no net loss in biodiversity and it is becoming best practice for planning authorities to require a minimum of 10% net gain in biodiversity (this is shortly to become a legal requirement with the Environment Bill that is to go through parliament in 2020).

5. REFERENCES

CIEEM. (2013). *Guidelines for Preliminary Ecological Appraisal*. CIEEM. April 2013.

Collins, J. (2016). *Bat Surveys for Professional Ecologists – Good Practice Guidelines*. Bat Conservation Trust.

JNCC. (2010). *Handbook for Phase 1 Habitat Survey - a technique for environmental audit*. Revised edition. JNCC, Peterborough.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747.

Table 1. List of Plant Species Recorded During Survey

Common name*	Scientific name*	H1	H2	H3	G1	G2	Woodland Scrub & G3	Ornamental
Ash	<i>Fraxinus excelsior</i>	O	R					
Autumn hawkbit	<i>Scorzonoides autumnalis</i>				LF			
Barron strawberry	<i>Potentilla sterilis</i>				R			
Blackthorn	<i>Prunus spinosa</i>	F	O					
Bracken	<i>Pteridium aquilinum</i>				LF	D	F	
Bramble	<i>Rubus fruticosus</i>	O	O					
Broad buckler-fern	<i>Dryopteris dilatata</i>		O					
Broad-leaved dock	<i>Rumex obtusifolius</i>				O			
Broad-leaved plantain	<i>Plantago major</i>				O			
Broad-leaved willowherb	<i>Epilobium montanum</i>				LO			
Brown bent	<i>Agrostis vinealis</i>				LO			
Bullace	<i>Prunus insititia</i>	O						LO
Bush vetch	<i>Vicia sepium</i>					O		
Caucasian elm	<i>Zelkova carpinifolia</i>				O			
Chives	<i>Allium schoenoprasum</i>							LF
Chocolate cosmos	<i>Cosmos atrosanguineus</i>							LO
Cock's-foot	<i>Dactylis glomerata</i>				LF			
Cotoneaster	<i>Cotoneaster sp.</i>							R
Common bent	<i>Agrostis capillaris</i>				O			
Common bird's-foot-trefoil	<i>Lotus corniculatus</i>				R			
Common knapweed	<i>Centaurea nigra</i>				LF	LO		
Common nettle	<i>Urtica dioica</i>	O						
Common sorrel	<i>Rumex acetosa</i>				O			
Corn marigold	<i>Glebionis segetum</i>							LO
Crack-willow	<i>Salix fragilis</i>	O						
Creeping bent	<i>Agrostis stolonifera</i>					O		
Creeping buttercup	<i>Ranunculus repens</i>				LF	LO		
Creeping thistle	<i>Cirsium arvense</i>				O			
Cuckooflower	<i>Cardamine pratensis</i>					O		
Dandelion	<i>Taraxacum sp.</i>				F			

Common name*	Scientific name*	H1	H2	H3	G1	G2	Woodland Scrub & G3	Ornamental
Devil's-bit scabious	<i>Succisa pratensis</i>				R			
Dog-rose	<i>Rosa canina</i>	O						
Dogwood	<i>Cornus sanguinea</i>	O						
Elder	<i>Sambucus nigra</i>	O	R					
Field maple	<i>Acer campestre</i>	F						
Goat willow	<i>Salix caprea</i>						F	
Green alkanet	<i>Pentaglottis sempervirens</i>							O
Grey willow	<i>Salix cinerea</i>			F				
Guelder-rose	<i>Viburnum opulus</i>	O						
Hawthorn	<i>Crataegus monogyna</i>	D	D	D				
Hazel	<i>Corylus avellana</i>							R
Herb-robert	<i>Geranium robertianum</i>	R						
Hogweed	<i>Heracleum sphondylium</i>					LO		
Holly	<i>Ilex aquifolium</i>	O					LO	
Ivy	<i>Hedera helix</i>	O						
Japanese Rose	<i>Rosa rugosa</i>							R
Male fern	<i>Dryopteris filix-mas</i>				LO			
Meadow buttercup	<i>Ranunculus acris</i>						O	
Pedunculate oak	<i>Quercus robur</i>						R	
Perennial rye-grass	<i>Lolium perenne</i>				LF			
Petty spurge	<i>Euphorbia peplus</i>							LO
Pot marigold	<i>Calendula officinalis</i>							R
Red clover	<i>Trifolium pratense</i>				F			
Red fescue	<i>Festuca rubra</i>				LF			
Red valerian	<i>Centranthus ruber</i>							R
Ribwort plantain	<i>Plantago lanceolata</i>				O			
Rose-of-sharon	<i>Hibiscus syriacus</i>							R
Rowan	<i>Sorbus aucuparia</i>						R	
Russian comfrey	<i>Symphytum uplandicum</i>						LO	
Self-heal	<i>Prunella vulgaris</i>				O			
Sycamore	<i>Acer pseudoplatanus</i>	O					R	
Verbena	<i>Verbena bonariensis</i>							O

Common name*	Scientific name*	H1	H2	H3	G1	G2	Woodland Scrub & G3	Ornamental
Wayfaring tree	<i>Viburnum lantana</i>	O						
White clover	<i>Trifolium repens</i>				F	LO		
Wood avens	<i>Geum urbanum</i>	R						
Wood sage	<i>Teucrium scorodonia</i>	R						
Yarrow	<i>Achillea millefolium</i>				O			
Yorkshire fog	<i>Holcus lanatus</i>					O		

* Nomenclature follows Stace, C., Thompson, H. and Stace, M. (2019). New flora of the British Isles. 4th ed.
C & M Floristics.

** DAFOR:

D - Dominant	O - Occasional
A - Abundant	R - Rare
F - Frequent	L - Locally
V - Very	

PLATES



Plate I. G1 Poor/Semi poor grassland at the north of the site.



Plate II. Building and ornamental planting at the east of the site.



Plate III. Looking west across G1 and ornamental shrubs



Plate IV. Hedgerow 1 (H1)



Plate V. G2 viewed from the south.



Plate VI. G3 Showing HB on boarder.

Figure 1. Layout of site and habitats

Brook Cottage, Ipstones, Staffordshire
Preliminary Ecological Appraisal



APPENDIX I - LEGISLATION RELATING TO PROTECTED SPECIES DISCUSSED IN THE REPORT

The information below is intended only as guidance to the legislation relating to these species and relates solely to England and does not purport to provide legal advice. It is recommended that the legislative documents be referred to for the full legal wording and the services of a relevant specialist sought where legal advice is required.

Bats

There are seventeen different species of bat in the UK; some are very rare whilst others are widespread. However, because the populations of most species have declined in past decades, all British bats have been protected by law.

Bats are protected in England under European Legislation via the Conservation (Natural Habitats and Wild Flora and Fauna (92/43/EEC)) or 'The Habitats Directive'. The Directive is transposed into UK law via the Conservation of Habitats and Species Regulations 2010 (Statutory Instrument 2010/0490 known as the Habitats Regulations), which came into force on the 1st April 2010. The Conservation of Habitats and Species Regulations 2010 (the "Habitats Regulations") consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994 (Statutory Instrument 1994/2716) and amendments. Due to their inclusion on Schedule 2 of the Habitats Regulations, bats are considered 'European Protected Species'.

In summary, this legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb a bat;
- damage or destroy a breeding site or resting place of any bat;
- possess a bat (alive or dead) or any part of a bat.

Disturbance of bats includes in particular any disturbance which is likely:

(a) to impair their ability:

- (i) to survive, to breed or reproduce, or to rear or nurture their young; or
- (ii) to hibernate or migrate; or

(b) to affect the local distribution or abundance of the species to which they belong.

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended), which has also been amended by the Countryside and Rights of Way (CROW) Act, 2000.

In summary, this legislation makes it an offence to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection;
- intentionally or recklessly obstruct access to any structure or place which any bat uses for shelter or protection.

In addition, under UK's Biodiversity Action Plans seven British bat species are listed as 'Priority Species'. These include barbastelle *Barbastella barbastellus*, Bechstein's *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown

long-eared *Plecotus auritus*, greater horseshoe *Rhinolophus ferrumequinum* and lesser horseshoe *Rhinolophus hipposideros*.

Birds

All wild birds, their nests and eggs are protected by law under the Wildlife and Countryside Act 1981 (as amended). It is, therefore, an offence (subject to certain exceptions) to:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird whilst it is in use or being built;
- take or destroy the egg of any wild bird.

In addition to the above, in accordance to amendments of the Wildlife and Countryside Act by the Countryside and Rights of Way Act 2000, it is an offence to:

- intentionally or recklessly disturb any species listed on Schedule 1 of the Wildlife and Countryside Act whilst building a nest, or whilst it is on, in or near a nest containing eggs or young; and
- disturb the dependant young of a Schedule 1 bird.

For example, barn owl is protected under Schedule 1 of the Wildlife and Countryside Act, protecting them from intentional or reckless disturbance during the breeding season (which is normally considered the time from when the female makes the first nest 'scrape' and lays the first egg until the time when the last dependent young stops returning to the nest (English Nature, 2002/3)).

Great Crested Newt

Great crested newts are protected in England and Wales under European Legislation via the Conservation (Natural Habitats and Wild Flora and Fauna (92/43/EEC)) or 'The Habitats Directive'. The Directive is transposed into UK law via the Conservation of Habitats and Species Regulations 2010 (Statutory Instrument 2010/0490 known as the Habitats Regulations), which came into force on the 1st April 2010. The Conservation of Habitats and Species Regulations 2010 (the "Habitats Regulations") consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994 (Statutory Instrument 1994/2716) and amendments. Due to their inclusion on Schedule 2 of the Habitats Regulations, bats are considered 'European Protected Species'.

In summary, this legislation makes it an offence to:

- deliberately capture, injure or kill a great crested newt;
- deliberately disturb a great crested newt;
- damage or destroy a breeding site or resting place of any great crested newt;
- possess a great crested newt (alive or dead) or any part of a great crested newt.

Disturbance of great crested newts includes in particular any disturbance which is likely:

(a) to impair their ability:

- (i) to survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) to hibernate or migrate; or
- (b) to affect the local distribution or abundance of the species to which they belong.

Great crested-newts are also protected under the Wildlife and Countryside Act 1981 (as amended), which has also been amended by the Countryside and Rights of Way (CROW) Act, 2000.

In summary, this legislation makes it an offence to:

- intentionally or recklessly disturb a great crested-newt while it is occupying a structure or place which it uses for shelter or protection;
- intentionally or recklessly obstruct access to any structure or place which any great crested-newt uses for shelter or protection.

In addition, the great crested newt is a Priority Species within the UK Biodiversity Action Plan with a Species Action Plan aimed at maintaining the existing range and population status, as well as increasing the number of populations through re-colonisation.

Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal for any person to kill, injure or take a badger. It is also an offence to destroy, damage or obstruct a badger sett, or to disturb animals whilst within a sett. Any operation likely to affect badgers by direct disturbance to the animals or damage, destruction or obstruction of their setts is required under the Act to be licensed by the appropriate authority. In the case of proposals for developments requiring planning permission, Natural England is the statutory licensing authority.

The Protection of Badgers Act 1992 defines a sett as 'any structure or place, which displays signs indicating current use by a badger.' This is applied to the tunnels and chambers of the sett and the areas immediately outside the entrances, or to other structures used by badgers for shelter and refuge, such as crevices amongst rocks and boulders; spaces under garden sheds, raised buildings or other structures; and above-ground 'nests' or 'couches' – often tucked under a hedge or bush, but sometimes amongst hay bales in farm buildings. (See Guidance on 'Current Use' in the Definition of a Badger Sett, Natural England, June 2009).

Water Vole

Water voles are protected under the Wildlife and Countryside Act 1981 (as amended), which has been amended by the Countryside and Rights of Way (CROW) Act, 2000.

In summary, this legislation makes it an offence to:

- intentionally or recklessly disturb a water vole while it is occupying a structure or place which it uses for shelter or protection;
- intentionally or recklessly obstruct access to any structure or place which any water vole uses for shelter or protection.

In April 2008 amendments made to the Wildlife and Countryside Act 1981 also made it an offence to:

- kill, injure or take a water vole;
- possess or control a water vole;
- damage or destroy a place of shelter or disturb whilst water voles are occupying places of shelter and;
- sell, possess or transport for the purposes of sale or advertise the buying or selling of water voles

In addition, the water vole is a Priority Species within the UK Biodiversity Action Plan with a Species Action Plan aimed at maintaining the existing range and population status, as well as increasing the number of populations through re-colonisation.

European Otter

Otters are protected in England under European Legislation via the Conservation (Natural Habitats and Wild Flora and Fauna (92/43/EEC)) or 'The Habitats Directive'. The Directive is transposed into UK law via the Conservation of Habitats and Species Regulations 2017 (known as the Habitats Regulations). Due to their inclusion on Schedule 2 of the Habitats Regulations, otters are considered 'European Protected Species'.

In summary, this legislation makes it an offence to:

- deliberately capture, injure or kill a otter;
- deliberately disturb a otter;
- damage or destroy a breeding site or resting place of any otter;
- possess a otter (alive or dead) or any part of a otter.

Disturbance of otters includes in particular any disturbance which is likely:

(a) to impair their ability:

(i) to survive, to breed or reproduce, or to rear or nurture their young; or

(b) to affect the local distribution or abundance of the species to which they belong.

Otters are also protected under the Wildlife and Countryside Act 1981 (as amended), which has also been amended by the Countryside and Rights of Way (CROW) Act, 2000.

In summary, this legislation makes it an offence to:

- intentionally or recklessly disturb a otter while it is occupying a structure or place which it uses for shelter or protection;
- intentionally or recklessly obstruct access to any structure or place which any otter uses for shelter or protection.

In addition, otter is a Priority Species within the UK Biodiversity Action Plan with a Species Action Plan aimed at maintaining the existing range and population status, as well as increasing the number of populations through re-colonisation.

NERC ACT AND BIODIVERSITY

A number of UK habitats and species are also included on the list of habitats and species which are of principal importance for the conservation of biodiversity in England as required under Section 41 of the Natural Environment and Rural Communities (NERC) Act. The NERC Act came into force on 1st Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of NERC Act to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and subtidal sands and gravels.

There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the Hen Harrier has also been included on the list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England. In accordance with Section 41(4) the Secretary of State will, in consultation with Natural England, keep this list under review and will publish a revised list if necessary.

The impact that this legislation has on the Planning system is also outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory obligations and their Impact within the Planning System. This states:

The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult English Nature [now Natural England] before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise developers that they must comply with any statutory species' protection provisions affecting the site concerned.