Ecological Assessment

of land

at
Lydbury North
Shropshire

(SO353859)

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SUMMARY

Background

Churton Ecology was commissioned to carry out an Ecological Appraisal of land (approximately 0.15 ha) proposed for residential development in the village of Lydbury North Shropshire.

Method of study

A desk study and Extended Phase 1 habitat survey were carried out in order to assess the current ecological value of the site and to identify potential impacts and ecological constraints and make recommendations for general mitigation, compensation and further surveys, as appropriate.

Baseline Ecological Conditions

There are no statutory sites for nature conservation within 1km of the site but there are two County Wildlife Sites (Walcot Park Lake and Lower Down), to the south. These will not be affected by proposed works.

The site comprises poor semi-improved grassland with one partial hedgerow along the west boundary; some old stone wall is also present in the west boundary. A narrow band of immature plantation runs along the south boundary.

The grassland and hedgerow (as a remnant only) are not priority habitats and are of low ecological value.

The only feature of current ecological interest on the site is the west boundary hedgerow.

Ecological issues

The only potential ecological issue associated with the proposed development, on or near the site is the disturbance of nesting birds if there is any hedgerow, tree or scrub removal within their breeding season.

Key recommendations

Any clearance of hedgerow, tree or scrub should, where possible, be carried out in the late summer or winter months to avoid the main bird-nesting season.

Opportunities for enhancement of the site post development include planting of native hedgerow along the east and west boundaries and planting of shrubs and trees on site that provide food for wildlife. Erection of bird boxes on buildings is another option.

1 INTRODUCTION

1.1 Background, site description and survey objectives

Churton Ecology was commissioned by Balfours LLP to carry out an Ecological Assessment of land proposed for residential development on the southern edge of the village of Lydbury North in Shropshire (SO353859). The site is currently a small field.



Figure 1: Site location (red)
OS map licence no.100048619

The survey aimed to provide ecological information with relevance to the proposed works by a) analysing previous biological records within a 1km radius of the site centre ii) identifying the presence of special sites for conservation within the 1km surround c) identifying habitats within the site and surrounds, their ecological significance and function d) identifying the presence of protected, priority or notable species and habitats or the potential for these e) assessing the likely significant impacts of the proposed works e) identifying any further survey work or mitigation that might be necessary prior to the submission of a planning application .

1.2 Proposed works

Proposals include the construction of 4 houses, in a terrace, and associated infrastructure. The site covers approximately 0.15 ha.

2 METHODOLOGY

2.1 Baseline Ecological Conditions

The ecological baseline was established through a desk study and site survey.

2.2 Desk study

A desk study was carried out to identify protected species and habitats as well as national and local designated sites for nature within 1km of the site. Searches were conducted using the following sources:

- Shropshire Ecological Data Network
- OS maps

OS maps and aerial photographs were used to identify landscape features of potential interest including ponds, streams and ditches, and areas of apparent (semi-) natural value. This is particularly useful when considering links between important areas and potential Great Crested Newt breeding habitats within 250m of the site.

2.3 Habitat survey

A phase 1 survey of the site and immediate surrounds was conducted on 24/4/2014 by Kate Thorne following the JNCC (2010) Phase 1 methodology, see Appendix 1 for habitat map.

The habitats were assessed, and their importance/value noted based on botanic diversity and/or their potential to support uncommon or rare species of fauna (e.g. axiophytes/Red Data Book species).

All hedgerows that might either be removed or otherwise impacted were assessed according to the Hedgerow Regulations (1997).

2.4 Protected species survey

Bat species

Immature trees in the adjacent plantation and the adjacent small telephone exchange building, were assessed for their potential to support bat roosts; only a ground level search to ascertain bat roost features was required.

A general habitat suitability assessment of the site and surrounds was also carried out to determine their value as foraging and commuting habitat.

Great Crested Newt (Triturus cristatus)

Suitable aquatic habitats with the potential to support breeding Great Crested Newt were sought on OS maps, within 250m of the site.

The habitats on site were assessed for their suitability to provide resting places or areas suitable for shelter or protection (referred to as terrestrial habitats) and a limited search of refugia (stone piles) was made. The potential for newts to traverse the site and any dispersal limitations that might interrupt such migrations were also considered.

Otter (Lutra lutra) and Water Vole (Arvicola amphibious)

No search was conducted for these species since no suitable habitat was encountered.

Dormouse (Muscardinus avellanarius)

Suitable woodland and hedgerow habitats were noted within or adjacent to the site. Dispersal links and barriers to suitable woodland habitats were also considered in relation to hedgerow/woodland links.

Badger (Meles meles)

Burrows and surface nests were sought on the site and within a 50m surround (at least). Other evidence of activity, such as latrine pits, paths, snuffle holes, feeding remains and hairs (in burrow spoil or snagged along trails) were also sought.

Reptiles

Suitable habitat within the site and adjacent surrounds, with potential to support the 'widespread' reptile species, was sought. Areas were assessed for their potential to provide permanent, seasonal and/or temporary reptile habitats. Dispersal links and barriers between more abundantly suitable habitats were also considered in relation to mobile and/or transient species.

<u>Birds</u>

Habitats with potential to support common, priority or Schedule 1 species of bird were sought within the site and surrounds. A list of bird species using the site and adjacent surrounds was established during the survey and old nests encountered were attributed to species, where possible.

Other protected or priority species

The walkover process is generally designed to pick up on anything that may be encountered or inferred from habitat suitability. However, for protected and priority species that might require specialist survey, (e.g. invertebrates, nocturnal, cryptic or migratory animals) a

botanical/habitat feature survey generally provides a sound basis for predicting any further survey work that may be necessary.

3 RESULTS (Baseline Ecological Conditions)

3.1 Desk study

3.1.1 Designated Nature Conservation Sites

There are no statutory sites for nature conservation in the 1km surround but there are two County Wildlife Sites.

Table 1: non statu	utory sites for n	ature conserv	ation in the 1ki	m surround
Site name	Legislation	Ecological value	Distance	Details
Walcot Park Lake WS	N/A	County	750m at nearest point	Large artificial lake and wet woodland; 22.09 ha. SO348853
Lower Down WS	N/A	County	1km plus at nearest point	Unimproved MG5 pasture with species rich ponds;14.5ha. SO343847

Other sites

The nearest pool is at just over 500m distance to the south-east.

3.1.2 Protected and priority species

Note: the site falls within the monad SO3585.

The findings of both protected and priority species have been summarised below, also see map of their distribution in Appendix 3.

Protected species

Otter (*Lutra lutra*) has been recorded from the River Kemp (SO3685) and Walcot Lakes/Park (SO3485), in 2000.

There are recent records for several specially protected birds from the site monad and the wider surround: Common Kingfisher (Walcot Park, SO3585), Eurasian Hobby (SO3585 and SO3587), Red Kite (SO3585, SO3785, SO3586 and SO3587), Common Crossbill (SO3585 and SO3785) and Barn Owl (SO3587).

There are no records for any bat species, Great Crested Newt (*Triturus cristatus*), Dormouse (*Muscardinus avellanarius*), Water Vole (*Arvicola terrestris*), Badger (*Meles meles*) or any reptiles.

UK priority species

There are recent records from the site monad and the wider surround for Tree Pipit, Lesser Spotted Woodpecker, **Yellowhammer**, Grasshopper Warbler, Spotted Flycatcher, **House Sparrow**, Grey Partridge, **Tree Sparrow**, **Dunnock**, Marsh & Willow Tit, **Bullfinch**, **Song Thrush**, **Starling**, Wood Warbler and Northern Lapwing; those highlighted are the species that are most relevant to this development.

Pine Martin (2 animals) has been recorded from Lydbury North (SO3586) in 2006.

White-letter Hairstreak (butterfly) has been recorded in SO3687 (in 2003) and from SO3485 (in 1996).

There are two old records for Spreading Bellflower in SO3687/SO38; this species still survives in the South Shropshire Hills and is often associated with hedgerows.

Local priority species

There are recent records for several priority bird species: Mallard, Teal, Shoveler, Tufted Duck, Meadow Pipit, Swift, Stock Dove, **House Martin**, Snipe, Kestrel, Grey Wagtail, Wheatear, Redstart, Willow Warbler, Green Woodpecker, Golden Plover, Sand Martin, Mistle Thrush and Woodcock.

The most relevant priority plants (axiophytes) are grassland species [Common Lady's-mantle, Slender Parsley-piert, Betony, Spring Sedge, Woolly Thistle, Wild Basil, Changing Forget-me-not, Bird's-foot, Burnet-saxifrage, Flattened Meadow-grass, Common Fleabane, Devil's-bit Scabious, Hop Trefoil and Yellow Oat-grass] and woodland ones [Moschatel, Wood Anemone, Hard Fern, Hairy Brome, Wood-sedge, Climbing Corydalis, Alternate-leaved Golden-saxifrage, Golden-scaled Male-fern, Bearded Couch, Broad-leaved Helleborine, Wood Horsetail, Spindle, Sweet Woodruff, Bluebell, Slender St John's-wort, Yellow Archangel, Hairy Wood-rush, Great Wood-rush, Common Cow-wheat, Wood Melick, Wood-sorrel, Hard Shield-fern, Soft Shield-fern, Goldilocks Buttercup, Sanicle, Greater Chickweed, Small-leaved Lime, Large-leaved Lime and Wood Vetch. In addition, there are records for 2 arable axiophytes, 4 heathland ones and 19 wetland ones. Other species include Brittle Bladder fern (walls) and Trailing St John's-wort (hedge banks).

There are 1996 records for several priority beetles in Walcot Park (SO3485).

3.1.3 Schedule 9 ('invasive') species

Non-native invasive plants in the area include Japanese Knotweed, Himalayan Balsam, Few-flowered Garlic and Rhododendron

Invasive fauna species include Chinese Water-deer (old records in SO3484), Black Swan and Canada Goose.

3.2 Habitat survey

3.2.1 Site habitat types

The range of habitats on the site can be summarised as follows:

- Poor semi-improved grassland
- Hedgerow (remnant)
- Stone wall
- Plantation

These are represented on the habitat map in Appendix 1, with numbered target notes. All plants are listed in Appendix 2. In the text species are referred to using their English names (Appendix 2 provides a list of their scientific names). Nomenclature follows Stace, C. (2011) New Flora of the British Isles.

3.2.2 Site habitat descriptions

Poor semi-improved grassland

The site is largely a small grassland field which has been agriculturally improved. The sward has been grazed and is species-poor with only a few grasses [Yorkshire-fog (dominant) and Crested Dog's-tail] and herbs [Dandelion and Hogweed]. A few 'nuisance' weeds are present: Dock and Nettle (both rare).



Photograph 1: semi-improved grassland; plantation along south boundary; viewed from the north end.

Hedgerow

A low (trimmed) hedgerow runs along part of the west boundary (lane-side); woody species include Blackthorn, Gooseberry and Hawthorn with frequent Ivy. Negative features to this hedgerow are i) it is fragmented at either end from other hedges ii) there are no woodland ground flora species from the Hedgerow Regulations list.

It does not class as an 'important' hedgerow (as per the Hedgerow Regulations).



Photograph 2: west boundary: remnants of stone wall (foreground) and roadside hedge; viewed from the northwest.

Stone wall

A low dry stone wall runs along the north part of the west boundary; this is partly covered by turf and only a very short section is exposed. The turf merges into a grassy west facing bank (lane verge) where there is no hedge; it is a more diverse and finer grassland than that in the field with species such as Red Fescue, Germander Speedwell and Yarrow (also the non-native Fox-and-cubs).

3.2.3 Habitats in the site surrounds

Large expanses of arable land lie to the east and south-west, with a few trimmed hedges in this landscape. Residential areas lie to the west (on the opposite side of the lane) and north, the latter are separated from the site by a row of Western Red Cedar trees (their tops have been cut off but they are about 3-4m high).

Immediately to the south is a narrow plantation with a telephone building to the south again.

Buildings

The telephone exchange building is brick built with a lower west section that is slate tiled; the east section has interlocking cement tiles. All tiles appear to be close fitting as are the soffit boxes around the eaves, the gable verges and the ridge tiles.

Plantation

The narrow plantation along the south boundary is immature; it has grown to a height of around 10m with Field Maple trees dominant. No potentially large tree species have been planted in this area but there are a couple of self set Yew saplings; other species include Viburnum sp, Garden Privet (frequent) and Rowan. The ground flora has frequent Ivy covering the ground and some Wild Arum.

3.2.4 Flora

All the plant species found during the survey are common species, see Appendix 2 for full list.

3.3 Protected species survey

3.3.1 Bats

There are no bat roost features in any of the trees close to the site. The small buildings have low potential for bat roosts.

The site habitats offer low potential as foraging habitat or commuting routes.

3.3.2 Great Crested Newt

No suitable standing water-bodies were noted near the site. The site itself comprises poor terrestrial habitat although there are some potential refugia; a limited search of a few lying stones proved negative.

3.3.3 Otter and Water Vole

There is no habitat present on or near the site which is suitable for these species.

3.3.4 Dormouse

The trimmed nature of most hedgerows in the surrounds, and the fragmentation of the site hedgerow, makes the site and immediate surrounds unsuitable for Dormouse.

3.3.5 Badger

A faint Badger trail passes along the outside of the east boundary (in the arable field margin). No other signs and no setts were found.

3.3.6 Reptiles

The habitat present is largely unsuitable for all the 'widespread' reptile species, being too intensively managed. The grassland bank (verge outside the site hedgerow) and the stone wall in the west boundary may have greater potential but this area appears to be isolated from any other suitable habitat.

3.3.7 Birds

Only a very few common bird species were seen on the site and/or the immediate surrounds e.g. House Sparrow (a UK priority species), Robin and Great/Blue Tit.

The field appears unsuitable for ground nesting birds (too small).

3.3.8 Other priority species

Since the plant diversity is low to moderate, it may be reasonable to assume that no important invertebrate habitats will be affected by the proposed works.

4 ECOLOGICAL EVALUATION

4.1 Baseline evaluation criteria

An ecological evaluation was undertaken using a combination of criteria for habitats and species based on the results obtained through desk study and field survey. The general framework follows that described by the Institute of Ecology and Environmental Management (IEEM, 2006) (see Table 1 below).

Where relevant, the evaluation was made with reference to the statutory protection afforded to species and habitats.

Legal protection does not always correspond to conservation value. Some species (e.g. badgers) are protected for reasons of animal welfare rather than conservation. Others are of national conservation value but are not protected by law (e.g. some Red Data Book species and UK BAP species).

Table 2: Determination	on of Ecological Value
Ecological Value	Description and Examples
	Habitats or features that have high importance for nature conservation, such
	as statutory designated nature conservation sites of international or national
High	importance or sites maintaining viable populations of species of international
	or national importance (e.g. Red Data Book species; European protected
	species).
	Sites designated at a county or district level, e.g. Local Wildlife Site (LWS),
	ancient woodland site, ecologically 'important' hedgerows or ecological
Medium	features that are notable within the context of a region, county or district (e.g.
	a viable area of a Priority Habitat on the county BAP or a site that supports a
	viable population of a county BAP species).
	Sites of nature conservation value within the context of a parish or
Low	neighbourhood, low-grade common habitats, such as arable fields and
	improved grasslands and sites supporting common, widespread species.

4.2 Statutory and non statutory nature conservation sites in the locality

There are no statutory sites one within 1km of the site but there are two County Wildlife Sites; these are considered of be of medium ecological value.

4.3 Habitats within and close to the site

Grassland

The main habitat to be lost is poor semi-improved grassland which is not a priority habitat and is considered to be of low ecological value.

Hedgerows

The site supports a short section of hedgerow which is likely to be disturbed to provide access. As a remnant, it is considered to be of low ecological value.

Stone wall and grass bank

The derelict boundary stone wall is highly likely to be disturbed, to both provide access and to 'tidy up' the west boundary. As an isolated habitat, it is considered to be of low ecological value.

Plantation

The plantation just off site is considered to be of low ecological value; it may have some limited value for breeding birds and foraging bats.

4.4 Protected species

4.4.1 Bats

No potential bat roost features were noted in any of the trees or buildings on or close to the site.

The site offers poor foraging habitat and lacks linking linear features for commuting bats

4.4.2 Great Crested Newt

Given the lack of existing records and the lack of pools within 250m from a pool, it is considered highly unlikely that Great Crested Newt is present within the site.

4.4.3 Otter and Water Vole

Otter has been recorded in the surrounds but, given the lack of suitable habitat on or close to the site, it is considered highly unlikely that these two species are present within or close to the site.

4.4.4 Dormouse

Given the lack of suitable habitat, habitat links and any existing records, it is considered highly unlikely that this species is present within or close to the site.

4.4.5 Badger

Although there is a trail running along the east boundary off site, there is no evidence to suggest that this species uses the site and there is no sett on or near the site.

4.4.6 Reptiles

Although the west boundary has some potential for Slow-worm presence, given the lack of links to the grassland verge and stone wall, and any existing records, it is considered unlikely that reptiles are present on or close to the site.



Photograph 3: west boundary: remnants of stone wall (red arrow)) and roadside hedge; well managed gardens in surrounds; viewed from the south-west.

4.4.7 Birds

A number of priority and common scrubland/hedgerow bird species may use the boundary hedgerow and, to a lesser extent, the plantation close to the site for nesting (and/or foraging). The site lacks suitable habitat for specially protected birds e.g. Barn Owl (which has been recorded in the area). The site also appears unsuitable for ground nesting birds to breed (too small).

4.5 Survey limitations

There were no significant survey limitations.

4.6 Legal status

Bats

All UK bat species are protected under both UK and European Law. Essentially this makes it unlawful to; deliberately capture, injure or kill a bat; intentionally or recklessly disturb a bat whilst it occupies a roost or deliberately cause disturbance to a bat or group of bats; damage, destroy or cause deterioration to the roosting site of a bat; intentionally or recklessly obstruct access to a bat roost.

Notably, legal protection gives absolute protection to bat roosts and their continued ability to function, regardless of deliberate, intentional or reckless action. A roost is defined loosely as a place used for the purposes of breeding, resting or sheltering. Legal protection also extends to seasonal roosts which are not always occupied by bats throughout the year.

Disturbance caused through excessive noise or lighting and/or alterations to the landscape could potentially impact on bat roosting, foraging and/or commuting habitats and may have legal implications with regards European disturbance/roost deterioration laws. It is therefore the duty of the competent authority to take habitat severance, disturbance and land use change issues and their potential for impact on bat populations into consideration when assessing applications for the relevant consent/s.

Badger

Badgers are protected under the Protection of Badgers Act 1992. It is an offence to wilfully kill, injure, capture, possess or cruelly ill-treat a badger, or attempt to do so. It is also an offence to damage, destroy or obstruct a badger sett which shows signs of current use by badgers, or to disturb a badger within a sett.

Current use could be interpreted as a sett showing signs of recent occupation, regardless of whether the sett is in immediate occupation.

Birds

With the exception of Schedule 1 listed bird species, which receive a higher level of protection against breeding disturbance, all common species of bird are protected during their breeding activities under the Wildlife and Countryside Act 1981.

Essentially, this makes it an offence to intentionally take, damage or destroy the nest of any wild bird whilst that nest is occupied or being built; intentionally take or destroy the egg of any wild bird.

5 POTENTIAL IMPACTS AND RECOMMENDATIONS

5.1 Introduction

Wherever possible, negative ecological impacts from developments should be avoided. Where these are unavoidable then mitigation and compensation measures should be proposed. This is of particular importance where there is any presence of or potential for protected species. In addition, it is best practice to seek positive biodiversity benefits through enhancement measures, in particular with regard to Priority Habitats and Species listed on the national and local Biodiversity Action Plans and the NERC Act 2006, and protected species.

The Local Planning Authority is now required to actively seek in development proposals, measures that aim to promote appropriate Priority Habitats and Species listed in the UK Biodiversity Action Plan. The provision of compensation/enhancements helps local planning authorities in meeting requirements as stipulated under the National Planning Policy Framework (2012), which states that sustainable development should seek to achieve net gains in bio-diversity for nature.

5.2 Habitats

The County Wildlife Sites in the surrounds are highly unlikely to be affected.

On site there will be small scale loss or likely loss of low value habitat (grassland and fragmented hedgerow); this will result in a temporary negative impact of negligible significance.

Although mitigation is not considered essential, future opportunities for wildlife can be achieved through enhancements, see below.

5.3 Protected species

No development related impact on Bats, Great Crested Newt, Otter, Water Vole, Dormouse, Badger or reptiles can be reasonably predicted and no further survey or assessment is required.

5.3.1 Birds

Any negative impact on birds, through habitat loss, is likely to be temporary and of negligible significance. However, development work that may remove, damage or destroy a nest of a wild bird whilst it is in use should be avoided as it may constitute an offence.

Any clearance of hedgerow, scrub or trees should, therefore, be carried out i) within the bird nesting season, after a negative inspection for nests has been undertaken ii) outside the bird nesting season between July 31st and March 1st iii) after access into the hedge/tree has been suitably obstructed with netting prior to March 1st.

5.4 Habitat compensation and enhancement recommendations

Habitats

New native hedgerows could be planted along the east and west boundaries of the site, using woody species typical of the area, see table 3 below.

Scattered shrub/small tree planting across the site could include species that flower and/or fruit profusely (to provide food for birds) with care taken to avoid invasive species e.g. Dogwood and Snowberry, or species that are poor for wildlife e.g. Cypress species. Any garden hedgerow planting should avoid use of Cypress or Privet (poor for nesting); Hornbeam and/or Beech are recommended as they are native species (although not native to Shropshire) and produce a tidy manageable hedge.

Table 3: Native species recommended for hedge plan	ting
Taxon	Common name
Corylus avellana	Hazel
Crataegus monogyna	Hawthorn
Euonymus europaeus	Spindle
Viburnum opulus	Guelder Rose
Acer campestre	Field Maple
Ilex aquifolium	Holly

Species

Several priority birds recorded in the area are dependent on buildings. Bird boxes could be placed on any new building e.g. a Sparrow 'terrace', House Martin nest cups and/or traditional boxes for small birds. Internal nestboxes can be fitted for Swifts, House Sparrow or Starling.

5.5 Further survey recommendations

No further surveys are recommended.

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Appendix 1

Phase 1 habitat map





Appendix 2

Plant list

Taxon	Vernacular	Comment	
Acer campestre	Field Maple	plantation	
Achillea millefolium	Yarrow	road verge	
Arum maculatum	Lords-and-ladies	plantation	
Crataegus monogyna	Hawthorn	hedge	
Cynosurus cristatus	Crested Dog's-tail	grassland	
Dactylis glomerata	Cock's-foot	grassland	
Festuca rubra	Red Fescue	road verge	
Hedera helix	lvy	plantation, hedge	
Heracleum sphondylium	Hogweed	grassland, plantation	
Holcus lanatus	Yorkshire-fog	grassland	
Ligustrum ovalifolium	Garden Privet	plantation	
Pilosella aurantiaca	Fox-and-cubs	road verge	
Plantago lanceolata	Ribwort Plantain	road verge	
Prunus laurocerasus	Cherry Laurel	plantation	
Prunus spinosa	Blackthorn	hedge	
Ribes uva-crispa	Gooseberry	hedge	
Rumex obtusifolius	Broad-leaved Dock	grassland, plantation	
Sorbus aucuparia	Rowan	plantation	
Stachys sylvestris	Hedge Woundwort	plantation	
Stellaria media	Common Chickweed	hedge	
Taraxacum agg.	Dandelion	grassland	
Taxus baccata	Yew	plantation	
Urtica dioica	Common Nettle	hedge, plantation	
Veronica chamaedrys	Germander Speedwell	road verge	
Vicia sativa	Common Vetch	road verge	

Appendix 3

Map showing the location of county Wildlife Sites and protected species on the site and surrounds at Welshampton

Note: detail of records available on request.

