

**LITTLE KNOWLES FARM, BIDDULPH MOOR,
STAFFORDSHIRE**

PRELIMINARY ECOLOGICAL APPRAISAL

**Prepared for
Mrs T. Foxall**

December 2014

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Prepared by

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1. INTRODUCTION

- 1.1 This report has been prepared by Apex Ecology Ltd for BP Architecture on behalf of the client. It presents the results of a preliminary ecological appraisal carried out on land located at Little Knowles Farm in Biddulph Moor, Staffordshire during November 2014.
- 1.2 An application has been submitted to Staffordshire Moorlands District Council for the development of the site, including demolition of an existing timber stable and erection of a new stable and the creation of a manège (horse arena). The planning application reference is SMD/2014/0611.
- 1.3 The land surveyed (hereafter referred to as 'the site') consists of two fields used for grazing horses. The timber stable to be demolished is located in a field on the opposite side of and south of a small road with public access, The Hollands, from the farmhouse; as is the location for the proposed new stable. The proposed manège is to be constructed in the field to the west of the farmhouse.
- 1.4 Little Knowles Farm is located in a rural location, 1km north-east of village of Biddulph Moor. It is bordered by agricultural land characterised by pasture and meadows bordered by broad hedgerows and with scattered dwellings and farms. Spring Wood and Biddulph Grange Country Park lie 1.1km to the west and several wooded stream cloughs radiate out from Spring Wood eastwards the extremities of which lies within 450m of the site. The approximate OS grid reference for the site is SJ914593.
- 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 site and 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 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 Records, was contacted for existing records of protected and notable species within 2km of the site.
- 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 was undertaken on the 20th November 2014 by Helen Ball and Max Robinson both holding over 25 years combined experience working in the ecology sector.
- 2.4 The survey 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, 2004), 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.
- 2.5 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 are included within the survey findings and habitats have been numbered according to their type e.g. grassland G1, G2, G3 etc or denoted by use of a name where relevant.
- 2.6 A list of plant species were produced for each of the habitats and, where these could be divided into ecologically distinct or discrete compartments (such as individual woodlands) lists were compiled separately for each numbered habitat compartment. Where habitat compartments were similar in quality, a single plant list was compiled. The distribution and abundance of plant species in each habitat or habitat compartment were recorded and classified using the DAFOR scale¹.
- 2.7 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. Biodiversity Action Plan Priority species) or presence of a notable tree or invasive plant species². The locations of significant stands of invasive plant species were mapped indicatively. 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.

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

² A number of non-native invasive plant species are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Due to difficulties in identifying some of these plants to species, especially during the winter months, the survey cannot be taken as a comprehensive assessment for the presence of these species.

- 2.8 The ecological value of the habitats was assessed at the county, local (parish) and site levels and the statutes of each species of plant recorded were checked against Hawksford (2011), with any rare or uncommon species highlighted. A valuation of potential impacts on ecosystem services was not undertaken as such means of assessment is in its infancy and a meaningful and pragmatic approach to assessment has not yet been developed.
- 2.9 Preliminary Ecological Appraisals provide 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 Appraisals also identify 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.

3. SURVEY FINDINGS & INTERPRETATION

Review of Existing Ecological Records

- 3.1 Staffordshire Ecological Records provided information on statutorily protected and locally designated sites, as well as protected and notable species, such as Priority Biodiversity Action Plan species that have been previously recorded in the local area.
- 3.2 Bats have been recorded on eight occasions, with four species known to be present: common pipistrelle *Pipistrellus*, noctule *Nyctalus noctula*, Daubenton's *Myotis daubentonii* and whiskered/Brandt's *M. mystacinus/brandtii* (one of the records has not been identified to species). All the records come from Biddulph Grange Country Park (CP) or the Biddulph area. Those from Biddulph Grange CP include the Daubenton's, noctule and whiskered/Brandt's records and fall 1.75km to the west of the site. The only roost records were made from a site 1km to the south-west and relate to one of the common pipistrelle records and the unidentified bat species record. Given the limited number of records, it is very likely that bats are under-recorded given the type and quality of habitats present in the local area
- 3.3 Birds have been extensively recorded in the local area, with the vast majority of the records made at Biddulph Grange CP and from Rudyard Lake. Species recorded include common kingfisher *Alcedo atthis*, grey wagtail *Motacilla cinerea*, common starling *Sturnus vulgaris*, dunnoek *Prunella modularis*, green woodpecker *Picus viridis*, common bullfinch *Pyrrhula pyrrhula*, reed bunting *Emberiza schoeniclus*, common cuckoo *Cuculus canorus*, skylark *Alauda arvensis*, lesser redpoll *Carduelis cabaret*, willow warbler, common redstart *Phylloscopus trochilus*, willow tit *Poecile montana*, spotted flycatcher *Muscicapa striata*, and the thrushes mistle thrush *Turdus viscivorus*, song thrush *T. philomelos*, redwing *T. iliacus* and fieldfare *T. pilaris*. Birds of prey frequenting the local area include barn owl *Tyto alba* (which breeds in the local area), peregrine falcon, hobby and kestrel *Falco subbuteo*. A number of species of waders, waterfowl and gulls have been recorded from Rudyard Lake. A small number of records are from the 'Lask Edge/Top Road' area within 1km of the site and include grey partridge *Perdix perdi*, northern lapwing *Vanellus vanellus* northern wheatear *Oenanthe oenanthe* and Eurasian curlew *Numenius arquata*. These species typically nest and feed on open farmland (and upland acid grassland/rush pasture/moorland in the case of the latter three species). All these birds are 'red' or 'amber' listed species of conservation concern whose populations have declined significantly in recent years (Eaton *et. al*, 2009). Many of the species are birds that would be expected to occur in the area.
- 3.4 There are no records of species such as great crested newts *Triturus cristatus*, or reptiles within 2km of the site.
- 3.5 Badgers are known to occur in the local area and have been recorded on a number of occasions. Due to restrictions with use of the data, in particular making them public, reference to individual records cannot be made in this report. The search results have revealed that badgers are known to inhabit the local area,

with badgers recorded from sites close-by, including using breeding setts and as dead individuals due to road traffic collisions on local roads.

Survey Findings

- 3.6 Descriptions of the habitats present are given below and Table 1 provides a list of the plant species recorded. The site is shown on Figure I and features of the site are depicted in Plates I-V.
- 3.7 The survey covered the two fields in which the existing timber stable is located and where the manège is proposed. The first field, G1, is approximately 85m by 50m in extent and lies to the south of the farmhouse on the opposite side of 'The Hollands'. The new stables would be located in the northeast corner of the field G1; the rest of the field G1 would be unaffected by the proposals. The manège would be located in G2 the field to the west of the farmhouse, which is irregular in shape but approximately 75m by 130m in extent. The manège would lie in the eastern part of the field close to the existing farm buildings.
- 3.8 Grassland G1 had a short sward that was wet and poached by horses in places. The sward contains a very limited number of plant species and is poor semi-improved. Grasses dominate and few meadow herbs are present. Species present include perennial rye-grass, Italian rye-grass, crested dog's-tail, Yorkshire fog, white clover, creeping buttercup, common mouse-ear and broad-leaved dock. Species found growing along the edges of the field include common nettle, cleavers, cow parsley, foxglove and common bent.
- 3.9 The hedgerows along the northern and eastern edges of the G1 are low, approximately 1.2m in height and are regularly cut by box-flailing. They are generally intact and contain few gaps. No mature trees are present and the hedgerows are dominated by hawthorn. The hedgerow along the eastern edge adjoins an adjacent property. It is unmanaged and contains a number of sycamore trees; hawthorn and elder are also present.
- 3.10 A small disused timber stable is located in the north-east corner of G1. Fenced off from the remainder of the field it is surrounded by stands of tall-herb principally common nettle and broad-leaved dock. It consists of a low building built from wooden panels with a corrugated sheet metal and timber panelled roof. It is in a dilapidated state and part of the roof and some of the walls have collapsed. The interior of the building is exposed to the elements and is open and draughty.
- 3.11 Grassland G2 also supports a poor semi-improved sward. A similar range of plant species is present as in G1. Small patches of soft rush are also present indicating that the underlying soil may be damp/hold water at least some of the year. A narrow strip of hard standing/hard-core is present along the far eastern edge of the field. Species occasionally recorded here include red clover, annual meadow-grass and prickly sowthistle.
- 3.12 A hedgerow containing gaps runs along the northern edge of G2, remnants of dry-stone wall can also be found here and the far eastern section has recently been replanted. The hedgerow is unmanaged and is dominated by hawthorn with

holly a rarity. The hedgerow along the western boundary is similar being tall and unmanaged and dominated by hawthorn with the odd holly present.

- 3.13 The hedgerow along the southern edge of the site and bounding The Hollands is low and regularly cut by box-flailing. A wet ditch is present along the base for part of its length. Hawthorn is present, along with the occasional elder and sycamore as young maturing trees.

Assessment of Site and Potential for Protected Species

- 3.14 The site supports a limited number of plant species and the habitats present are low in ecological value in terms of botanical interest containing a mix of common and widespread species.
- 3.15 The hedgerows bordering G1 and G2 contain a limited mix of species and would unlikely qualify as ecologically 'important' under the hedgerow Regulations. The hedgerows would be considered as Priority Habitats under the UK Biodiversity Action Plan as they consist predominantly (i.e. 80% or more cover) of at least one woody UK native species. They will provide shelter and foraging for birds and some invertebrates, as well as nesting opportunities for birds and they connect to hedgerows in the wider landscape. They hold ecological value at the site level.
- 3.16 Bird activity was noted whilst on site. Incidental recordings included blackbird, chaffinch, goldfinch, wren, robin, blue tit and house sparrow; carrion crows were seen flying over the site.
- 3.17 The disused timber stables in G1 offer negligible opportunities for bats to use for roosting and the trees on site are young and very unlikely to contain features suitable for use by bats for roosting. The stables do offer nesting opportunities for birds, although no disused nests were evident. Bats will likely use the site for foraging, although it is unlikely the site provides a significant foraging resource for bats inhabiting the local area.
- 3.18 No ponds are shown lying within 250m of the site on the OS Explorer 268 map of the area and great crested newts are not known to occur in the local area, with no records highlighted within 2km by the record search. Further consideration of great crested newts in relation to the proposals is therefore not considered necessary given the likely lack of impacts on this species.
- 3.19 There are no records of reptiles from the local area. Given the nature of the habitats present, predominately grassland with few small scale habitat mosaics, limited tussock development and other areas where reptiles could bask and seek shelter, it is unlikely reptiles use the site. The exception is that grass snakes may make use of damp areas of the site (amphibians are a key prey item). Grass snakes are mobile animals that can travel large distances and therefore use of the site by this species may be transient. It is unlikely the site supports significant populations of any species of reptile.
- 3.20 A well-worn path was located running north-south through field G2 and the hedgerows bordering hedgerows. Badger guard hairs were found on the

fenceline and brambles where the path cuts through the northern hedgerow. No other signs of badgers were found during the survey, although some stretches of the hedgerows were dense and may have masked evidence. Badgers are known inhabit areas relatively close to the site. It is likely that the path is regularly used by badgers during night-time commutes and both fields G1 and G2 may well be used by badgers for foraging.

4. RECOMMENDATIONS

- 4.1 The proposals are briefly described in paragraphs 1.2 and 3.7. The timber stable to be demolished is located in a field on the opposite side of and south of a small road with public access (The Hollands) from the farmhouse; as is the location for the proposed new stable. The proposed manège is to be constructed in the field to the west of the farmhouse.
- 4.2 The grassland and tall-herb habitats on site are of low ecological value in terms of the plant species they support and no further consideration or protection of them as part of the proposals would be necessary.
- 4.3 Should there be a need to remove any length of hedgerow (although please see Para. 4.6) it is recommended that at least the same length of hedgerow be replaced to that being lost. 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 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 would include hawthorn, blackthorn, hazel, holly, dog-rose. The use of species such as ornamental dogwood and guelder rose is not recommended.
- 4.4 Removal of the timber stables and the clearance of any habitat (including hedgerows) 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 such 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 commence nesting earlier or later in the season.
- 4.5 To provide enhanced nesting opportunities for birds associated with the development, nest boxes (such as those commercially available from Schwegler) could be installed on the new stables. These would need to be installed at the tops of walls close to the eaves and should not be installed facing due south. Deflector birds can be fitted easily below to collect any droppings or nest material. Suitable boxes would include open-fronted and hole-opening boxes, with a target species including house sparrow and common starling.
- 4.6 As badgers are known to be present in the area and use the site for commuting and likely foraging, it is recommended that the hedgerows and other areas of dense vegetation are not removed or disturbed by the proposed works. As badgers regularly expand existing setts as well as dig new setts, and given that much of the legislation protecting badgers relates to the activity status of setts, should this need to take place, it is recommended that they are checked for the presence of badger setts in advance of works taking place. Sufficient time would be needed for any necessary licensing requirements should a sett be affected by

the works; an updated survey by the ecologist may be necessary to support a licence application.

5. REFERENCES

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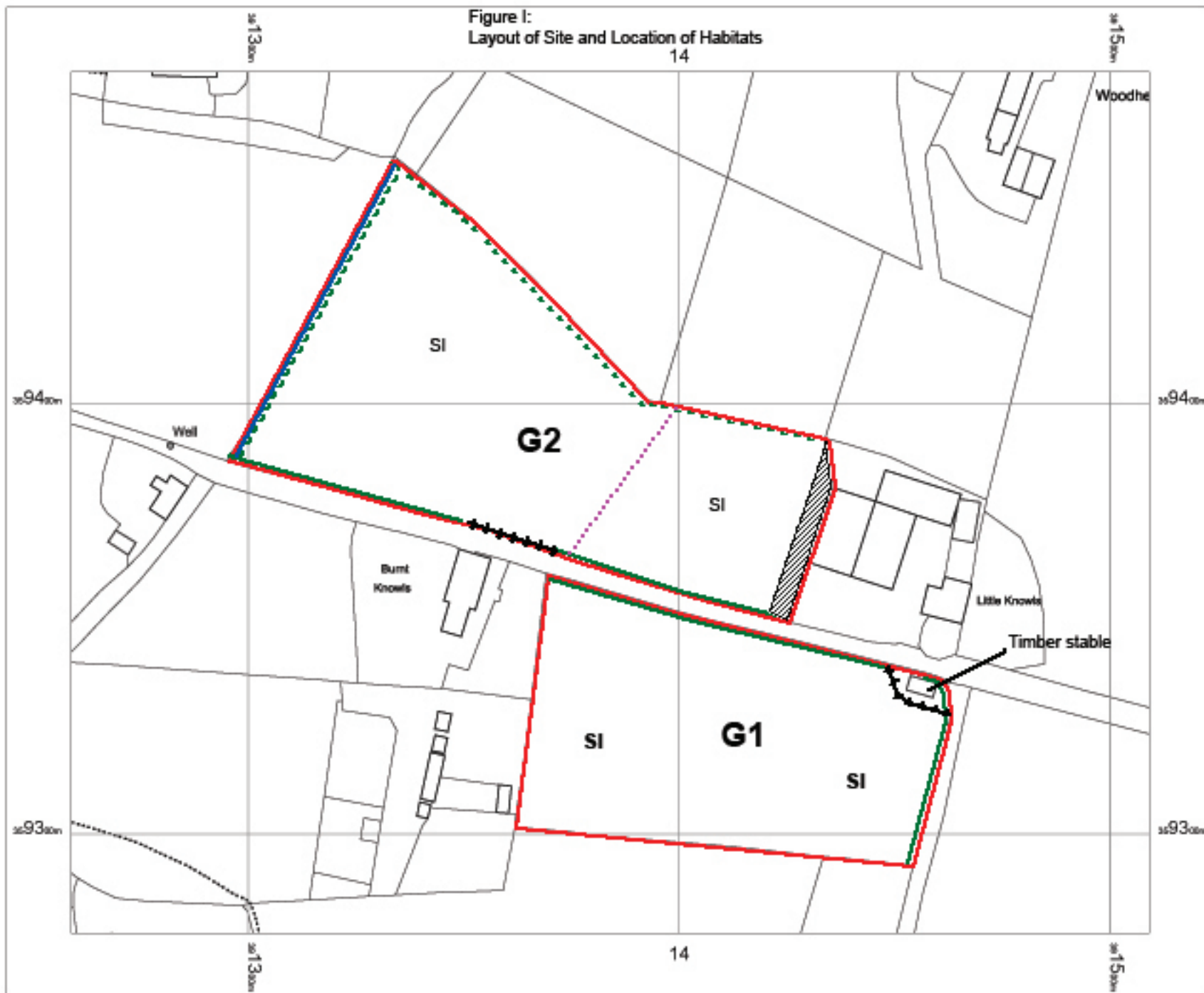
PLATES

	
<p>Plate 1. Timber shed in corner of field G1</p>	<p>Plate 2. View across field G1 looking north towards Little Knowles Farm</p>
	
<p>Plate 3. View looking eastwards across field G2 towards Little Knowles Farm</p>	<p>Plate 4. Hedgerow on western edge of field G1</p>
	
<p>Plate 3. View of badger path across G1 where it crosses hedgerow by lane.</p>	

Little Knowles Farm

Figure 1:
Layout of Site and Location of Habitats

14



N



Surveyed areas



Hardcore/bare earth



Defunct hedge



Intact hedge

Gx Grassland number

SI Poor semi-improved grassland

Fencing

Wet ditch

Badger path

OS MasterMap 1250/2500/10000 scale
15 December 2014, ID:
CM-00386374
www.centremapslive.co.uk

1:1250 scale print at A4, Centre:
391384 E, 358377 N

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Table 1. List of Plant Species Recorded During Survey

Common name*	Scientific name*	Grassland	Hedgerows and edge
Annual meadow-grass	<i>Poa annua</i>	LO	
Bramble	<i>Rubus fruticosus</i>		O
Broad-buckler fern	<i>Dryopteris dilatata</i>		R
Broad-leaved dock	<i>Rumex obtusifolius</i>	LF	
Chickweed	<i>Stellaria media</i>	LO	
Cleavers	<i>Galium aparine</i>	F-A	
Cock's-foot	<i>Dactylis glomerata</i>	R	
Common bent	<i>Agrostis capillaris</i>	O	
Common nettle	<i>Urtica dioica</i>	LF	O-VLA
Common mouse-ear	<i>Cerastium fontanum</i>	LF	
Common sorrel	<i>Rumex acetosa</i>	R	
Cow parsley	<i>Anthriscus sylvestris</i>	O-F	
Creeping bent	<i>Agrostis stolonifera</i>	O-LF	
Creeping buttercup	<i>Ranunculus repens</i>	A	
Creeping thistle	<i>Cirsium arvense</i>	R	
Crested dogs-tail	<i>Cynosurus cristatus</i>	O-F	
Cuckoo flower	<i>Cardamine pratensis</i>	O-F	
Daisy	<i>Bellis perennis</i>	O	
Dandelion	<i>Taraxacum</i> sp.	LO	
Elder	<i>Sambucus nigra</i>		R
Foxglove	<i>Digitalis purpurea</i>	O	R
Great willowherb	<i>Epilobium hirsutum</i>	R	
Hawthorn	<i>Crataegus monogyna</i>		D
Hogweed	<i>Heracleum sphondylium</i>	R	
Holly	<i>Ilex aquifolium</i>		R
Honesty	<i>Lunaria annua</i>	R	
Italian rye-grass	<i>Lolium multiflorum</i>	F-A	
Meadow buttercup	<i>Ranunculus acris</i>	O	
Perennial rye-grass	<i>Lolium perenne</i>	F-A	
Pineappleweed	<i>Matricaria discoidea</i>	R	
Prickly sow-thistle	<i>Sonchus asper</i>	R	
Red clover	<i>Trifolium pratense</i>	R	
Soft rush	<i>Juncus effusus</i>	LO	
Spear thistle	<i>Cirsium vulgare</i>	R	
Sycamore	<i>Acer pseudoplatanus</i>		R
White clover	<i>Trifolium repens</i>	F-A	
Yorkshire fog	<i>Holcus lanatus</i>	O-F	

* Nomenclature follows Stace, C. (2010) *New Flora of the British Isles*. Cambridge University Press, 3rd Edition

** DAFOR:

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

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. It is recommended that the legislative documents be referred to for the full legal wording.

Badgers

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).

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)).