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PRELIMINARY ECOLOGICAL APPRAISAL

At

Land off Lumber Lane

Burtonwood

Warrington

Cheshire

WA5 4AQ

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EXECUTIVE SUMMARY

United Environmental Services Ltd (UES) was commissioned by DPP UK Ltd to carry out a baseline ecological survey of a parcel of land off Lumber Lane in Burtonwood, Warrington Cheshire. A desk study and preliminary ecological appraisal (PEA) survey were undertaken on 13th March 2017, including searches using the Multi Agency Geographic Information Centre (MAGIC) and National Biodiversity Network (NBN).

The PEA provides an assessment of potential ecological impacts associated with the development of the land parcel. At this stage, no detailed development proposals have been submitted to UES, so a 'worst case scenario' has been adopted when assessing the ecological issues on the site.

The proposed development site has an area of approximately 11.7ha and is dominated by two large arable fields, which are developing into grassland. There is a hedgerow dividing the fields and another along part of the site boundary, as well as ditches, dense scrub and a small pond.

The results of the survey combined with the results of the desk study have highlighted the requirement for further work in relation to the below habitats and species. It should be noted that these issues are subject to change depending on the nature and scale of development.

- **Trees and hedgerows** – generic issues relating to root protection areas (RPA) of retained trees and replacement of removed trees in a detailed landscaping plan. Hedgerow survey required if any are to be removed.
- **Pond** – to be retained if possible. If not possible, mitigation measures are required for the infilling of the pond, subject to great crested newt (GCN) *Triturus cristatus* surveys, and the pond should be replaced as part of the landscaping scheme.
- **Amphibians** – a GCN presence / absence survey of the pond on site is required. Ponds within 500m of site should be subject to a scoping survey and impact assessment, to establish the need for further surveys.
- **Bats** – bat activity surveys may be required depending on the nature and scale of the development.
- **Birds** – breeding bird surveys may be required depending on the nature and scale of the development. In addition, vegetation clearance works should take place outside of the breeding bird season (March to August inclusive). If this is not possible, a targeted nest scoping survey is to be undertaken or an ecological clerk of works appointed to oversee the works.

Mitigation measures, as detailed in section 4, should be adhered to, which may in some cases negate the need for further survey work.

This report should be read with appendices 1 to 5, which include results of the desk study, GIS phase 1 habitat mapping, photographs of site and relevant statutory guidance.

1 INTRODUCTION

1.1 Author, surveyors, qualifications and scope of study area

This report is written by Declan Ghee BSc GRAD CIEEM and UES Graduate Ecologist. Declan holds a level 4 Botanical Society for Britain and Ireland (BSBI) field identification skills certificate (FISC), which certifies him as competent to undertake botanical and habitat surveys up to National Vegetation Classification (NVC) level. The report provides an assessment of the potential ecological impacts associated with the proposed development of a parcel of land off Lumber Lane in Burtonwood, Warrington, Cheshire.

The zone of influence considered within the scope of the survey includes all land within the red line boundary. Where relevant, other ecological resources, receptors and important habitats which are spatially separate from the site are considered.

1.2 Survey objectives

UES was commissioned in March 2017 to conduct a PEA of the proposed development site. This was completed in order to:

- Establish baseline conditions and determine the importance of ecological features present or potentially present within the survey area
- Identify key ecological constraints to the project
- Identify the potential requirement for mitigation or compensation, including measures that may be required based on further surveys
- Assess requirements for further surveys as a result of nationally or internationally protected species present or potentially found on site

1.3 Proposed works

At this stage, no detailed proposals have been submitted to UES.

1.4 Structure of the report

This report is a baseline appraisal that forms the basis for further ecological surveys and Environmental Impact Assessments (EIA) if required. In the majority of cases the preliminary ecological assessment will not provide all the ecological data required by the Local Planning Authority to determine an application, especially in the event that protected habitat or species issues are present or likely.

This report should be read with appendices 1 to 5, which include results of the desk study, GIS phase 1 habitat mapping, photographs of site and relevant statutory guidance.

2 METHODOLOGY

This PEA comprises a desk study and a field survey. The desk study is conducted in order to collate ecological information on species and / or habitats of interest that may be present. The field survey is conducted in order to assess the habitats and their importance, both on site and in the context of their wider surroundings.

2.1 Desk study

The following resources were used to inform the desk study:

- National – Using the UK government’s MAGIC website, statutorily protected sites were scoped to a distance of 10km from the application site.
- Local – UES has not been commissioned to undertake an environmental records search at this point. Where necessary, the author has used the National Biodiversity Network Gateway website to inform the survey.

2.2 Field survey

An ecological walkover survey was carried out on 13th March 2017 by Declan Ghee. The purpose of the survey was to identify, record and map dominant habitats types within the development area and highlight any further species surveys that may be required based on the quality of those habitats. When conducting the surveys particular focus was concentrated on the following species and habitat features:

- Amphibians
- Reptiles
- Badger
- Hazel dormouse
- Bats
- Birds
- Trees
- Hedgerows
- Plant communities
- Invasive species
- Otter
- Water vole
- White-clawed crayfish

The habitats were assessed by using the phase 1 habitat survey technique, which is a system for environmental audit widely used within the environmental consultancy field. The survey was undertaken in accordance with the methodology in the ‘Handbook for phase 1 habitat survey - A technique for environmental audit’ (JNCC, 2010) as recommended by Natural England, and in the “Guidelines for Preliminary Ecological Appraisal” (CIEEM, 2013).

The survey area encompasses all of the land within the development footprint and the land to a distance of 30m outside it where accessible. In line with recognized guidelines, ponds were also scoped to a distance of 500m from the survey area.

The phase 1 habitat survey methodology was extended to record any signs of habitats suitable to support protected / invasive species and any incidental observations of other noteworthy species.

2.3 Survey limitations

The survey was conducted in March when not all plants are readily identifiable. However sufficient vegetative identification was possible, allowing a robust assessment of habitats to be undertaken.

3 RESULTS

3.1 Desk study

A desk study was conducted for the proposed development site and surrounding area. Statutorily protected sites were scoped to a distance of 10km. Further results of the desk study can be found at Appendix 1 – Desk study.

There is a single statutorily protected site within 2km of site:

- Colliers Moss Common LNR¹
The reserve is approximately 1.3km north-west of the proposed development site. It is 62.36 hectares with three areas of relict mosslands on site. Other habitats include lagoons, grassland, heathland, woodland and untreated colliery spoil which has been colonised. The site supports a large and diverse range of dragonflies including migrant hawkler *Aeshna mixta* and black tailed skimmer *Orthetrum cancellatum*.

There are sixteen statutorily protected sites (designated for ecological reasons) within 2 – 10km of site:

- Abram Flashes SSSI²
- Bryn Marsh & Moss SSSI
- Clinkham Wood LNR
- Dorchester Park LNR
- Highfield Moss SSSI
- Mill Brow LNR
- Oxmoor Wood LNR
- Paddington Meadows LNR
- Pennington Flash LNR
- Risley Moss SSSI & LNR
- Stanley Bank Meadows SSSI
- Stanley Bank LNR
- Thatto Heath Meadows LNR
- The Wigan Flashes LNR
- Three Sisters LNR
- Wigg Island LNR

3.2 Baseline conditions – Habitats

The results of the PEA are also shown on the accompanying map at Appendix 2 – Phase 1 habitat plan. Habitats are colour-coded in accordance with the phase 1 standard.

The local area consists of arable and pasture fields, as well as residential properties associated with the adjacent Burtonwood village. The following principle habitat types were characterised locally:

- A2.1 Dense scrub
- A2.2 Scattered scrub
- A3.3 Scattered trees (mixed)
- B6 Semi-improved grassland (species-poor)
- C3.1 Tall ruderal
- F1 Swamp
- G1 Standing water

¹ Local Nature Reserve

² Site of Special Scientific Interest

- J1.1 Arable
- J2.1.2 Intact hedge (species-poor)
- J2.4 Fence
- J2.5 Wall
- J2.6 Dry ditch

3.2.1 A2.1 Dense scrub

There are a couple of areas of dense scrub scattered around the site boundary which are largely dominated by bramble *Rubus fruticosus*. Other species present include: stinging nettle *Urtica dioica*, broad-leaved dock *Rumex obtusifolius*, elder *Sambucus nigra*, hogweed *Heracleum sphondylium*, willow *Salix* sp., willowherb *Epilobium* sp., and hawthorn *Crataegus monogyna*.

There is also an area of willow scrub surrounding the pond on site, along the eastern boundary.

3.2.2 A2.2 Scattered scrub

The boundaries and linear features of site have small patches of scrub which have not yet developed into dense stands. These predominantly consist of bramble.

3.2.3 A3.1 Scattered trees (mixed)

The site boundaries and the hedgerow across the centre of site have a number of scattered trees along them. The species are mostly broad-leaved species, such as pedunculate oak *Quercus robur*, ash *Fraxinus excelsior*, hawthorn, sycamore *Acer pseudoplatanus*, hazel *Corylus avellana*, wild cherry *Prunus avium*, willow sp. and silver birch *Betula pendula*. There are also a couple of coniferous cypress *Cupressus* trees to the north of site and in bordering residential gardens.

3.2.4 B6 Semi-improved grassland (species-poor)

There is a small strip of semi-improved, species-poor grassland along the eastern site boundary, underneath a post and barbed wire fence. The sward contains perennial rye-grass *Lolium perenne*, Yorkshire fog *Holcus lanatus* and other tussock-forming grasses, such as cock's-foot *Dactylis glomerata*.

3.2.5 C3.1 Tall ruderal

There are two small areas of tall ruderal vegetation on site, one in the north-western corner and one in the south, surrounding what appears to be a dry attenuation basin. Species present in these areas include: cock's-foot, willowherb sp., Yorkshire fog, broad-leaved dock, hogweed, stinging nettle, creeping bent-grass *Agrostis stolonifera*, hedge woundwort *Stachys sylvatica*, creeping thistle *Cirsium arvense* and cow parsley *Anthriscus sylvestris*.

3.2.6 F1 Swamp

Along the northern boundary, there is a drainage basin which was dry at the time of survey. The basin is dominated by great reedmace *Typha latifolia*, with some bracken *Pteridium aquilinum* also present at the edges.

3.2.7 G1 Standing water

There is a pond along the eastern site boundary, which is heavily encroached by willow and bramble scrub. The pond is lobed, covers an area of approximately 15m x 10m, and is relatively shallow with an estimated maximum depth of 30cm. The pond margins are completely shaded. The water contains a large amount of leaf litter and there is also some fallen timber in the centre. There are stands of greater tussock sedge *Carex paniculata* to the northern edge, however other marginal or emergent vegetation is limited. The pond displays signs of anti-social behaviour, with Styrofoam littered within.

The ditches running along the site boundaries are also wet in places, as indicated on the phase 1 habitat map at Appendix 2. The vegetation surrounding the ditches is detailed in section 3.2.12. The ditches are all very shallow, with depths of approximately 5cm. There is also a ditch which runs from the western site boundary towards the centre of site. This ditch has less than 5cm of standing water, but duckweed *Lemna* sp. is present within, and the margins contain scattered bramble, great willowherb *Epilobium hirsutum*, elder and reed canary-grass *Phalaris arundinacea*.

3.2.8 J1.1 Arable

The majority of the site is covered by arable land, where a grain has been formerly cultivated. The site is beginning to develop into grassland with a more diverse sward along the margins. Species present here include: Yorkshire fog, perennial rye-grass, creeping bent-grass, spear thistle *Cirsium vulgare*, cherry laurel *Prunus laurocerasus* (garden escape), broad-leaved dock, cleavers *Galium aparine*, bracken, wavy bittercress *Cardamine flexuosa*, ivy *Hedera helix*, stinging nettle, false oat-grass *Arrhenatherum elatius*, cock's-foot, smooth sow-thistle *Sonchus oleraceus*, germander speedwell *Veronica chamaedrys* and hedgerow crane's-bill *Geranium pyrenaiicum*.

3.2.9 J2.1.2 Intact hedge (species-poor)

There are two hedges on site.

Hedge 1 divides the northern and southern arable fields, and contains dominant hawthorn and five early mature pedunculate oak trees and a single ash tree. This hedgerow is fairly young and sparse, and measures approximately 2m in height and 1m in width.

Hedge 2 demarcates the site boundary at the south-western corner. It consists of hawthorn, blackthorn *Prunus spinosa*, privet *Ligustrum vulgare*, ash, sycamore, and a decorative bamboo (garden escape).

3.2.10 J2.4 Fence

There are a number of post and wire and wooden panel fences surrounding the site.

3.2.11 J2.5 Wall

There is a small section of wall in the south of site, along the boundary.

3.2.12 J2.6 Dry ditch

There is a ditch which starts in the north-western corner of site and travels around the site boundary eastwards, down to the previously mentioned attenuation basin, before travelling southwards along the eastern site boundary. The ditch is periodically wet, but only has a maximum depth of 5cm. In the north-western corner of site, the ditch is only 20cm wide and deep.

There is another ditch in the south-eastern corner of site, which travels eastwards off site.

Species present surrounding the ditches include: reed canary-grass, goat willow *Salix caprea*, floating sweet-grass *Glyceria fluitans* (in the standing water areas), male fern *Dryopteris filix-mas*, ivy, hard rush *Juncus inflexus*, bramble, and elder.

3.3 Baseline conditions – Protected species or resources

3.3.1 General methods

As part of the PEA, specific observations of wildlife were also recorded. Wildlife observations focus on protected species, invasive species or species of conservation concern. Habitats with potential to support protected species were noted with a view to follow up surveys if required.

3.3.2 Amphibians

GCNs have not been recorded within 2km of the site, however Cheshire is known to have exceptional populations of this species and the habitats on and surrounding site are broadly suitable for foraging, commuting and breeding newts.

The single pond on site is not considered to be exceptional breeding habitat. The level of encroaching scrub over-shades the pond and prohibits the growth of favoured egg-laying vegetation for newts. However, the pond still has the potential to be used by GCNs if present in the local area, and the pond is likely to be directly impacted by any proposed development.

The ditches on site also have low potential to be used by GCNs. The shallow depths are likely to preclude breeding activity but they may be used for commuting purposes.

There are a further seven mapped ponds within 500m of site, and a further unmapped pond approximately 250m to the south-west of site. The surrounding landscape presents good quality habitat for GCNs with numerous pasture fields divided by hedgerows and tree lines.

3.3.3 Badger

The site is broadly suitable for badgers *Meles meles*, due to the foraging opportunities, suitable sett locations and level of shelter at the linear features of site. However, no field signs of badgers were found during the survey. There are signs of smaller mammal activity, such as rabbit holes and digging in the north and east of site. There is also a slightly larger hole in the south-west of site (see Appendix 2 – Phase 1 habitat plan, target note 7), but this is also thought to have been excavated by rabbits or potentially fox, due to the lack of badger field signs in the surrounding area. Therefore, badger presence is not anticipated and no impacts are envisaged.

3.3.4 Bats

There are no buildings on site which could be used by roosting bats. The trees on site are in reasonable condition and there are few potential roosting features of note. The site could be used for foraging and commuting purposes by a number of bat species.

3.3.5 Birds

Although a targeted bird survey was not conducted during the site visit, the following bird species were recorded whilst on site: blue tit *Cyanistes caeruleus*, great tit *Parus major*, woodpigeon *Columba palumbus*, robin *Erithacus rubecula*, herring gull *Larus argentatus*, goldfinch *Carduelis carduelis*, blackbird *Turdus merula*, wren *Troglodytes troglodytes*, buzzard *Buteo buteo*, kestrel *Falco tinnunculus*, pheasant *Phasianus colchicus* and oystercatcher *Haematopus ostralegus* (heard not seen).

The habitats on site are broadly suitable for overwintering waders, but no such birds were present on site during the walkover survey (which was conducted in late winter). The surrounding landscape also contains large areas of similar habitat.

Of the species mentioned above, herring gull is listed under Section 41 of the NERC Act 2006 and is listed on the most recent birds of conservation concern “red list”. Kestrel and oystercatcher are included on the “amber list”.

Hedgerows, trees, dense scrub and swamp vegetation all provide suitable nesting opportunities for breeding birds in the summer.

3.3.6 Hazel dormouse

The habitats on site are relatively unsuitable for dormice *Muscardinus avellanarius*. The hedgerows generally lack key plant species or are not sufficiently dense enough. Dormice are not anticipated to be present and no impacts are envisaged.

3.3.7 Hedgerows

There are two species-poor hedgerows on site. These are unlikely to qualify as “important” for ecological reasons under the Hedgerow Regulations, but they may qualify as important on historical grounds.

3.3.8 Invasive species

No invasive species were recorded during the walkover survey.

3.3.9 Plant communities

No plant communities or individual species were recorded on site which are afforded statutory protection in their own right.

3.3.10 Reptiles

There are records of slow-worms *Anguis fragilis* within the SJ59 grid square. However, the suitable habitats on site are relatively sparse. The majority of the grassland does not have suitable cover or foraging opportunities, and the areas that do have these elements are very small in area. Reptile presence is not anticipated due to the sub-optimal habitats, and therefore no impacts are envisaged.

3.3.11 Trees

There are no tree species on site which are afforded statutory protection.

3.3.12 Otter

There are no water features on site which are suitable for use by otters *Lutra lutra*.

3.3.13 Water vole

There are a few burrows in the banks of the ditch in the north of site, however these are too large and narrow for water vole *Arvicola amphibius*, and the nearby field signs of rabbit suggest that these holes are used by this species. Furthermore, the habitats on site are sub-optimal for water vole due to the lack of standing water.

3.3.14 White-clawed crayfish

There are no suitable water features on site for white-clawed crayfish *Austropotamobius pallipes*.

4 EVALUATION AND RECOMMENDATIONS

This section provides a brief assessment of the likely impacts associated with the proposed development on the receptors identified during the walkover survey and desk study. It also includes any mitigation and compensation measures which may be required for the proposed development to proceed.

No detailed development proposals are available at this point in time. Therefore, the impact assessments below are precautionary and should be re-evaluated when detailed proposals are available.

4.1 Habitats

4.1.1 Designated sites

The sites identified during the desk study were cross-referenced with the survey area relevant to this report. The closest statutorily protected site is Colliers' Moss Common LNR. Given the distance from site and the scale of development, it is considered unlikely that the proposed development will have any direct or indirect impact on this or any other local designated sites.

4.1.2 Trees and hedgerows

There are a number of trees scattered around the site, as well as two hedgerows.

Construction impacts

The development proposals could include the removal of trees and hedgerows as an ecological resource, or could risk permanent damage.

Mitigation

A BS5837 arboricultural survey should be undertaken to catalogue the location and species of the trees and hedgerows on site. This should include establishing and implementing root protection areas around the trees and hedgerows to be retained. These areas should be adequately protected by appropriately designed protective barriers and ground protection throughout the entire development process.

Hedgerows should be retained where possible. A hedgerow survey should be undertaken to establish whether they qualify as important under the Hedgerow Regulations 1997, from March to October inclusive.

Compensation

If any trees or hedgerows are to be removed, they should be replaced accordingly as part of a detailed landscaping scheme, with only native species to be planted. In particular, linear features (such as hedgerows and tree lines) must be retained and enhanced where possible.

Operational impacts

Without detailed development proposals, potential operational impacts cannot be assessed.

4.1.3 Pond

There is a small pond along the eastern site boundary.

Construction impacts

The development could result in the loss of this ecologically important habitat. It could also result in the degradation of quality through input. If the pond is not appropriately removed, it could also result in harm to any wildlife which may be residing in it.

Mitigation

The pond should be subject to a great crested newt presence / absence survey. Mitigation and compensation measures for great crested newts (see section 4.2.1) take precedence over the mitigation measures listed below, as the presence of great crested newts will trigger a number of other requirements to protect this European protected species.

The pond can be enhanced through selective scrub removal. If the pond cannot be retained, it should be drained and infilled immediately afterwards in late autumn to winter, so that amphibians are less likely to be present and will have had the opportunity to finish breeding for that year. It should be drained under the supervision of a suitably experienced ecologist.

Before draining the pond, a hibernacula pile should be created on site in a suitable location which can be used to translocate any common amphibians found during the draining.

Compensation

If the pond is to be removed, it should be replaced as part of a detailed landscaping scheme.

Operational impacts

Without detailed development proposals, potential operational impacts cannot be assessed.

4.2 Species

4.2.1 Amphibians

There is a number of ponds within 500m of the development site, and a pond on site which has the potential to be used by GCNs. The habitat connectivity in the local area is also quite good. As such, there is the possibility that common amphibians and GCNs could be present on site during the development.

Construction impacts

Any amphibians (including GCNs) within the working area are at risk of harm during the development. Poor landscaping could also fragment habitats and sever commuting corridors

for wildlife in the local area. Depending on the development proposals, it could also result in the loss of suitable breeding habitat (the pond) for common amphibians and GCNs.

Mitigation

A GCN presence / absence survey is required of the pond on site, conducted between mid-March and mid-June. This survey consists of four visits, which would rise to six if GCN presence is identified. Half of the survey visits must be carried out from mid-April to mid-May. If presence is identified, a European protected species mitigation licence will be required for the works to proceed.

The ponds within 500m should be subject to a GCN scoping survey and impact assessment, to establish whether any of the ponds are suitable to support GCNs and whether further surveys are required. This could be performed in conjunction with eDNA surveys, which can be used to determine absence of GCN from a pond.

Compensation

The need for compensation should be assessed when further information is available following the GCN surveys.

Operational impacts

Without detailed development proposals, potential operational impacts cannot be assessed.

4.2.2 Bats

The site could be used by a number of foraging bat species.

Construction impacts

Inappropriate landscaping could also result in the severing of commuting corridors used by bats as well as the loss of foraging habitats.

Mitigation

Depending on the development proposals and site layout, bat activity surveys may be necessary to determine which areas of site are particularly important for commuting and foraging bats.

Compensation

The need for compensation should be assessed when further information is available following the further surveys or when detailed development proposals are available.

Operational impacts

Without detailed development proposals, potential operational impacts cannot be assessed.

4.2.3 Birds

There are a number of habitats, such as swamp, hedgerows, dense scrub and mature trees which could support breeding birds.

Construction impacts

Vegetation removal could result in the direct loss of nests, any individuals within the nests and of available nesting territories if conducted during the breeding season. The development could also potentially result in the loss of foraging and breeding habitat for a number of bird species.

Mitigation

Depending on the nature and scale of the development, and the extent to which habitats will be modified on site, breeding bird surveys may be necessary. These surveys should aim to identify the potential presence of protected or threatened bird species in order to inform the final landscape design and development proposals.

Site clearance and vegetation removal (including enabling works) should be carried out outside of the breeding bird season, March to August inclusive. If this is not possible, a targeted breeding bird nest scoping survey should be conducted prior to the start on site or an ecological clerk of works appointed.

Compensation

The need for compensation should be assessed when further information is available following the breeding bird survey or when detailed development proposals are available.

Operational impacts

Without detailed development proposals, potential operational impacts cannot be assessed.

5 CONCLUSION

The proposed development site has an area of approximately 11.7ha and is dominated by two large arable fields, which are beginning to develop into grassland. There is a hedgerow dividing the fields and another along part of the site boundary, as well as ditches, dense scrub and a small pond.

Even though the site is dominated by arable land, there are a number of other habitats on the site, largely concentrated around the boundaries, which present better ecological features and potential for local wildlife.

The preliminary ecological appraisal has highlighted a number of potential issues on site, relating to protected species and priority habitats. However, it should also be noted that without detailed development proposals, a precautionary approach has been adopted and so impacts may not be as severe as predicted. Operational impacts have not been considered at this early stage.

6 REFERENCES

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

DEFRA (2016). *MAGIC* [online]. Available at: <http://magic.defra.gov.uk/>.

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APPENDICES

Appendix 1 – Desk study

Statutorily protected sites (2km buffer)



Legend

- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- Moorland Line (England)
- National Nature Reserves (England)
- National Nature Reserves (Scotland)
- National Nature Reserves (Wales)
- National Parks (England)
- Ramsar Sites (England)
- Ramsar Sites (Scotland)
- Ramsar Sites (Wales)
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Sites of Special Scientific Interest (Scotland)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (England)
- Special Areas of Conservation (Scotland)
- Special Areas of Conservation (Wales)
- Special Protection Areas (England)
- Special Protection Areas (Scotland)
- Special Protection Areas (Wales)
- Sites of Special Scientific Interest Units (England)
- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- Destroyed
- Not Assessed
- Biosphere Reserves (England)
- Biosphere Reserves (Scotland)
- Biosphere Reserves (Wales)

Projection = OSGB36
 xmin = 350700
 ymin = 390400
 xmax = 363200
 ymax = 395800

Map produced by MAGiC on 29 March, 2017.
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



Legend

- | | |
|--|---|
| Areas of Outstanding Natural Beauty (England) | Part Destroyed |
| Limestone Pavement Orders (England) | Destroyed |
| Local Nature Reserves (England) - points | Not Assessed |
| Moorland Line (England) | Sites of Special Scientific Interest (England) |
| National Nature Reserves (England) - points | Sites of Special Scientific Interest (Scotland) |
| National Nature Reserves (Scotland) - points | Sites of Special Scientific Interest (Wales) |
| National Nature Reserves (Wales) - points | Special Areas of Conservation (England) |
| National Parks (England) | Special Areas of Conservation (Scotland) |
| Ramsar Sites (England) | Special Areas of Conservation (Wales) |
| Ramsar Sites (Scotland) | Special Protection Areas (England) |
| Ramsar Sites (Wales) | Special Protection Areas (Scotland) |
| Sites of Special Scientific Interest Units (England) | Special Protection Areas (Wales) |
| Favourable Condition | Biosphere Reserves (England) |
| Unfavourable Recovering | Biosphere Reserves (Scotland) |
| Unfavourable no change | Biosphere Reserves (Wales) |
| Unfavourable Declining | |

Projection = OSGB36

xmin = 330000

ymin = 381900

xmax = 387000

ymax = 406900

Map produced by MAGIC on 29 March, 2017.

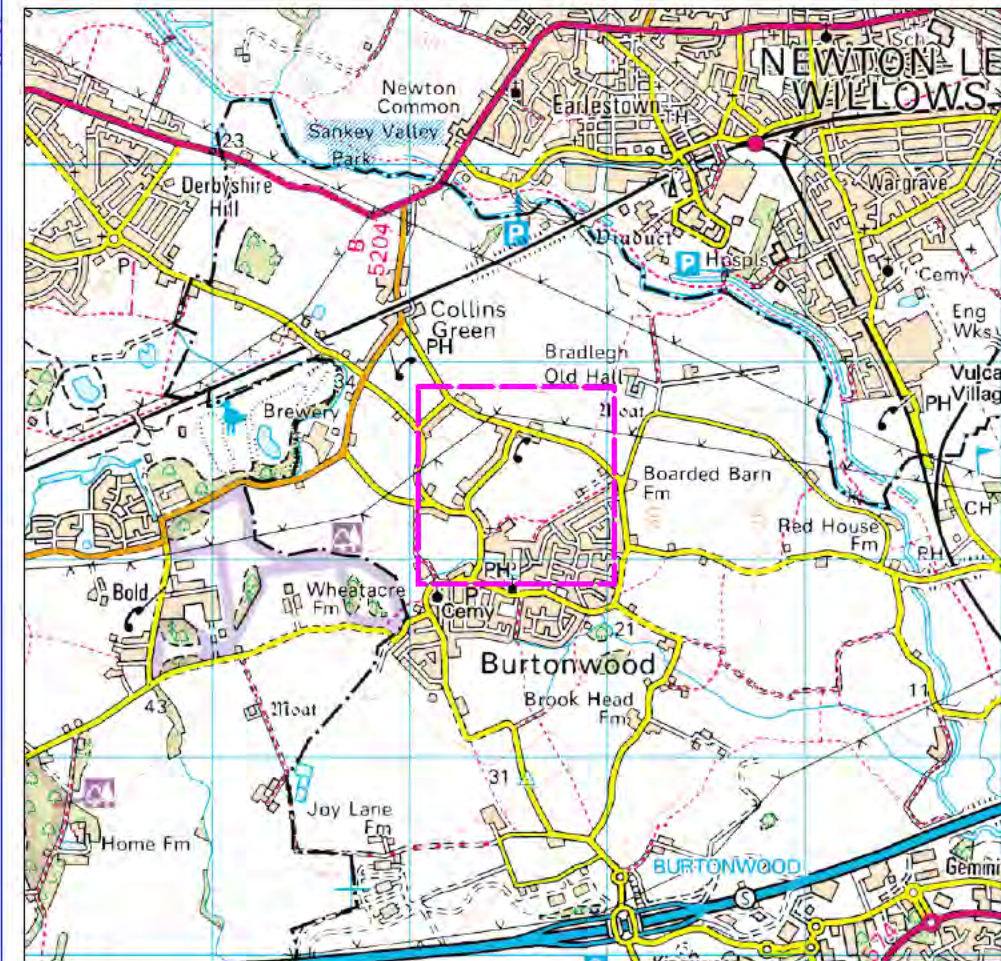
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Appendix 2 – Phase 1 habitat plan

- Target note 1 - The ditch in this area is very narrow and shallow
- Target note 2 - Bracken
- Target note 3 - Rabbit burrow
- Target note 4 - Ephemeral scrapes
- Target note 5 - Mammal path leading into ditch
- Target note 6 - Rabbit burrows and digging
- Target note 7 - Entrance hole, most likely to be rabbit, but no field signs of badger.
- Target note 8 - Log and brash pile

PRELIMINARY ECOLOGICAL APPRAISAL

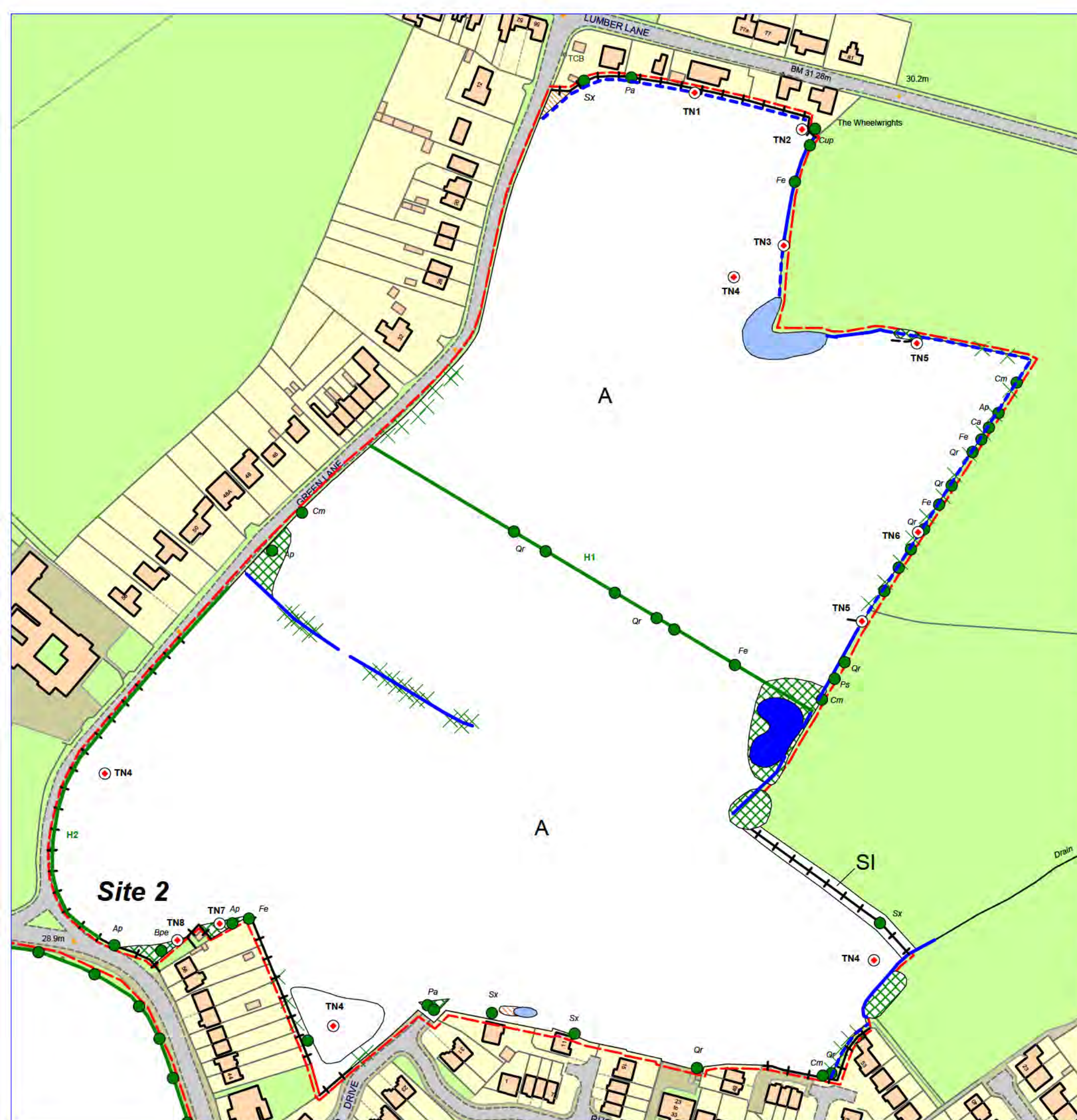
Site: Burtonwood Site 2
 NGR: SJ 56541 93376
 Author: [REDACTED]
 Date: 21/03/2017



KEY:

Code	Habitat classification	Code	Habitat classification
A2.1	Dense scrub	J2.1.2	Intact hedge (species-poor)
A2.2	Scattered scrub	J2.4	Fence
A3.3	Scattered trees (mixed)	J2.5	Wall
SI	Semi-improved grassland (species-poor)	J2.6	Dry ditch
C3.1	Tall ruderal	-	Mammal paths
F1	Swamp	-	Target notes
G1	Standing water	-	Site boundary
A	J1.1 Arable		

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


Appendix 3 – Aerial photographs

**Land off Lumber Lane,
Burtonwood**

Close aerial photograph

KEY

 Site boundary



**Land off Lumber Lane,
Burtonwood**

Wide aerial photograph



Appendix 4 – Photographs



Photo 1 – Tall ruderal vegetation in the north-west corner of site.



Photo 2 – Looking south from the north-west of site, at the margin which is grassing over.



Photo 3 – Narrow dry ditch in the north of site.



Photo 4 – Ditch in the north of site, as it progresses south to the attenuation basin.



Photo 5 – The northern projection of site, showing the succession from arable to grassland.



Photo 6 – Ephemeral scrape in the north of site.



Photo 7 – Rabbit burrow in the north of site (see target note 3 on phase 1 habitat plan).



Photo 8 – Looking south at the attenuation basin, which was dry.



Photo 9 – The ditch to the north of site, east of the attenuation basin.



Photo 10 – Looking north at the eastern site boundary, north of the pond.



Photo 11 – Pond on the eastern site boundary.



Photo 12 – Looking north towards the ditch and pond at the eastern site boundary.



Photo 13 – Thin strip of semi-improved grassland, with a longer sward to the east of site.



Photo 14 – Looking east at the south-eastern corner of site.



Photo 15 – Looking west across the southern half of site.



Photo 16 – Large ephemeral scrape in the south of site.



Photo 17 – Mammal hole within scrub in the south of site, most likely belonging to rabbit.



Photo 18 – Log and brush pile in the south of site (target note 8).



Photo 19 – The south-western corner of site and Hedge 2.



Photo 20 – Hedge 1, as viewed from the south (trees located to the right, out of shot).



Photo 21 – Looking east at the ditch on the western site boundary.



Photo 22 – Looking south-east at Hedge 1.

Appendix 5 – Planning and statutory context

Ecological assessments

Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of legislative protection in relation to the following species and habitats:

Amphibians

- Great crested newts
- Other amphibians

Reptiles

Badgers

Hazel dormouse

Bats

Birds

Trees

Hedgerows

Invasive plant species

Otters

Water voles

White-clawed crayfish

Planning policy

Amphibians

Great crested newts

Great crested newts (GCN) *Triturus cristatus* and their habitat (aquatic and terrestrial) are afforded full protection by the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture GCN
- Deliberately, intentionally or recklessly disturb GCN in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of GCN
- Damage or destroy breeding sites or resting places of GCN
- Intentionally or recklessly disturb sheltering GCN, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead GCN, any part of GCN or anything derived from GCN

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

GCN are also protected by the Protection of Animals Act 1911, which prohibits cruelty and mistreatment. Releasing a GCN in such a way as to cause undue suffering may be an offence under the Abandonment of Animals Act 1960.

In addition to the above, there are various statutory provisions relating to the transport of animals, designed to ensure their welfare. GCN are also listed under Section 41 of the NERC Act (see bats section for further details).

It is important to identify the presence of GCN individuals and also to identify suitable habitat on sites so that legal obligations regarding this species can be observed. If a survey identifies the presence of GCN on the site, an assessment of the population size class is required. This can then inform a mitigation scheme, which would need to be developed in liaison with the local Natural England team, and which minimises direct threats to newts and compensates for any loss of habitat. A licence issued by Natural England is required for the legal implementation of a mitigation scheme.

A Natural England mitigation licence application requires a Mitigation Method Statement and a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the

proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

Other amphibians

More common British amphibians, such as common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *Triturus helveticus* are protected only by Section 9(5) of the Wildlife and Countryside Act 1981 (as amended). This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.

The above named species are also listed as UK Species of Conservation Concern. Due to general declines in most British amphibian species in recent years, many local authorities require amphibian surveys as a planning condition, or as part of environmental information submitted as part of a planning application, even where the presence of GCN is ruled out.

Natterjack toad *Bufo calamita* and pool frog *Pelophylax lessonae* are also offered the same level of protection as GCN, through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010.

Natterjack toad, common toad and pool frog are also listed under Section 41 of the NERC Act (see bats section for further details).

Water bodies that support all five (more common) species of British amphibians in high numbers, may be afforded protection in local plans, as Sites of Importance for Nature Conservation (SINC), or a similar equivalent, for sites of local importance. A site may require statutory protection as a Site of Special Scientific Interest (SSSI).

Reptiles

Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure any of the species listed above
- Sell, offer, advertise or transport for sale a live or dead animal of the species listed above

If a proposed development is likely to have an impact on these reptiles the local statutory nature conservation organisation must be consulted.

Sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* receive full protection under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2010. Read together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture any sand lizards or smooth snakes
- Deliberately, intentionally or recklessly disturb sand lizards or smooth snakes in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of such an animal
- Damage or destroy breeding sites or resting places of such animals
- Intentionally or recklessly disturb sheltering sand lizards or smooth snakes, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead sand lizards or smooth snakes, any part of such an animal or anything derived from such an animal

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

All reptile species are also listed under Section 41 of the NERC Act (see bats section for further details).

Badgers

European badgers *Meles meles* and their habitat are protected under The Protection of Badgers Act 1992 and are also included on Schedule 6 of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention. The legislation affords badgers protection against deliberate harm or injury making it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger (or attempt to do so)
- To interfere with a sett by damaging or destroying it
- To obstruct access to, or entrance of, a badger sett
- To disturb a badger whilst it is occupying a sett

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Works that disturb badgers whilst they are occupying a sett are illegal without a licence. Disturbance can occur even without direct interference or damage to the sett in question. In general, the following activities are likely to require a licence:

- Use of heavy machinery or significant earth moving within 30m of a sett
- Use of lighter machinery (usually any wheeled vehicles) within 20m of a sett
- Any digging, chain saw use or scrub clearance within 10m of a sett

Hazel dormouse

Hazel dormice *Muscardinus avellanarius* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture dormice
- Deliberately, intentionally or recklessly disturb dormice in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to hibernate or migrate
 - their local distribution or abundance
- Damage or destroy breeding sites or resting places of dormice
- Intentionally or recklessly disturb sheltering dormice, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead dormouse, any part of a dormouse or anything derived from a dormouse

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Dormice are also listed under Section 41 of the NERC Act (see bats section for further details).

Bats

In the United Kingdom, all species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (known as the "Habitats Regulations"). The Wildlife and Countryside Act is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000. This makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture a bat

- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time)
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat, any part of a bat or anything derived from a bat

Under UK law, a bat roost is *any structure or place which any wild [bat] ... uses for shelter or protection*. As bats often reuse the same roosts, legal opinion is that a roost is protected whether or not the bats are present at the time of the activity taking place.

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

If an activity is likely to result in any of the above offences, a licence can be applied for to derogate from the protection afforded. These licences must provide appropriate mitigation and are issued by Natural England.

A Natural England mitigation licence application requires a Mitigation Method Statement and, in many cases, a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

The Natural Environment and Rural Communities (NERC) Act 2006 lists the following bat species as species of principle importance under Section 41:

- Barbastelle *Barbastella barbastellus*
- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Soprano Pipistrelle *Pipistrellus pygmaeus*
- Brown Long-eared bat *Plecotus auritus*
- Greater Horseshoe *Rhinolophus ferrumequinum*
- Lesser Horseshoe *Rhinolophus hipposideros*

Section 40 requires every public body in the exercising of its functions 'have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity' (all biodiversity and not just section 41 species and habitats); therefore making these bats a material consideration in the planning process and requiring a detailed ecological bat survey before planning permission can be granted.

Birds

All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare.

In addition to the protection afforded to all wild birds, more vulnerable species listed on Schedule 1 of the Act receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

The NERC Act offers further protection to the nests of some species that regularly re-use their nests, even when the nests are not in use.

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status' of 244 UK bird species. "Birds of Conservation Concern 4: the Red List for Birds" is the most recent publication summarising their findings. Three lists, Red, Amber and Green, have been produced based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity,

localised distribution and international importance. These lists are a valuable resource when considering conservation priorities.

Trees

Trees may be protected on an individual or group level through a Tree Preservation Order (TPO). In order to carry out works to trees with a TPO, prior written consent must be obtained from the Local Planning Authority. Trees may also be protected through a condition of planning consent or designated conservation areas.

Hedgerows

The Hedgerow Regulations are made under Section 97 of the Environment Act 1995 and came into operation on 1st of June 1997. They aim to protect important hedgerows in the countryside by controlling their removal through a system of notification to the Local Planning Authority.

A hedgerow can only be considered for classification as “important” if it, or the hedgerow of which the section belongs to is over 20m in length (or which meets a hedgerow at either end) and has existed for 30 years or more.

Invasive plant species

A number of invasive, non-native plant species are listed under Schedule 9 (Part II) of the Wildlife and Countryside Act 1981 (as amended). The most commonly encountered listed species in ecological surveys are Japanese knotweed *Fallopia japonica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*. Section 14(2) of this Act makes it an offence to *plant or otherwise cause to grow in the wild* any plant listed on Schedule 9 (Part II). These provisions are necessary to prevent the establishment of non-native species which may be detrimental to our native wildlife.

Soil or plant material contaminated with non-native and invasive plants can cause ecological damage and may be classified as controlled waste. It is an offence to keep, treat or dispose of waste that could harm the environment or human health. If there is any doubt, contact the local authority or Environment Agency.

Otters

European otter *Lutra lutra* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture otters
- Deliberately, intentionally or recklessly disturb otters in such a way to be likely to significantly affect:
 - their ability to survive, breed, reproduce, rear or nurture their young
 - their ability to migrate
 - their local distribution or abundance
- Damage or destroy breeding sites or resting places of otters
- Intentionally or recklessly disturb sheltering otters, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead otter, any part of an otter or anything derived from otter

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Otters are also listed under Section 41 of the NERC Act (see bats section for further details).

Water voles

Water voles *Arvicola amphibius* are protected by the provisions of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take water vole
- Possess or control live or dead water vole or any part of a water vole
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place which a water vole uses for shelter or protection, or disturb water vole using such a place
- Sell, offer, advertise or transport live or dead water voles for sale

Licences are available from Natural England to allow activities that would otherwise be an offence, including:

- Scientific or educational purposes
- For the purposes of ringing or marking
- Conserving wild animals or introducing them into particular areas
- Preserving public health or public safety
- Preventing the spread of disease
- Preventing serious damage to any form of property or to fisheries

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Water voles are also listed under Section 41 of the NERC Act (see bats section for further details).

White-clawed crayfish

White-clawed crayfish *Austropotomobius pallipes* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is an offence to:

- Intentionally or recklessly kill or injure white-clawed crayfish
- Sell, offer, advertise or transport for sale a live or dead white-clawed crayfish

If a proposed development is likely to have an impact on white-clawed crayfish then the local statutory nature conservation organisation must be consulted.

Penalties for offences include fines of up to £5000, plus up to six months imprisonment, for each offence committed.

Their inclusion on the EC Habitats Directive allows areas to be designated as Special Areas of Conservation (SAC) for the presence of white-clawed crayfish. Such a designation brings legal protection under the Conservation of Habitats Regulations 2010, this includes how the site is managed and what development can occur on and in proximity to these sites.

White-clawed crayfish are also listed under Section 41 of the NERC Act (see bats section for further details).

Planning policy

National Planning Guidance is issued in the form of the National Planning Policy Framework 2012 (NPPF). The most relevant section is *11. Conserving and enhancing the natural environment*.

Key relevant principles stated in *11. Conserving and enhancing the natural environment* are;

- 109 The planning system should contribute to and enhance the natural and local environment by:
- Protecting and enhancing valued landscapes, geological conservation interests and soils

- Recognising the wider benefits of ecosystem services
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitments to halt the overall decline in biodiversity, including establishing coherent ecological networks that are more resilient to current and future pressures

117 To minimise impacts on biodiversity and geodiversity, planning policies should:

- Plan for biodiversity at a landscape-scale across local authority boundaries
- Identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation
- Promote the preservation, restoration and re-creating of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets

118 When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted
- Opportunities to incorporate biodiversity in and around developments should be encouraged