

**LLOYDS ANIMAL FEEDS,
WREXHAM MILL, BRIDGE ROAD NORTH,
WREXHAM INDUSTRIAL ESTATE**

**EXTENDED PHASE 1 HABITAT SURVEY
(NOVEMBER 2014)**



ces ecology
consultant ecologists

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EXECUTIVE SUMMARY

- In January 2012 JW Ecological Ltd. undertook an ecological assessment of the Lloyds Animal Feeds site on Wrexham Industrial Estate in connection with the proposed installation of a new gasifier unit at the site. The JW Ecological survey was submitted as part of a detailed planning application, in which the recommendations made in respect of protected species were accepted. However, the client now wishes to submit a revised planning application to support similar proposal.
- Cheshire Ecological Services Ltd. (CES), the consultancy arm of Cheshire Wildlife Trust, to which all profits are covenanted, was commissioned to conduct an Extended Phase 1 Habitat Survey of the Lloyds Animal Feeds site on the Wrexham Industrial Estate, where the installation of a biomass boiler and associated infrastructure is proposed.
- The purpose of the survey was to gain baseline ecological information of the site in order to assess its current status, and to identify any ecological constraints to development that may currently be associated with the development area and/or the surrounding land.
- The proposed development site totals approximately 1.8Ha, and is located towards the south of the central area of Wrexham Industrial Estate. At the time of survey the site comprised buildings, extensive areas of hard standing, woodland, amenity grassland, scrub and scattered trees.
- The current proposals will result in the loss and disturbance of woody vegetation which has potential to support nesting birds. It is therefore recommended that all vegetation removal works be conducted between October and February (i.e. outside of the nesting bird season). If this is not possible and works are required to be conducted during the bird nesting season, nesting bird surveys will be required.
- A Great Crested Newt (GCN) meta-population is known to be associated with the Wrexham Industrial Estate. Standard procedure for Wrexham Industrial Estate is that all development works with potential to impact on GCN are conducted under a Natural Resources Wales GCN development licence. It is considered that sufficient GCN survey data already exists to support the application in respect of this development. Given this, a method statement detailing a proposed GCN mitigation strategy will need to be formulated and submitted to NRW before a development licence can be issued.
- It is possible that reptiles are associated with the site, therefore their potential presence will need to be addressed. It is considered that a suitable mitigation strategy for the protection and conservation of GCN would offer sufficient protection for the reptiles, provided that specific provisions are made for their capture and release. These measures should be detailed within the GCN mitigation strategy method statement.
- A number of recommendations were made in relation to the protection and/or conservation of butterflies, badgers and trees.

1.0 INTRODUCTION

- 1.1 In January 2012 JW Ecological Ltd. undertook an ecological assessment of the Lloyds Animal Feeds site on Wrexham Industrial Estate in connection with the proposed installation of a new gasifier unit at the site. The JW Ecological survey was submitted as part of a detailed planning application, in which the recommendations made in respect of protected species were accepted. However, the client now wishes to submit a revised planning application to support similar proposal.
- 1.2 Cheshire Ecological Services Ltd. (CES), the consultancy arm of Cheshire Wildlife Trust, to which all profits are covenanted, was commissioned to conduct an Extended Phase 1 Habitat Survey of the Lloyds Animal Feeds site on the Wrexham Industrial Estate, where the installation of a biomass boiler and associated infrastructure is proposed.
- 1.3 The purpose of the survey was to gain baseline ecological information of the site in order to assess its current status, and to identify any ecological constraints to development that may currently be associated with the development area and/or the surrounding land.
- 1.4 As part of the survey, an assessment was made to establish whether the site's habitat composition, and its potential to support protected species, had changed since the JW Ecological Ltd. ecological assessment undertaken in January 2012.
- 1.5 The survey was conducted by Matthew Lawton BSc (Hons) ACIEEM and Dawn Goodfellow BSc (Hons) MCIEEM on 12th November 2014.
- 1.6 Weather conditions at the time of survey were cold and bright.

2.0 SITE DESCRIPTION

- 2.1 The survey was centred on OS grid reference SJ 38377 49666.
- 2.2 The proposed development site totals approximately 1.8Ha, and is located towards the south of the central area of Wrexham Industrial Estate. For the purpose of this survey the term 'site' refers to all land contained within the red line boundary plan supplied by the client. However, it should be noted that the area of land to be directly impacted by the proposed development works is considerably smaller.
- 2.3 At the time of survey the site comprised buildings, extensive areas of hard standing, woodland, amenity grassland, scrub and scattered trees.
- 2.4 Land use in the wider area comprised industrial premises, roads, extensive areas of hard standing, amenity grassland and ponds (refer to Appendix A: Site Location Map).
- 2.5 The site was bounded by minor roads and industrial/commercial premises.

3.0 SURVEY METHODS

Desk-based study

- 3.1 A desk-based study may be undertaken in relation to a proposed development to gather information relating to the presence of protected/priority species and protected habitats/sites within a given distance from the proposed development site. The results of a desk-based study may be used to assess the potential impacts of a proposed development on such species and habitats.
- 3.2 JW Ecological Ltd. conducted a desk-based study in relation to the former development proposal. As part of this study, NBN Gateway and Cofnod were consulted and information sourced relating to the potential presence of protected species and habitats/sites occurring within 1km from the proposed development site. The findings are presented within the results section of this report.
- 3.3 CES was not commissioned to conduct an additional data-search pertaining to protected species and sites as the data sourced by JW Ecological was considered to be sufficient to support the revised planning application. CES did however consult the Natural Resources Wales' online map to search for statutorily designated nature conservation sites within the local and wider area.

Extended Phase 1 Habitat Survey

- 3.4 This survey involved the mapping of various habitat types on the site in addition to any habitat features and botanical species of conservation importance. A thorough walk-over survey was undertaken of the site. The methodology for this survey followed that described by the Joint Nature Conservation Committee (JNCC, 2010).
- 3.5 Preliminary searches were also carried out for protected/BAP species such as badgers, bats, reptiles and great crested newts (GCN) that may potentially use the site. Scientific names and the national status of vegetative species recorded follow Stace (1997). Scientific and common names stated in the text are also presented in Appendix B: Species Lists.
- 3.6 The observations made during this survey have been used to assess the presence, or potential presence, of protected and/or BAP species within the proposed area of works and to recommend further actions where required. It should however, be noted that this survey serves as a single visit representing a 'snap-shot in time' whereby only the species present at the time of survey were recorded.
- 3.7 Positive evidence of species that use this site periodically or are in growth at different times of the year may not have been recorded. It is important to consider that the absence of a species from a particular survey does not necessarily indicate the absence (or continued absence) of that species from the area.
- 3.8 All trees with features such as holes, cracks and crevices were assessed for their suitability to support roosting bats, and were categorised in accordance with the Bat Conservation Trust's (BCT) Bat Survey: Good Practice Guidelines, (2012).

4.0 RESULTS

Desk-based Study

- 4.1 The closest statutorily designated nature conservation site is River Dee and Bala Lake Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC), which, at its nearest point, is located approximately 2.7km to the southeast of the proposed development site.
- 4.2 The JW Ecological survey report states that Wrexham Industrial Estate Wildlife Site is located approximately 180m south of the survey area (refer to Appendix C: GCN presence within Wrexham Industrial Estate).
- 4.3 Cofnod, the North Wales Environmental Information Service, provided JW Ecological with numerous records of great crested newts occurring within and around the Wrexham Industrial Estate. The closest of these records was for a pond located on the northern side of Bridge Road North, approximately 180m to the west of the site.
- 4.4 The JW Ecological survey report states that Cofnod also provided records of slow worm and adder being associated with the Redwither Brook corridor, approximately 600m south-west of the survey area. Records were also provided for whiskered bat, pipistrelle bats, dinky skipper and grizzled skipper occurring within 1km of the site.

Fieldwork

- 4.5 Features of interest recorded on site during this survey are described in the Target Notes (TN) below. All numbered Target Notes correspond with the Phase 1 Habitat Survey Map (Appendix D). Species lists for each area and photographic plates are presented within Appendices B and E respectively.

Target Notes

- TN1 – Pond (off-site, 180m) with potential to support grass snake and breeding amphibians such as great crested newt/other amphibians
- TN2 – Refugia (broken concrete pad) with potential to support sheltering/hibernating amphibians and reptiles (Plates 1 & 2)
- TN3 – Refugia (rubble, timber & vegetation mounds) with potential to support sheltering/hibernating amphibians and reptiles (Plates 1 & 3)
- TN4 – Mosaic of habitats (scrub, rubble, broken hard-standing & grassland) with potential to support amphibians and common reptile species
- TN5 – Scrub and woody vegetation with potential to support nesting birds (Plates 4, 5 & 6)
- TN6 – Mature oak trees (three) with potential to support roosting bats (Plate 7)

5.0 DISCUSSION

Designated Sites

- 5.1 The closest statutorily designated nature conservation site is River Dee and Bala Lake Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC), which at its nearest point is located approximately 2.7km to the southeast of the proposed development site. It is considered highly unlikely that the proposed development would adversely affect the status of this important site, or any other statutory designated sites, on the grounds of distance and an apparent lack of connectivity.
- 5.2 JW Ecological Ltd. established that the Wrexham Industrial Estate Wildlife Site is located approximately 180m south of the survey area. It is considered highly unlikely that the proposed development would have a direct adverse impact on this important site, however, unmitigated development at the survey site has the potential to impact on mobile species such as amphibians or reptiles, that may be associated with the wildlife site. Further discussion relating the protected species is presented within the species sections of this report.

Habitats

5.3 Hard-standing (Plates 1, 2 & 8)

Extensive areas of hard standing were present on site, which included roadways, pathways and car parking areas. No vegetation communities were recorded in these areas.

An extensive area of broken concrete, presumably the foundations of a former building, was present to the east of the existing premises (TN2). This area was dominated by birch scrub, patches of semi-improved grassland and other ephemeral/pioneer vegetation. At the time of survey the lower lying areas were submerged in water, however this was not considered to be a permanent water-body; rather the site manager informed the surveyors that it was the result of a recent burst water pipe. No aquatic vegetation was recorded here, and at the time of survey water depth was estimated to be less than 5cm.

The proposed development will result in the loss of intact and broken hard standing on site.

5.4 Buildings (Plates 9 & 10)

Several adjoined buildings with associated industrial structures (i.e. hoppers/tanks) were present on site. They were considered to be of minimal ecological value. The current proposals may result in some alterations to the existing building's exterior.

A separate, small detached building was located on the western boundary of the site. The current proposed development layout plan indicates that this building will not be affected by the proposed works.

5.5 Dense/continuous scrub (Plates 10)

Extensive areas of dense bramble scrub with frequent willowherbs and common nettle were present to the east of the site, upon a sloped/raised embankment. The current proposals are likely to result in the loss of some dense/continuous bramble scrub and tall herb habitat.

5.6 Broadleaved plantation woodland (Plate 11)

A narrow band of plantation woodland was present to the south-east of the site. Trees varied in age from mature to immature, with frequent self-seeded saplings throughout. Species include cherry, horse-chestnut, birch and holly. It is not known whether the current proposals will result in the loss or disturbance of any mature/established trees.

5.7 Semi-natural broadleaved woodland (Plate 12)

A small area of semi-natural broadleaved woodland was present on the north-eastern boundary of the site, within a fenced area. It was dominated by tall elms, many of which were dead or dying. The current proposed development layout plan indicates that this area will not be affected.

5.8 Amenity grassland (Plate 13)

The southern and eastern boundaries of the site comprised narrow bands of amenity grassland (i.e. lawned areas). Several scattered shrubs and trees were present in these areas.

5.9 Scattered trees (Plate 14)

Many scattered trees were present throughout the site. They included mature oaks, poplars and horse chestnuts, and numerous self-seeded immature birch trees.

5.10 Semi-improved neutral grassland (Plate 15)

Areas of rough semi-improved neutral grassland were located to the east and south of the site. The grassland was over gravelly soils, compacted hard-standing and broken concrete foundations. Frequent scrub and tall herb vegetation was scattered throughout the grassy areas. The area of grassland to the south of the site was considered to be of moderate/high species diversity. Extensive areas of moss were also present here.

5.11 Bare ground (Plate 16)

A narrow strip of bare ground was present within the area of dense/continuous bramble scrub on the embankment to the east of the site. It appeared to have been recently created, perhaps to allow mechanical access to the far north of the site. However, the Site Manager stated that there had been a burst water pipe on/adjacent the site prior to the survey being conducted.

Features of Ecological Interest

5.12 The following features of 'ecological interest' were identified during the survey:

- Mosaic of habitats, including scrub, rubble piles, broken hard-standing and grassland
- Mature trees within an industrial area

- 5.13 Although not necessarily afforded legal protection, it is recommended that where practicable, the above features of ecological interest should be retained and sufficiently protected during development works.
- 5.14 Exclusion zones should be established around all mature and semi-mature trees (i.e. trees with a stem diameter of 20cm or greater at chest height) to be retained that are located adjacent to the working area/s, in an effort to avoid inadvertent damage to them. The exclusion zones should be equal to or greater in distance to that of branch spread.
- 5.15 The habitat composition of the site has potential to support legally protected/BAP wildlife species. It was not within the scope of this survey to carry out detailed searches for protected species, although the potential for the study site to support the following species is discussed below:
- Bats
 - Badgers
 - Birds (nesting)
 - Great crested newts
 - Reptiles
 - Dingy & Grizzled Skipper butterflies

Legislation relating to each species discussed in this report is presented in Appendix F: Legislation. No other legally protected species are considered likely to be associated with the proposed development site due to a lack of suitable habitat on, and surrounding the site.

5.16 Badgers

Badgers and their setts are protected under British law, therefore surveys are required to check for the presence of badgers or their setts if they are likely to be disturbed for any reason. A development licence may be required if potentially disturbing works are to take place within 30m of a badger sett.

No badger setts or evidence of badgers was recorded during the survey. The site was considered to offer this species with suitable commuting and foraging habitat as badgers tend to favour short vegetation and woodland habitats for foraging for earthworms and other invertebrates. It is therefore reasonable to conclude that badgers could be associated with the site. Given that the proposed construction works will involve earthworks and excavations, it is recommended that any security fencing surrounding the site be suitably low (<10cm) to the ground to deter badgers from entering the site (the existing perimeter chain link fencing could be incorporated into this, if intact). As a precautionary measure, any excavations should be covered over night to prevent badgers and other animals from becoming entrapped. It is considered that these measures would offer sufficient protection for hedgehog (UK BAP Priority species), which may be associated with the site.

No further survey effort in respect of this species is currently considered necessary. In the event that badgers are found to be using the proposed development site, CES should be contacted for advice.

5.17 Bats

All British species of bat are protected under both European and British law. Therefore surveys are required to check for their presence in areas where bats or their roosts are likely to be disturbed for any reason. Cofnod provided JW Ecological with records of whiskered and pipistrelle bats occurring within 1km of the proposed development site.

Bats are known to roost in buildings and mature trees, where they may rest, give birth and raise young. Buildings provide a choice of safe, dry places and can present a whole range of potential roost sites such as within wall cavities, eaves or roofs. Some bat species rely exclusively on trees for roost sites; others use them for only part of the year. Some bat species rely exclusively on trees for roost sites, whilst others use them for only part of the year. The importance of trees to bats depends on species, season and foraging behaviour. Even in winter, deep cavities can provide protection against bad weather and fluctuations in temperature. Furthermore, trees and hedgerows, especially native ones, can host many species of insects, which are food for bats and can also aid bat navigation.

With the exception of the three oak trees identified in TN6, all other on-site trees were considered either too immature or lacking in features such as cracks and crevices to support roosting bats, i.e. Category 3 Trees (BCT, 2012). The current proposals will not affect the trees identified in TN6. Bats are not currently considered to pose a constraint to any works which may affect the remaining trees. If it becomes necessary to fell or de-limb any of the trees identified by TN6, further survey effort in respect of roosting bats will be required.

The building/s and associated structures were considered to be highly unsuitable for bat roosting; they were modern, metal clad industrial buildings which were well lit and had no obvious voids/crevices. Bats are not considered to pose a constraint to any works which may affect the buildings and no further survey effort in respect of bats is considered necessary.

Many nocturnal insects are attracted to artificial light, particularly lamps that emit an ultra-violet element in an otherwise dark area. Noctule, Leisler's, Serotine and Pipistrelle bats will swarm around streetlights, feeding on the insects attracted to the lights. However, slower-flying species and some of Britain's rarest and most vulnerable bats are light avoiding. Lighting is considered to be particularly harmful if used near woodland edges, ponds and along river corridors and hedgerows used by bats. Artificial lighting disrupts the normal light patterns of night and day and may, as a result, affect the natural behaviour of bats. Bats may move away from lit areas and some areas of continuous lighting may create a barrier that some species will not cross. This may affect social interaction. The effect of lighting on bats depends upon the level of light spillage onto roosting, commuting and foraging areas, and the duration of that light pollution.

It is possible that bats use the site for foraging and/or navigation/commuting. It is therefore recommended that any external lighting of the new development be kept to a minimum; duration of such lighting should be downward-facing and minimised wherever possible, and every effort should be made to reduce light spillage onto the adjacent areas.

5.18 Birds

All species of wild bird, their nest and eggs are protected under Section 1 of the *Wildlife and Countryside Act*, 1981 (as amended), therefore surveys are required to check for their presence where they are likely to be disturbed for any reason. In addition to the protection afforded to all wild birds under Section 1 of the Act, species listed on Schedule 1 receive special legal protection when breeding, making it an offence to intentionally or recklessly disturb any wild bird listed on Schedule 1 whilst it is at or near a nest containing eggs or young, or disturb the dependent young of such a bird. JW Ecological were provided with numerous records of BAP Priority species occurring within approximately 1km of the proposed development site.

The site was considered to offer birds with suitable nesting opportunities; namely within the areas of scrub, woodland (plantation and semi-natural) and scattered trees on, and adjacent to, the site. The building/s was considered to offer negligible nesting opportunity to birds, however feral pigeon may utilise the building for nesting and roosting if they can gain access.

The current proposals will result in the loss and disturbance of woody vegetation and may involve disturbance/alteration to the main building's exterior (which has very limited potential to support nesting birds). It is therefore recommended that all vegetation removal works be conducted between October and February (i.e. outside of the nesting bird season, which generally encompasses March to September). If this is not possible and works are required to be conducted during the bird nesting season, CES should be contacted and nesting bird surveys be conducted prior to any potentially disturbing works taking place. In the event that nesting birds are found to be present, an appropriate mitigation strategy should be formulated and implemented.

It is recommended that a number of bird nest boxes, made from FSC timber, be erected within the site to help mitigate the anticipated loss of bird nesting habitat. The nest boxes should be suitable for species such as house sparrow and starling, which are considered likely to be associated with the site.

5.19 Butterflies

Cofnod provided JW Ecological with records of dingy skipper and grizzled skipper occurring within 1km of the proposed development site. Both species are UK BAP Priority Species, and are listed as a Section 42 species of principle importance under the *NERC Act*, Wales 2006.

The caterpillar food plants of these species include common and greater bird's-foot trefoil and other short herbaceous species typically associated with open/ephemeral habitats. The areas of open ground and semi-improved neutral grassland supported such species, and other flowering plants, including bramble and willowherbs, which may offer adult butterflies with a valuable nectar source. It is therefore recommended that where practicable, areas of semi-improved neutral grassland be retained and managed in the long term as rough grassland. This should include the removal of scrub and scattered trees from the central areas of the grassland habitats, to help prevent the grassland from succeeding to scrub and woodland habitat. Mowing should be limited to once annually, ideally in late summer, with the cuttings removed. No further survey effort in respect of butterflies is currently considered necessary.

5.20 Great crested newt

Great crested newts (GCN) are protected under British and European law. It is an offence to, amongst other things, intentionally kill, take or injure a GCN, or damage, destroy or obstruct their breeding sites and places of shelter. Adult GCN predominantly live terrestrially, but utilise ponds for breeding purposes during the spring and summer months. They shelter and hibernate in crevices underground, such as within old mammal burrows, cracks within concrete bases and within spoil/rubble mounds.

A survey may be necessary to check for the presence of GCN if background information on distribution suggests that they may be present. Detailed indicators include:

- Any historical records for GCN on the site, or in the general area
- A pond on or near the site (within around 500m), even if it holds water only seasonally. Note that muddy, cattle-poached, heavily vegetated or shady ponds, ditches and temporary flooded hollows can be used by GCN
- Sites with refuges (such as piles of logs or rubble), grassland, scrub, woodland, or hedgerows within 500m of a pond

Cofnod provided JW Ecological with numerous records of great crested newts occurring within and around the Wrexham Industrial Estate, the closest of which was for a pond located on the northern side of Bridge Road North, approximately 180m to the west of the site (refer to Appendix C: GCN presence in Wrexham Industrial Estate). This pond was found to be extant during the CES Extended Phase 1 Habitat Survey. A review of OS and aerial imaging indicates the potential presence of a further four ponds located within 500m of the proposed development site.

No ponds or other suitable amphibian breeding habitat is located within the proposed development area. The temporarily flooded area (<5cm deep) is believed to be the result of a recent burst water pipe only. This is further supported by the site visit made by JW Ecological in January 2012, during which no ponds or other suitable amphibian breeding habitat were noted/mapped. The site does however offer GCN and other amphibians with suitable terrestrial habitat, including shelter and hibernation opportunities; namely within the broken concrete bases and rubble mounds.

A GCN meta-population is known to be associated with the Wrexham Industrial Estate. Standard procedure for Wrexham Industrial Estate is that all development works with potential to impact on GCN are conducted under a Natural Resources Wales (NRW) GCN development licence. In this instance, it is considered that sufficient survey data already exists to support the application in respect of this development. Given this, a method statement detailing a proposed GCN mitigation strategy will need to be formulated and submitted to NRW before a licence can be issued. The method statement must include a detailed strategy to minimise direct threats to GCN, and specify proposals for habitat compensation and enhancement measures to mitigate any predicted GCN habitat loss.

No potentially disturbing works should take place until an NRW GCN development licence has been obtained and mitigation measures have been fully implemented.

5.21 Reptiles

All six species of British reptile are protected against intentional killing, injury or sale under Schedule 5 of the *Wildlife and Countryside Act*, 1981. The sand lizard and smooth snake are afforded a higher degree of protection under European law, which, amongst other things, makes it an offence to damage, destroy or obstruct their places of shelter or disturb these species in such a place. However, the distribution of these species is limited, and is largely restricted to a few southern counties in England, with the exception of some coastal sites in Merseyside and North Wales which support populations of sand lizard. The distribution of the remaining 'common' species (i.e. adder, grass snake, slow worm and common lizard) is widespread. With some variation between species, reptiles prefer undisturbed habitats with open areas for basking and warmth, and more vegetated areas for shelter and feeding. They shelter and hibernate in crevices underground, such as within old mammal burrows, cracks within concrete bases and within spoil/rubble mounds.

Cofnod provided JW Ecological with records of slow worm and adder being associated with the Redwither Brook corridor, approximately 600m south-west of the survey area. The proposed development site has connectivity with Redwither Brook, albeit via predominantly sub-optimal habitat for reptiles; industrial/commercial premises with extensive areas of open ground/hard-standing separate the brook from the site. The habitat composition of the site was considered to offer some suitable shelter, foraging and hibernation habitat to the 'common' species of reptile. It is therefore reasonable to conclude that reptiles may be associated with the site.

It is considered that the mitigation measures required for the protection of GCN would offer sufficient protection for any reptiles that may be associated with the site, provided that specific provisions are made for their capture and release, which should be detailed within the GCN mitigation strategy method statement (e.g. the provision of reptile artificial cover objects as part of trapping/capture effort). As part of the GCN and reptile mitigation strategy, a 'toolbox talk' should be given to all construction workers prior to the commencement of works, detailing, amongst other things, the recommended procedures should any (potentially venomous) reptiles be discovered on site.

5.22 Other protected species

No other protected species, such as water vole, otter or barn owl, are considered likely to be associated with the proposed development site, and as such, no further survey effort in respect of other protected species is currently considered necessary. In the highly unlikely event that such species are found to be associated with the site, CES should be contacted for advice.

6.0 SUMMARY RECOMMENDATIONS TABLE

	Species potentially associated with the site/s?	Further survey effort required?	Survey timing	Recommendations
Badger	Yes	No	-	Working areas should be enclosed by security fencing, and be sufficiently low as to deter badgers from entering the development area; excavations should also be covered overnight.
Bats	Yes	No: <u>Unless it is proposed to carry out potentially disturbing works to any trees identified in TN6</u>	-	Any new external lighting at the site should be kept to a minimum and downward-facing.
Birds	Yes	Potentially: Nesting bird surveys will be required <u>if</u> vegetation removal works are to take place between March & September	March - September	Vegetation removal works should take place outside of the bird breeding season (i.e. October – February). A survey will not be required if potentially disturbing works are undertaken during this period.
Butterflies	Yes	No	-	The semi-improved neutral grassland on site should be retained and managed as rough grassland with a 'once annually' mowing regime implemented.
Great crested newt	Yes	A GCN mitigation strategy will have to be agreed/formulated and a NRW GCN development licence will have to be obtained	-	No potentially disturbing works should take place until a GCN development licence has been granted and habitat compensation measures implemented.
Reptiles	Yes	The mitigation measures required for GCN would offer sufficient protection for any reptiles that may be associated with the site, provided that specific provisions are made for their capture and release		The GCN mitigation strategy method statement should also detail the measures required for the capture and release of any reptiles discovered during the implementation of the GCN mitigation works, and advice for construction workers should (potentially venomous) reptiles be encountered during construction works.

Mature trees	On site	No: No further ecological surveys are currently required (with the exception of the TN6 trees)	-	Trees to be retained should be adequately protected during the works.
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7.0 REFERENCES

BCT (2012). Hundt L. Bat Surveys: Good Practice Guidelines, Second Edition, Bat Conservation Trust.

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Appendices

Appendix A: Site Location Map



Legend

- Site Boundary
- 250m radius
- 500m radius

Client:	Custom Design Projects	
Project:	Lloyd's Animal Feeds Ltd, Wrexham Industrial Estate	
Map:	Site Location Map	
CES Ref:	CES/1158/11-14/NF	
Scale:	Not to scale	
Date/Rev:	November 2014	0

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Appendix B: Species Lists

Species present in the areas of tall ruderal herbs and rough grassland

Scientific name	Common name
<i>Achillea millefolium</i>	Yarrow
<i>Arrhenathe rumelatus</i>	False oat-grass
<i>Centaurea nigra</i>	Common knapweed
<i>Chamerion angustifolium</i>	Rosebay willowherb
<i>Dactylis glomerata</i>	Cock's-foot
<i>Epilobium hirsutum</i>	Great willowherb
<i>Festuca sp.</i>	Fescue sp.
<i>Heracleum sphondylium</i>	Hogweed
<i>Leucanthemum vulgare</i>	Ox-eye daisy
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Potentilla reptans</i>	Creeping cinquefoil
<i>Rumex obtusifolius</i>	Broad-leaved dock
<i>Senecio jacobaea</i>	Common ragwort
<i>Urtica dioica</i>	Common nettle

Species present in the areas of dense/continuous scrub

Scientific name	Common name
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus</i>	Bramble

Species present in the areas of semi-improved neutral grassland and associated scrub

Scientific name	Common name
<i>Achillea millefolium</i>	Yarrow
<i>Betula sp.</i>	Birch sp.
<i>Bryophyte sp.</i>	Mosses
<i>Carex sp.</i>	Sedge sp.
<i>Centaurea nigra</i>	Common knapweed
<i>Cirsium vulgare</i>	Spear thistle
<i>Cotoneaster sp.</i>	Cotoneaster sp.
<i>Crataegus monogyna</i>	Common hawthorn
<i>Cynosurus cristatus</i>	Crested dog's-tail
<i>Dactylis glomerata</i>	Cock's-foot
<i>Hypochaeris radicata</i>	Cat's-ear
<i>Juncus inflexus</i>	Hard rush
<i>Lotus corniculatus</i>	Common bird's-foot-trefoil
<i>Plantago lanceolata</i>	Ribwort plantain
<i>Prunella vulgaris</i>	Self-heal
<i>Rubus fruticosus</i>	Bramble
<i>Rumex obtusifolius</i>	Broad-leaved dock
<i>Salix sp.</i>	Willow sp.
<i>Tussilago farfara</i>	Colt's-foot

Species present in the areas of scattered trees

Scientific name	Common name
<i>Aesculus hippocastanum</i>	Horse-chestnut
<i>Betula pendula</i>	Silver birch
<i>Malus sp.</i>	Apple sp.
<i>Populus sp.</i>	Poplar sp.
<i>Quercus robur</i>	Pedunculate oak
<i>Ulmus sp.</i>	Elm sp.

Species present in the areas of plantation woodland

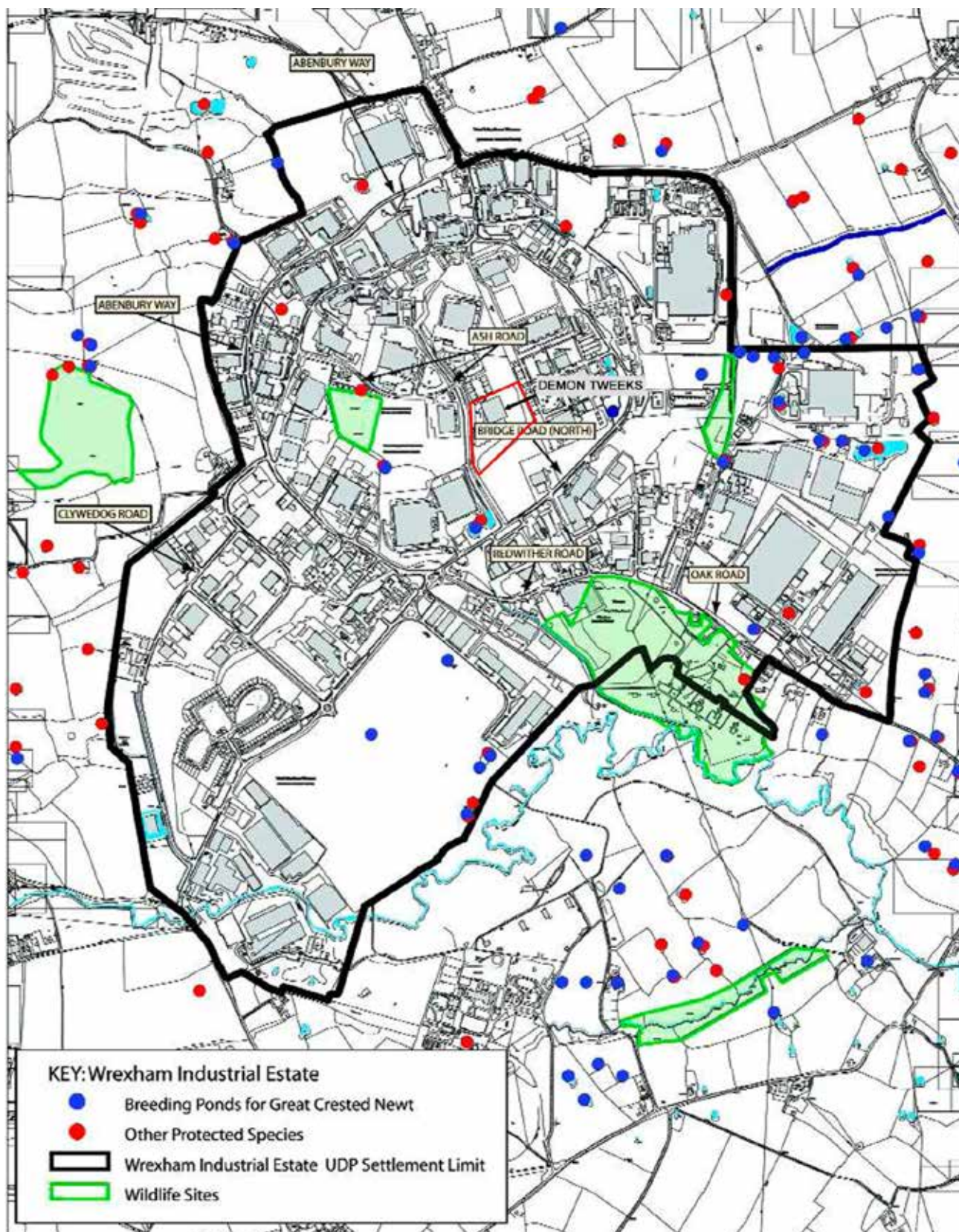
Scientific name	Common name
<i>Betula pendula</i>	Silver birch
<i>Geranium robertianum</i>	Herb-robert
<i>Hedera helix</i>	Ivy
<i>Ilex aquifolium</i>	Holly
<i>Populus sp.</i>	Poplar sp.
<i>Prunus sp.</i>	Cherry sp.
<i>Rosa canina</i>	Dog-rose
<i>Rumex crispus</i>	Curled dock
<i>Urtica dioica</i>	Common nettle

Species present in the areas of amenity grassland

Scientific name	Common name
<i>Bellis perennis</i>	Daisy
<i>Galium aparine</i>	Cleavers
<i>Ranunculus repens</i>	Creeping buttercup
<i>Senecio squalidus</i>	Oxford ragwort
<i>Stellaria media</i>	Common chickweed
<i>Taraxacum agg.</i>	Dandelion

N.B. These species lists represent those species identified during the survey. Those species which were not in growth or could not be identified due to the growth stage are not included. Exotic species (such as garden escapes) may also have been omitted from the above lists. However, it is considered that the information gathered during the survey was sufficient to provide an accurate assessment of the site.

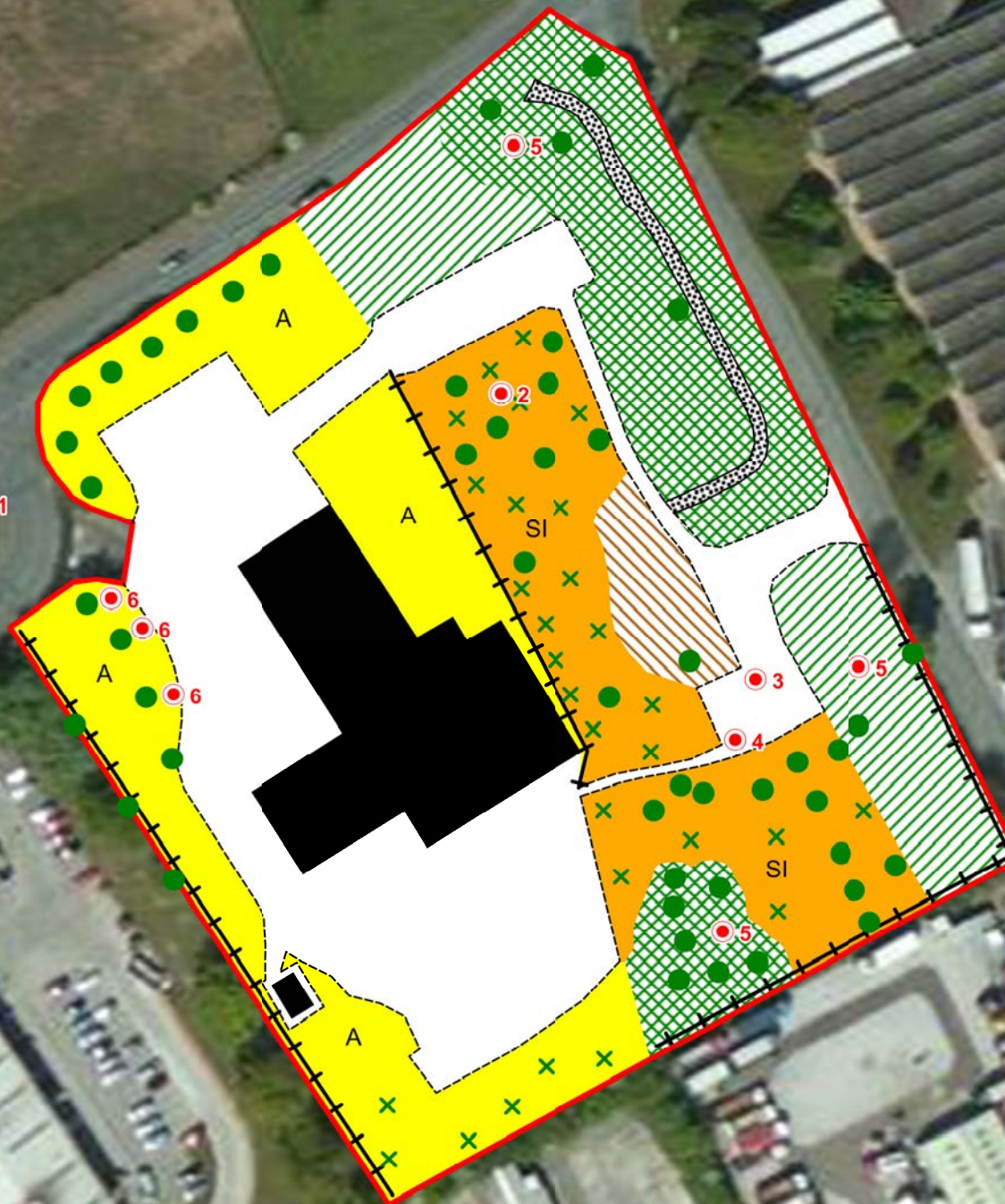
Appendix C: GCN presence within the area of Wrexham Industrial Estate (Base map extracted from Local Planning Guidance Note No 29 - Wrexham Industrial Estate - Appendix 1: Ecological Survey 2008)



Appendix D: Extended Phase 1 Habitat Survey Map & Key



← 1



Legend

Please see overleaf

Client:	Custom Design Projects	
Project:	Lloyd's Animal Feeds Ltd, Wrexham Industrial Estate	
Map:	Extended Phase 1 Habitat Map	
CES Ref:	CES/1158/11-14/NF	
Scale:	Not to scale	
Date/Rev:	November 2014	0

CES Ecology
Bickley Hall Farm
Bickley
Malpas
Cheshire
SY14 8EF



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Extended Phase 1 Habitat Map Key

Habitats



A112 - Plantation woodland



A21 - Dense/continuous scrub



A22 - Scattered scrub



A31 - Scattered broadleaved trees



B22 - Semi-improved neutral grassland



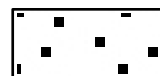
C31 - Tall ruderal



J12 - Amenity grassland

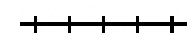


J36 - Building



J4 - Bare ground

Boundaries



J24 - Fence

Others



Site boundary



Target Note



Hard Standing

Appendix E: Photographic Plates



Plate 1: View of the broken concrete pad area dominated by scrub, trees and areas of grassland (looking south)



Plate 2: View of the broken concrete pad with associated vegetation and an area of standing water - believed to be wet as a result of a recent burst water pipe



Plate 3: View of rubble on site; offering amphibians and reptiles with potential basking/shelter habitat



Plate 4: View of scrub and woody vegetation to be lost (looking north)



Plate 5: View of the area of grassland and scattered trees adjacent the existing buildings, which is to be lost to the development (looking west)



Plate 6: The current proposals will involve development of the 'wooded' area to the left of the chain-link fence (looking south)



Plate 7: View of three mature oak trees with potential to support roosting bats – these trees should remain unaffected (looking north)



Plate 8: View of the on-site buildings, extensive areas of hard standing with amenity grassland beyond (looking south-east)



Plate 9: Overview of buildings on the site – with negligible potential to support roosting bats



Plate 10: Internal view of the main building, showing its unsuitability to support roosting bats



Plate 11: View of the bramble scrub-dominated embankment and adjacent access track to the east of the site



Plate 12: View of hard-standing and an area of plantation woodland on the site



Plate 13: View of a stand of elm-dominated semi-natural broadleaved woodland



Plate 14: View of amenity grassland habitat towards the south of the site



Plate 15: View of scattered broadleaved trees at the site



Plate 16: View of rough semi-improved neutral grassland at the site, interspersed with immature trees (mainly birch) and scrub



Plate 17: View of a narrow strip of bare ground within the bramble-dominated embankment to the east of the site

Appendix F: Legislation

Species/Habitat	Protected by:	UK BAP	Local BAP
Adder	Provisions 1 and 5 of Section 9 of the <i>Wildlife and Countryside Act</i> , 1981 (as amended) Section 41 of the <i>Natural Environment and Rural Communities (NERC) Act</i> , 2006	Yes	Yes
Badger	<i>Protection of Badgers Act</i> , 1992	No	No
Bats	Regulation 41 of <i>The Conservation of Habitats and Species Regulations</i> , 2010 Section 9 of the <i>Wildlife and Countryside Act</i> , 1981 (as amended) Section 40 of the <i>Natural Environment and Rural Communities (NERC) Act</i> , 2006	Dependent on species	Dependent on species
Common lizard	Provisions 1 and 5 of Section 9 of the <i>Wildlife and Countryside Act</i> , 1981 (as amended) Section 41 of the <i>Natural Environment and Rural Communities (NERC) Act</i> , 2006	Yes	No
Dingy skipper	Section 42 of the <i>Natural Environment and Rural Communities (NERC) Act</i> , 2006	Yes	Yes
Grass snake	Provisions 1 and 5 of Section 9 of the <i>Wildlife and Countryside Act</i> , 1981 (as amended) Section 41 of the <i>Natural Environment and Rural Communities (NERC) Act</i> , 2006	Yes	No
Great crested newt	Regulation 41 of <i>The Conservation of Habitats and Species (Amendment) Regulations</i> , 2012 Section 9 of the <i>Wildlife and Countryside Act</i> , 1981 (as amended) Section 41 of the <i>Natural Environment and Rural Communities (NERC) Act</i> , 2006	Yes	Yes
Grizzled skipper	Section 42 of the <i>Natural Environment and Rural Communities (NERC) Act</i> , 2006	Yes	Yes
Nesting birds	Section 1 of the <i>Wildlife and Countryside Act</i> , 1981	Dependent on species	Dependent on species
Slow worm	Provisions 1 and 5 of Section 9 of the <i>Wildlife and Countryside Act</i> , 1981 (as amended) Section 41 of the <i>Natural Environment and Rural Communities (NERC) Act</i> , 2006	Yes	Yes

The Conservation of Habitats and Species Regulations, 2010

European protected species are listed on Schedule 2 of the *Conservation of Habitats and Species Regulations* 2010. Those species listed on Schedule 2 are protected under Regulation 41, which refers to the protection of wild animals of a European Protected Species. The following is a summary of the offences listed under Regulation 41, however, the *Conservation Regulations* should always be referred to for the exact and current wording:

Under Regulation 41 of the *Conservation of Habitats and Species Regulations*, 2010 it is an offence to –

- deliberately capture or kill a wild animal of a European protected species;
- deliberately disturb wild animals, in particular any disturbance which is likely:
 - o to impair their ability to survive, to breed or reproduce, or to rear or nurture their young; or
 - o to impair their ability, in the case of animals of a hibernating or migratory species, to hibernate or migrate;
 - o to affect significantly the local distribution or abundance of the species to which they belong
- deliberately take or destroy the eggs of such an animal; or
- damage or destroy a breeding site or resting place of such an animal.
- keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal of a European protected species, or any part of, or anything derived from, such an animal.

Wildlife and Countryside Act, 1981 (as amended)

British protected species of animal are listed on Schedule 5 of the *Wildlife and Countryside Act*, 1981 (as amended). Those species listed on Schedule 5 are protected under Part 1, Section 9, which refers to the protection of certain wild animals. The following is a summary of the offences listed under Section 9; however the Act should always be referred to for the exact and current wording:

Under Section 9 of the *Wildlife and Countryside Act*, 1981 (as amended) if any person –

- intentionally kills, injures or takes any wild animal included in Schedule 5;
- has in his possession or control any live or dead wild animal included in Schedule 5 or any part of, or anything derived from such an animal;
- intentionally or recklessly damages or destroys, or obstructs access to, any structure or place which any wild animal included in Schedule 5 uses for shelter or protection;
- disturbs any such animal included in Schedule 5 while it is occupying a structure or place which it uses for that purpose;
- sells, offers or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead wild animal included in Schedule 5, or any part of, or anything derived from, such an animal; or,
- publishes or causes to be published any advertisement likely to be understood as conveying that he buys or sells, or intends to buy or sell, any of those things, he shall be guilty of an offence.

This legislation applies to all life stages of GCN. Heavy fines (up to £5,000 per incident) can be imposed for **each** offence, and a prison sentence of up to 6 months for each offence can be given to any person found guilty of an offence. In certain circumstances, any machine, tool or implement involved in an illegal act can also be seized.

Natural England (NE) issue licences for the disturbance of European Protected Species including GCN, certain criteria must be met before a licence can be issued to enable otherwise prohibited works to proceed. Such criteria may be subject to change without notice. For further information please visit www.naturalengland.org.uk

Wildlife and Countryside Act, 1981 (as amended) - Birds

All species of wild bird, their nests and eggs are protected under Section 1 of the *Wildlife and Countryside Act, 1981* (as amended); therefore surveys are required to check for their presence where they are likely to be disturbed for any reason.

The following is a summary of the offences listed under Section 1; however the Act should always be referred to for the exact and current wording:

Under Section 1 of the *Wildlife and Countryside Act, 1981* (as amended), if any person:

- Intentionally kills, injures or takes any wild bird;
- Intentionally takes, damages or destroys the nest of any wild bird while that nest is in use or being built;
- Intentionally takes or destroys an egg or any wild bird, he shall be guilty of an offence;
- Has in his possession or control any live or dead wild bird or any part of, or anything derived from, such a bird; or
- Has in his possession or control an egg of any wild bird or any part of such an egg, he shall be guilty of an offence.

Schedule 1 (Part 1 and Part 2) of the *Wildlife and Countryside Act, 1981* (as amended) lists bird species that receive special attention under Section 1. Any person convicted of an offence listed above, in respect of a bird included in Schedule 1 or any part of, or anything derived from, such a bird; the nest of such a bird; or an egg of such a bird or any part of such an egg, shall be liable to a special penalty.

Also, if any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturbs dependent young of such a bird, he shall be guilty of an offence and liable to a special penalty.

Schedules 1, 2, 3 and 4 of the *Wildlife and Countryside Act, 1981* (as amended) list different species of bird and different Parts of Section 1 of the Act refer to different offences which may be committed in relation to the varying Schedules. The following is a summary of the type of protection offered to species of wild bird listed on each of the Schedules, however the Act itself should always be referred to for the exact and current wording and full species lists:

Schedule 1: Birds which are protected by special penalties:

Part 1: At all times.

Part 2: During the close season.

Schedule 2: Birds which may be killed or taken:

Part 1: Outside the close season.

Part 2: By authorised persons at all times.

Schedule 3: Birds which may be sold:

Part 1: Alive at all times if ringed and bred in captivity.

Part 2: Dead at all times.

Part 3: Dead from 1st September to 28th February.

Schedule 4: Birds which must be registered and ringed if kept in captivity.

The Natural Environment and Rural Communities (NERC) Act, 2006 (as amended)

The following is a summary of the *Natural Environment and Rural Communities (NERC)*, Act, 2006 (as amended), the *NERC Act* itself should be referred to for the exact and current wording:

- Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity;
- In complying with the above, a Minister of the Crown, government department or the National Assembly for Wales must in particular have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992;
- Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.

The Protection of Badgers Act, 1992

The following is a summary of the offences contained in the Act; however the *Protection of Badgers Act*, 1992 itself should always be referred to for the exact and current wording.

Under the *Protection of Badgers Act*, 1992 a person is guilty of an offence if, except as permitted by or under this Act he:

- wilfully kills, injures or takes, or attempts to kill, injure or take, a badger;
- has in his possession or under his control any dead badger or any part of, or anything derived from, a dead badger;
- cruelly ill-treats a badger;
- uses badger tongs in the course of killing or taking, or attempting to kill or take, a badger;
- digs for a badger; or,
- sells a live badger or offers one for sale or has a live badger in his possession or control.

A person is also guilty of committing an offence under the *Protection of Badgers Act*, 1992 if he intentionally or recklessly interferes with a badger sett by doing any of the following things:

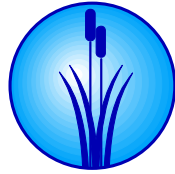
- damaging a badger sett or any part of it;
- destroying a badger sett;
- obstructing access to, or any entrance of, a badger sett;
- causing a dog to enter a badger sett; or,
- disturbing a badger when it is occupying a badger sett,

The definition of a badger sett within the meaning of the 1992 Act is given as “any structure or place, which displays signs indicating current use by a badger”. ‘Current’ is not defined in the

Act, and may be open to interpretation. Natural England indicates that a sett is in 'current' use if it has been occupied at all over the previous 12 months. Whatever the interpretation of 'current use' however, it is important to note that a sett is protected whether or not there is a badger actually in residence at the time of inspection.

Natural England Guidelines state that work that disturbs badgers or their setts is illegal if not carried out under licence. Badgers could be disturbed by work near their sett even if there is no direct interference or damage to the sett itself, for example, using very heavy machinery within 30 metres of an active sett. Lighter machinery (particularly for any digging operation) within 20 metres, or light work such as hand digging or scrub clearance within 10 metres of an active sett, all require a licence. There are some activities which can cause disturbance at a far greater distance (such as using explosives or pile driving) and should therefore be given individual consideration. Certain criteria must be met before a licence can be issued to enable otherwise prohibited works to proceed. Such criteria may be subject to change without notice.

Timing of operations should also be considered. If required, site-specific badger disturbance licences are normally only issued between the months of July and October so as to avoid the badger's breeding season. This aspect should be borne in mind when assessing any possible constraints upon the development timetable.



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