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**Land at Home Farm, Llay
Proposed Aldi Store Development**

**Preliminary Ecological Assessment
21st May 2019**



Report by: Kate Williamson CIEEM & Chris Hall ACIEEM

Client: Aldi Stores Ltd, Chester High Road, Neston, Cheshire, CH64 3TS

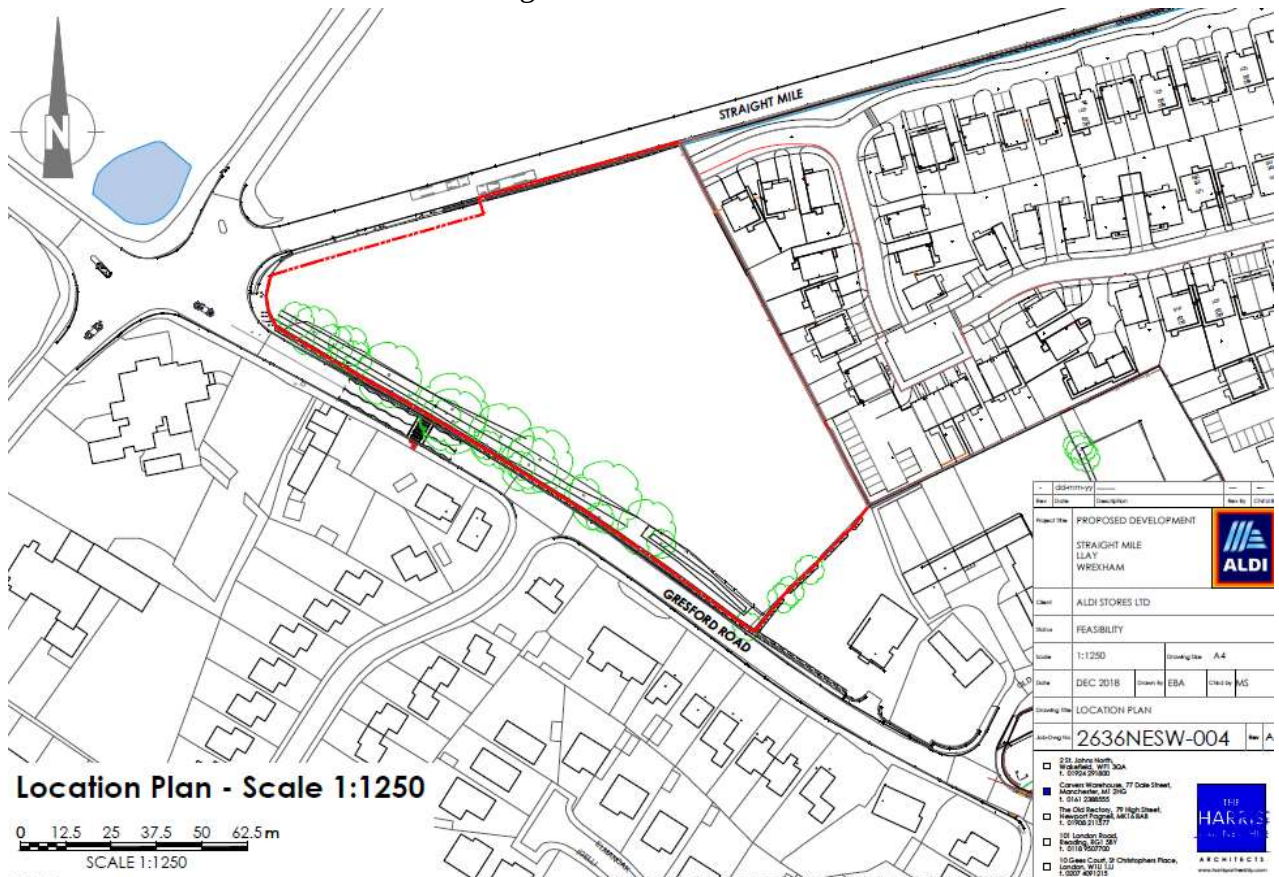
**Planning
Authority:** Wrexham County Borough Council

**Grid
Reference:** SJ 333 562 (Approximate site centre)

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Figure 1: Site Location



Land at Home Farm, Llay

Proposed Aldi Store Development

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1. Summary

Cambrian Ecology Ltd was commissioned by JLL on behalf of the client; Aldi Stores Ltd, to carry out ecological surveys of the location of a proposed new Aldi store at Land at Home Farm, Llay. The site had previously been surveyed as part of a wider housing development project. The previous work included an ecological management plan and ecological method statement in 2017. The housing development has since been granted planning consent on the majority of the site surrounding the current survey area. This development is currently in the construction phase.

An additional ecological survey report is now required to accompany the necessary planning application to be submitted to Wrexham County Council (WCBC) for the proposed new Aldi store. A pre-application submission was made to WCBC and comments received from the Ecologist, Emma Broad, influenced the extent of survey work conducted in 2018/19.

A Phase 1 Habitat Survey was carried out in addition to Habitat Suitability Index (HSI) assessments of an ephemeral ditch/pond in the South-east corner of the site and a larger pond outside the site boundary on the opposite side of Straight Mile Road. To address protected species issues, an inspection of mature trees for bat roosting potential and a series of remote monitoring surveys of the boundaries were undertaken.

The site comprises a very limited range of habitats, dominated by heavily improved grassland. Also present is a mature tree line, an ephemeral ditch surrounded by scrub, and species poor hedges. No 'Invasive Non-Native Species' (INNS) were recorded.

The HSI assessments scored the ephemeral pond/ditch 0.28 which is 'poor' potential to support great crested newts (GCN). The larger pond outside the site boundary scored 0.51, which is classed as 'below average'.

A biological records search was carried out with the Local Records Centre, (LRC) Cofnod as recommended in the guidance from the Chartered Institute of Ecology & Environmental Management, (CIEEM). This enables the proposed development site to be assessed in a wider context and a potential wider 'zone of influence' of the development to be taken into account.

The data search revealed no records of protected species or designated sites for the site itself. A small number of GCN and bat records were present within a 1km search area, but none of these were within 0.5km of the site.

A small number of the mature trees on the have some potential for roosting bats, although this is reduced by the presence of street lighting along the road. Bats could be using both the treeline and hedgerows around the site for foraging and commuting (results of monitoring to in here). There is also the potential for nesting birds to be present within these features. Precautionary measures have therefore been recommended to minimise any potential impacts.

Mitigation for disturbance to bats and birds involve the timing of works, with supervised felling of any trees with roosting potential. These works will be required to be carried out in accordance with a detailed method statement which must also include 'Reasonable Avoidance Measures' (RAMS) to minimise the risk of disturbing/harming any animals that may be present. Mitigation to replace the commuting features and roosting opportunities is more difficult. It is proposed to erect solid fence lines, retain hedgerows/treeline where possible and carry out replanting. Lighting will also be an issue and a lighting plan needs to be formulated and agreed with NRW/WCBC to prevent the inhibition of bat movements. Roosting opportunities are recommended to be built into the plans for the new building and on either poles or retained trees along the site boundary.

With regard to GCN, it is recommended that ecological permeability is maintained post-construction by utilising 'amphibian friendly' drainage and dropped kerbs. The retention of vegetation strips around the boundaries of the site for bats and birds, will also allow amphibians to continue to move through the landscape.

In order to address the requirements for planning authorities to seek Biodiversity gain as a routine part of the planning process, under Section 6 of the Environment Wales Act (2016), some recommendations are made for enhancements. These include recommendations for the composition of any new planting, the management of the site to increase food resources and floral diversity, and the management of the pond to increase its value to Biodiversity.

2. Introduction

Cambrian Ecology Ltd was commissioned by JLL on behalf of the client; Aldi Stores Ltd, to carry out ecological surveys of the location of a proposed new Aldi store at Land at Home Farm, Llay. The site had previously been surveyed as part of a wider housing development project. The previous work included an initial ecological assessment in 2014, a great crested newt assessment and mitigation by Penny Anderson Associates in 2016 and an ecological management plan and ecological method statement by EDC in 2017. The housing development has since been granted planning consent on the majority of the site surrounding the current survey area. This development is currently in the construction phase.

An additional ecological survey report is now required to accompany the necessary planning application to be submitted to Wrexham County Council (WCBC) for the proposed new Aldi store. A pre-application submission was made to WCBC and comments received from the Ecologist, Emma Broad, influenced the extent of survey work conducted in 2018/19.

The site is located at Grid Reference SJ 333 562.

3. Methodologies

3.1 Habitats

The Habitat survey was carried out on 15th March 2019 by ecologist Chris Hall. The survey took the form of an extended Phase I survey and identified baseline ecological conditions, as well as any important or notable habitats. All habitats within the proposed development site were classified and species lists were drawn up for each habitat type identified and the habitat condition was assessed. In the context of this report, *important or notable habitats* are considered to be those which are of a sustainable size and which meet any of the following criteria:

- Habitats which have a high intrinsic ecological value, i.e. they support a diverse range of vascular plant and/or faunal species
- Mature or semi-natural habitats in built-up areas
- Any Section 7 Wales priority habitats
- Local BAP habitats considered having a significant extent and/or ecological interest
- Invasive Non-Native Species, (INNS)

All habitats considered to have the potential to support rare, protected or otherwise notable species of flora and fauna were noted, as were any direct signs of these species. Where possible, habitats were cross-referenced to any relevant Section 7 Wales priority habitats or WCBC's Biodiversity Action Plan.

3.2 Protected Species

A protected species survey of the site was also carried out by Kate Williamson on 15th March 2019. The site was assessed on its potential to support any protected or important species. During this survey, a search was made for field signs of protected or notable species and assessments made of the potential of habitats to support these species. In the context of this report important or notable species are considered to be those that meet any of the following criteria:

- Species protected by British or international law
- Section 7 Wales priority species or local BAP species
- Nationally rare or scarce species
- Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber lists)

3.3 Great Crested Newts

A HSI assessment was also made on both the ephemeral pond/ditch on the site and a nearby pond outside the site boundary by GCN Licence holder Kate Williamson (76538:OTH:SA:2017) assisted by Chris Hall. Due to the fact that the ponds have been previously surveyed and continue to only score 'poor' and 'below average' respectively in the HSI assessment, combined with the assessment of the terrestrial habitat, this is considered to be a proportionate level of survey work.

3.4 Bats

The mature trees on the site were inspected from the ground using binoculars, to assess whether they contained any potential crevices that could be utilised by roosting bats.

Remote recording along the boundaries of the site was also conducted throughout the 2019 survey season; June, July and October.

3.5 Desk Study

The desktop study aims to collate existing information about relevant priority species within 1km of the survey area. This information has relevance to the likelihood of these priority species being present within the survey area, as well as giving context to any species records from the actual site.

A data search for protected species and designated was conducted with the Local Environmental Records Centre; Cofnod. The search parameters were 1km from the survey site area.

4 **Survey Limitations**

Field signs for protected and important species are often difficult to find or absent from a site. For this reason, the site and its habitats are assessed on their potential to support these species.

Considering the level of survey information that has already been gathered for the site in 2014, 2016 and 2017, it is reasonable to assume that negative survey results in 2019 concurring with previous results are likely to be robust. For example, the ephemeral pond/ditch on the site and nearby pond have both been surveyed and assessed for the presence of GCN and found to be negative. Conducting a further HSI assessment and inspection of the waterbodies to ensure that there have been no significant changes in the intervening period is considered proportionate to any risks involved. The formulation of RAMs within the working method statement will further ensure that there is no disturbance to this species or breach of legislation.

The level of potential roosting opportunities within the mature trees is considered to be low and further reduced by the presence of high levels of illumination from street lighting. Individual crevice-dwelling bats are known to regularly move roosts and even a whole suite of expensive emergence/dawn surveys on the individual trees are potentially unlikely to record them. By conducting any felling under the direct supervision of a licensed bat ecologist, who will produce RAMs and guide the working methods, it is considered that the chances of impacting on any bats is extremely low. Again, this is considered a 'reasonable' and proportionate approach.

Although the Phase I survey was undertaken in March, given the nature of the habitats and the previous survey information, it is not considered that this has had any impact on the results and conclusions. Indeed, it has proved very useful in the assessment of the trees as they were not yet in leaf.

5 **Results**

5.1 Habitat

The habitat on the proposed new Aldi site on land at Land at Home Farm, Llay comprises a very limited range of habitats with the site dominated by heavily improved grassland. Also present is a mature tree line, an ephemeral ditch surrounded by scrub, and species poor hedges.

No INNS were recorded on the site.

Ephemeral Pond/Ditch

There is a short length of pond/ditch in the south-east corner of the site which appears to be ephemeral. This wet ditch is the result of the effluent (grey water) outfall from the adjacent dwellings septic tanks. There was no specific aquatic vegetation associated with this water body which is being invaded by species from the immediately surrounding habitat including nettle; (*Urtica dioica*), broadleaved dock; (*Rumex obtusifolius*) and soft rush; (*Juncus effusus*). Despite a prolonged period of heavy rain for the few days prior to the survey, only approximately 10cm of water was present.

Improved Grassland

This is the dominant habitat on the site and perennial rye grass; (*Lolium perenne*) is by far the most dominant species. Also present as minor components are dandelion; (*Taraxacum officinale*), creeping buttercup; (*Ranunculus repens*), bugle; (*Ajuga reptans*), and common chickweed; (*Stellaria media*). In less heavily managed areas around the field margins, nettle, broadleaved dock and cock's foot; (*Dactylis glomerata*) are also present.

Scrub

There is a small area of scrub surrounding the ephemeral ditch in the south east corner of the site. Bramble; (*Rubus fruticosus*) with broadleaved dock, nettle and cock's foot also present.

Species Poor Hedges

The site is bounded on all four sides with hedges, with a large gap in the western corner by the road junction.

The hedge on the southern boundary under the tree line is slightly more diverse with hawthorn; (*Crataegus monogyna*), holly; (*Ilex aquifolium*) ash; (*Fraxinus excelsior*), dog rose; (*Rosa canina*) and ivy; (*Hedera helix*) present.

The remainder of the hedges are virtual monocultures of hawthorn, but are all intact and well maintained.

Tree Line

There is a line of mature trees along the southern site boundary which are subject to a 'Tree Preservation Order' (TPO) and as such are to be retained. The development will result in the loss of three trees in order to provide site access. According to the arboricultural report, these are 'unremarkable specimens of very limited merit'.

The two dominant species are oak; (*Quercus robur*) and Scot's pine; (*Pinus sylvestris*) with an individual immature willow; (*Salix spp*) at the western end of the tree line.

Ground-flora species associated with the tree line include nettle, broadleaved dock, cleavers; (*Gallium aparine*), and cow parsley; (*Anthriscus sylvestris*).



Fig.2: Aerial photograph of the proposed development site and surrounding habitat

5.2 Protected Species

No signs of the presence or past presence of protected species were recorded during the site visit on 15th March 2019.

However, the potential for nesting birds to be present within the mature trees and hedgerows was noted. There is also the potential for bats to use these linear features for commuting through the landscape and foraging. There was some limited potential for individual crevice-dwelling bats to be present in some crevices within mature trees. This potential was further limited by the high levels of illumination due to street lighting.

5.3 Great Crested Newts

The HSI assessments of the two ponds were both sub-optimal for the presence of GCN.

The pond/ditch on the site – HSI score 0.28 = poor

The pond adjacent to the site – HSI score 0.51 = below average

5.4 Bats

Surveys are ongoing in the form of remote monitoring using Anabat along the site boundaries.

5.4 Desk Study

This data search revealed that there are no designated or protected sites covering the proposed development area, or that will potentially be affected by the proposals.

There are 3 records of GCNs within the 1km search parameter, the nearest of which is over 600m away. There are 7 records of bat species within the 1km search area, but most of these are associated with the houses of Llay and none are for the development area.

The only other records that may be relevant to this development are the presence of badger and hedgehog, both of which are over 700m from the site.

There are no records of any other species that could potentially be affected by the proposals.

6 **Habitat Evaluation and Impact Assessment**

6.1 Habitat

Ephemeral Pond/Ditch

From a botanical point of view the ephemeral pond/ditch has minimal value as a habitat. There is no specific aquatic vegetation associated with this habitat which is being colonised by the more robust species from the surrounding habitat. Any botanical impact on this habitat as a result of the proposals is therefore considered to be minimal.

Improved Grassland

From a botanical point of view, the improved grassland is an impoverished habitat that is common and widespread in this locality. It is not considered that the loss of this habitat as a result of the proposals will have any negative impact on Biodiversity.

Scrub

The area of scrub in the south-east corner of the site comprises common and widespread species of no current conservation concern. The small size of this habitat combined with its sparse nature, not dense enough to provide nesting cover, contributes to the minimal impact that will occur as a result of its loss.

Species Poor Hedges

While the hedges on the site are of limited value from a botanical point of view, linear landscape features such as these can provide invaluable habitat links with the wider landscape for a range of taxa including bats, small birds and mammals. This potentially important factor should be taken into account in the mitigation strategy.

The relatively heavily managed nature of the hedges will result in them producing very little in the way of fruit for birds and small mammals which will reduce their potential importance. This does however provide scope for 'Biodiversity Gain' by introducing more favourable management regimes.

Tree Line

Mature trees are of significant benefit in their own right, in particular the mature oaks which take a very long time to replace. Trees such as these, and the mature Scot's pines, produce large quantities of fruit in the autumn to the benefit of a wide range of bird and mammal species. Oak trees in particular are of enormous value with regards to the number and biomass of invertebrates that they support which in many cases are the base of the food chain.

This Biodiversity value increases as the trees age and start producing dead wood with the consequent increase in dead-wood invertebrates and fungi, eventually leading to rot holes which provide roosting opportunities for bats and nest sites for a number of small birds.

The loss of the mature tree line could therefore result in a negative impact on Biodiversity on a local level. However, as the tree line is the subject of a TPO, it will be retained, except for three individual trees which are outside of the TPO designation. It is not considered that the loss of these three individuals (two pines and a relatively small, damaged oak) will have any significant impact.

7 Species Evaluation and Impact Assessment

7.1 Bats

There is some minimal potential for individual crevice-dwelling bats to be present within crevices in mature trees, although this is further reduced by the presence of street lighting. As the trees are the subject of a TPO they will be retained, so there should be no impact on potential roosting areas.

There is the potential for the movements of bats to be inhibited by the presence of inappropriate lighting if this lighting causes the illumination of linear landscape features such as the hedgerows or the mature tree line. The mature treeline is already illuminated by street lighting, but there is a darker potential commuting corridor on the inside (field side) of this treeline. The northern boundary is already highly lit by Straight Mile road, but the eastern and southern boundaries are currently darker. However, it is not known what the lighting impact of the current housing development on the adjacent field will be on the eastern boundary.

7.2 Great Crested Newts

There are no waterbodies on the site that have any significant potential to support GCN. Even if GCNs were present on this site, the majority of habitat loss is restricted to heavily grazed, improved grassland that is not considered to be suitable GCN terrestrial habitat. This factor, combined with the negative results of the previous surveys, the lack of GCN records within 500m of the site, and the 'poor' score of the ephemeral pond/ditch in the HSI index, indicate that any negative impact on this species is unlikely. However, there are records of the species around the site and they are known to

be found commuting through unsuitable areas, so some RAMs are recommended to ensure the continued permeability of the landscape for GCN within the wider area.

7.3 Nesting Birds

There is the potential for nesting birds to be present within hedgerows and mature trees, which could be disturbed by the construction works or killed/injured/disturbed by the removal of the hedgerows. If this disturbance occurred during the nesting season resulting in the failure of the brood, this could have a negative impact on birds at a local level.

All birds, with the exception of some 'pest species' which can be controlled under licence are protected while nesting.

There is however also the potential for a positive impact on birds by introducing a more favourable management regime for any remaining hedgerows to improve productivity in relation to flower and fruit production and by the planting of wildlife-friendly species on the completed site.

8 **Mitigation Measures**

8.1 Habitats

Ephemeral Pond/Ditch, Improved Grassland and Scrub

No mitigation measures are required for the potential loss of these habitats from a botanical point of view.

Hedges

It is recommended that the hedges and trees on the site are retained to continue to provide habitat connectivity with the wider landscape. Where this is not possible, any works to remove the hedgerows should be conducted outside of the recognised bird breeding season (see section 8.2).

Tree Line

The following mitigation measures are recommended to ensure the long term future of the mature trees on the site which are to be retained under a TPO.

- The enforcement of root protection zones during the enabling works and construction phases. Professional advice must be sought regarding the extent of the root protection zones required.
- The retention of dead wood on the trees, where possible, to preserve their value to biodiversity
- Any management of the trees must take the potential presence of protected species such as nesting birds and roosting bats into account.

8.2 Protected Species

Bats

To prevent the inhibition of bat movements, the installation of any exterior lighting must take the following into account:

- Exterior lighting on the site must be kept to a minimum and must be directional.
- Lighting around the edges of the site must be capped and downward facing.
- There must be no illumination of the boundary features.

In the unlikely event of any of the mature trees needing to be felled, these should be done under the direct supervision of a licensed bat worker who will produce a detailed RAMS and guide the working practices. If any bats are found during the course of any tree felling, work must stop and NRW must be consulted as there may then be a requirement for a licence to complete the works.

Nesting Birds

The removal of any hedgerows must take place outside of the nesting bird season (1st March to 31st August). If this is not possible within work schedules, then the vegetation must be checked for any active bird nests by an experienced ecologist prior to clearance commencing. In the event of any nesting being recorded, the clearance works must be delayed until such time as any chicks have fledged.

GCN

Due to the fact that GCN are found in the wider area around the proposed development site, it is important to maintain ecological permeability through the site to prevent a potential barrier to dispersal. The following measures will be adopted within the site plan:

- An 'amphibian-friendly' drainage system will be installed
- There will be a reduced use of kerbs and/or strategically placed dropped kerbs to allow GCN to prevent GCN getting stuck on roadways
- Strips of vegetation will be retained around the site boundaries, see landscape plan

8.3 Biodiversity Gain

Under Section 6 of the Environment Wales Act (2016), Planning Authorities are required to seek Biodiversity gain as a routine part of planning consents being issued. The following recommendations are made to enhance the Biodiversity value of the site post-development.

It is recommended that the planting of species of value to wildlife is included in the landscaping scheme.

Native plants suitable for inclusion in the new planting scheme include:

Hawthorn; (*Crataegus monogyna*)

Holly; (*Ilex aquifolium*)

Elder; (*Sambucus nigra*)

Dog rose; (*Rosa canina*)

Guelder rose; (*Viburnum opulus*)

Rowan; (*Sorbus aucuparia*)

Whitebeam; (*Sorbus aria*)
Cherry; (*Prunus avium*)
Bird cherry; (*Prunus padus*)
Cherry plum; (*Prunus cerasifera*)
Crab apple; (*Malus sylvestris*)

Hedge Management

It is recommended that beneficial hedge management practices are introduced such as the rotational management of hedges to maximise fruit production to the benefit of wildlife for any remaining hedgerows. Advice regarding this management can be found on the RSPB website at:

ww2.rspb.org.uk/Images/Englishhedgerows1_tcm9-133255.pdf

This practice will carry long term benefits for birds that feed on berries and bats which may use the hedges as flight paths and feeding corridors.

Nesting birds

A total of two communal nest boxes suitable for house sparrows will be mounted on the new building in a location agreed with the site ecologist. This species appears on the RSPB red list.

A total of 5 'tit' boxes should be mounted on suitable mature trees on the site to provide additional nesting opportunities.

Bats

A total of 5 bat boxes suitable for tree-roosting and crevice-dwelling species will be erected on mature trees on the site. This will provide additional roosting opportunities for these species and represents a potential Biodiversity gain for the site.

9 Legal Implications

9.1 Bats

Bats are protected under UK law by the Wildlife and Countryside Act 1981 (as amended) and also under European law by the Habitat and Species Regulations 2010. Under these laws it is an offence to deliberately kill or injure a bat, to disturb a bat or to damage, destroy or block access to a roost. Bat roosts are protected under these laws whether the animals are present at the time of survey or not. Natural Resources Wales are empowered to issue licences to carry out work to bat roosts for reasons of overriding public interest.

9.2 Great Crested Newts

The great crested newt, along with the common toad, is included in Section 42 of the NERC Act in Wales. The legislation makes it an offence to deliberately capture, injure or kill these species or to

deliberately take or destroy their eggs. It is also an offence to damage or destroy a breeding or resting place or to possess a live or dead specimen.

GCN are also given full protection under the 'Conservation (Natural Habitats, &C) Regulations 1994 (the Habitats Regulations) as amended in 2007 & 2009.

The 2007 amendment to the Habitats Regulations raised the threshold above which a person will commit the offence of deliberately disturbing a GCN. Now a person will commit an offence only if he deliberately disturbs the animals in a way likely to significantly affect (a) the ability of any significant group to survive, breed, rear or nurture their young, or (b) the local distribution or abundance of the species. The amendments have also removed many of the defences including the 'incidental result defence' which was previously an defence in acts where the offence was incidental as a result of a lawful activity which could not reasonably be avoided.

The existing offences under the Wildlife & Countryside Act which cover the obstruction of places used for shelter or protection along with issues of disturbance and sale still apply.

9.3 Nesting Birds

Under the Wildlife and Countryside Act 1981, all nesting birds and their nests are protected. Once a bird places a single piece of material then it constitutes a nest. It is then an offence to cause damage to the bird, nest, eggs or chicks and immediate habitat which is likely to result in damage by causing the bird to desert its nest. This covers all bird species, with a small number of exceptions (pest species which can be controlled by special license.

In 2000, the Countryside and Rights of Way Act (CROW Act) was made law, strengthening the legal protection for many species and introducing a 'reckless disturbance' offence.

Planning Authorities are also obliged to take nesting birds into account in relation to planning decisions following guidance from the Welsh Government detailed in Technical Advice Note (TAN) 5.

10 Appendices

10.1 Site photographic record



The northern boundary of the site along Straight Mile road



Pond located just outside the site boundary



Small area of scrub around ephemeral ditch/pond



Potential roosting crevice within mature tree



Mature tree along B5373

10.2 Phase 1 Habitat Map



10.3 Review Table

Name	Task	Date
Kate Williamson	Author	21.05.2019
Chris Hall	Review	22.05.2019