

Greenscape Environmental Ltd

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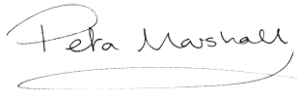
**ENVIRONMENTAL APPRAISAL
AND
PHASE 2 SURVEYS FOR BATS**

**LAND ADJACENT TO ASHLEIGH COURT NURSING HOME
CHESTER ROAD
GRESFORD
WREXHAM
LL12 8PP**

OCTOBER 2017

855 003R

Report by Peta Marshall BSc (hons)

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	Name	Signature	Date
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The report should be read in its entirety.

Questions arising from the survey report should be directed to the author of this report who will be pleased to clarify any technical issues raised.

Whilst the surveyors make every reasonable effort, Greenscape Environmental Ltd cannot guarantee that all protected species have been identified and survey results are definitive. Many species are cryptic and transitional in habit.

Reports are considered valid for 2 years for planning purposes after which time further survey information may be required.

Greenscape Environmental Ltd can provide advice and support for recommendations and planning conditions.

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1 Summary

1.1 Purpose of the Report

Greenscape Environmental Ltd was commissioned by David Owen on behalf of Mr Simmons to update the survey information about an unused building at Chester Road. The project involves the creation of a car park and extension of the existing building. Significant internal alterations will be conducted to create offices.

This document outlines the potential impacts as ascertained from the ecological assessment, and recommends measures to avoid, reduce or manage negative impacts.

1.2 Methodology

The appraisal of the site included a desk study of the area, reviews of other surveys conducted by Greenscape Environmental and a phase 1 environmental appraisal and phase 2 surveys for bats. Ponds within 250m were taken into consideration.

The phase 1 ecological appraisal was undertaken at the site, OS grid reference SJ34365404 on 14th June 2017 by Peta Marshall with the assistance of Ben Jones. Phase 2 bat activity surveys were conducted on the 14th June, 1st and 23rd August 2017 with the assistance of R Wilson.

1.3 Key Issues

No designated sites were found within the vicinity of the site and therefore no negative impact is expected from the development. Records of protected species within 2km include typical bat species, water vole, otter and great crested newt (GCN).

Since the site was initially surveyed by Greenscape in 2011, it has become overgrown, trees have fallen and been removed and some leylandii hedge grown. It is considered of low ecological value. No bats were recorded emerging from the building in 2017. 2 soprano pipistrelles were recorded in 2013. It is considered that the site can be enhanced for bats, and work can be conducted following reasonable avoidance measures as an offence is unlikely.

The pond within 250m, Pikeys pond was re-assessed for newts. Previous surveys identified a small and reducing population of newts. Water quality has not improved since 2013, and the conclusion that the work can be conducted under a strict method statement is considered adequate to ensure the risk to individual newts is negated.

1.4 Impacts and Mitigation Measures

It is recommended that the biodiversity is enhanced post construction with the inclusion of bat and bird boxes. It is also recommended that the landscaping be improved with the inclusion of fruit trees. Work will be done under strict method statements to minimise the risk to protected species.

1.5 Conclusions

It is considered the development can proceed without the loss of habitat of significant value and without the loss of favourable conservation status of any protected species. As there is no evidence of protected species within and around the development site, there is no requirement to address the three tests under Regulation 53 of the Conservation of Habitats and Species Regulations 2010). There are no further ecological constraints to the development as proposed.

2 Introduction

This report has been compiled by Peta Marshall who has over 10 years' experience conducting ecological appraisals. It has been reviewed in line with Greenscape's Quality Management System. Peta is a member of Chartered Institute of Ecology and Environmental Management (CIEEM) and as such is bound by the code of professional conduct.

Greenscape Environmental Ltd was commissioned by Mr D Owen on behalf of Mr Simmons to conduct a survey to determine the presence of protected species and potential for the damage or destruction of habitats of ecological value, as part of the planning application for the development of land and a building adjacent to the Ashgrove Nursing Home at Chester Road, Gresford.

2.1 Project Background

The project involves the clearance of ruderal to provide car parking and access to the site. The existing building will be extended and renovated with internal alterations.

The area to be developed is 1400m² and the extension 556m².

2.2 Purpose of the Report

The aim of this type of survey is to locate and describe, as far as reasonably practicable, evidence of wildlife, including all protected and BAP species, which may be disturbed or lost in the event of development.

The purpose of the report is to:

1. Identify the key ecological constraints to the proposed development
2. Inform planning to allow significant ecological effects to be minimised or avoided wherever possible
3. Allow any necessary mitigation or compensation measures to be developed

The application site meets the trigger point for requiring a bat survey since it involves modification, conversion, demolition or removal of buildings and structures involving the following: Pre-1960 buildings within 400m of woodland and/or water.

2.3 Planning Policy and Legislation

The relevant planning policy and legislation to the current development is:

The Wildlife and Countryside Act 1981(as amended) – as listed in:

- Schedule 1. Birds protected by special penalties at all times
- Schedule 5. Protected animals
- Schedule 8. Protected plants

The Conservation of Habitats and Species (Amendment) Regulations 2010 – as listed in:

- Schedule 2. European protected species of animals
- Schedule 5. European protected species of plants

Natural Environment and Rural Communities Act 2006 (NERC 2006)

Section 7 of the Environment Act (Wales) 2016

Circular 06/2005: Biodiversity and Geological Conservation

Wrexham Unitary Development Plan – EC6 Biodiversity Conservation

2.4 Site Context and Location

The site is located at grid reference SJ3436 5404. It is set in a semi urban environment with the main Chester Road to the immediate north, Ashleigh Court Nursing home to the south, infrastructure to the immediate west and arable land to the east.

The main Chester Road is considered an environmental barrier, but connectivity to the east is reasonably good with hedges. The car park to the nursing home is relatively busy.

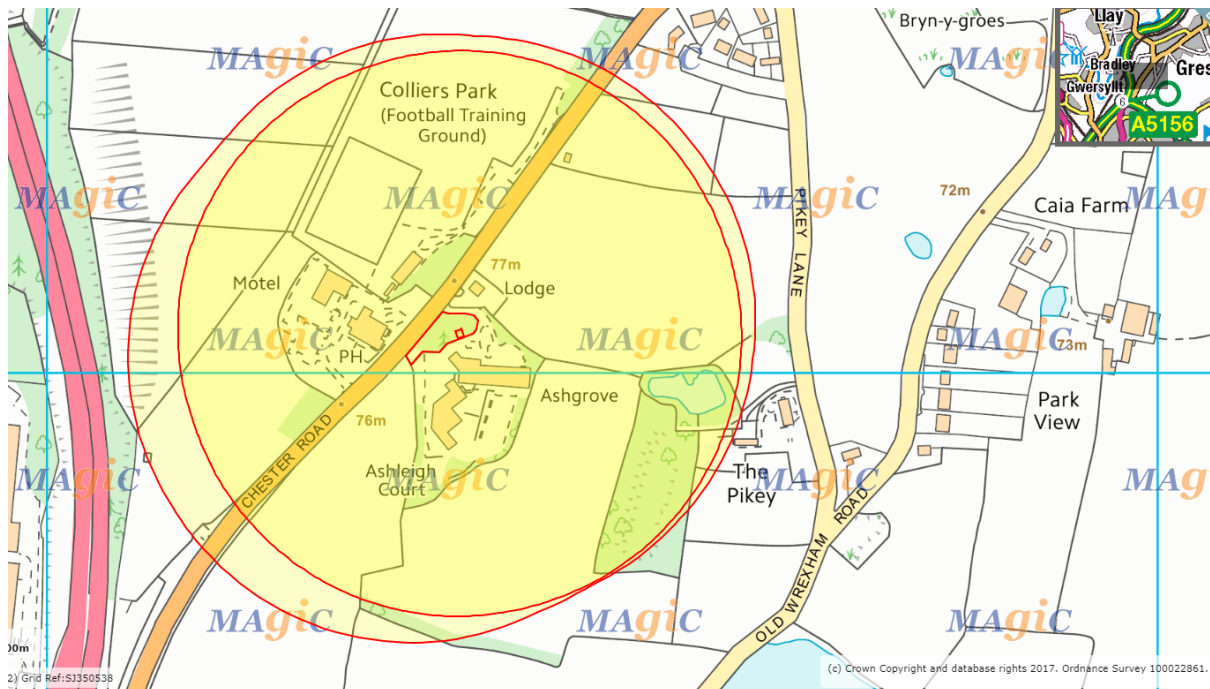


Figure 1. An OS map showing the site with 250m buffer. Scale 1:3000. Map courtesy of Magic Maps

2.4.1 Date of Survey and conditions

The phase 1 ecological appraisal was undertaken at the site, OS grid reference SJ 1234 5678 on Date by Peta Marshall BSc (hons) MA.

Date	Time	Temp °C Start- Finish	Sunset / Sunrise	Condition
14/06/17	Day+ 21:00- 22:30	16-14	21:39	Clear, light breeze
01/08/17	20:30-22:00	20-19	21:05	Clear, light breeze, humid
23/08/17	19:45-21:15	15-14	20:20	Overcast, Light breeze, rain later

3 Methodology

3.1 Desk Study

The desk study provides contextual information such as the site's proximity to designated areas and known records of protected/notable species. This assists with the evaluation of the ecological value of the site.

Organisation/Resource	Information Assessed
Freely available online species datasets (NBN Atlas)	Statutory Designation (2km) Non statutory designations (2km) Protected/UK BAP Species records (2km)
MAGIC website	International statutory designations (1km) • Special Protection areas (SPA) • Special Areas of Conservation (SAC) • RAMSAR sites National statutory designations (1km) • Sites of Special Scientific Interest (SSSI) • National Nature Reserves (NNR) EPS Licenses for protected species (2km)
Local Records Centre	Protected/UK BAP Species records (2km)

A search on Multi Agency Geographic Information for the Countryside (Magic Maps) determined nearby designated areas. The map is presented in Appendix A.

A review of other surveys conducted by Greenscape Environmental was conducted and compared to the NBN results to ascertain the necessity to purchase further records from COFNOD.

3.2 Field Survey- Methodology

3.2.1 Details of Surveyors

Name	Membership of associations/ experience	Licenses
Peta Marshall BSc(hons)MA	MCIEEM PIEMA 10+ years' experience surveying for protected species. Peta has a degree in Applied Biology and has been working in commercial environmental assessment for over 10 years. As a member of the CIEEM she is bound by professional conduct	Holder of survey licenses for bats and newts in England and Wales Registered Consultant for Low Impact Class Licence for Bats England 2015-12200-CLS-CLS Bats RC084 BLICL 2015-18939-CLS-CLS GCN Dormice-2017-29225-CLS-CLS Wales Bats-67442:OTH:CSAB:2015 GCN-67660:OTH:SA:2015
Ben Jones BSc(hons) MSc	Consultant 2 years' experience assisting with preliminary environmental appraisals and phase 2 surveys for bats and newts in England and Wales Ben has a degree in Marine and Freshwater biology and a Master's degree in "Managing the Environment".	Holder of survey licenses for bats and newts England Bats - 2017-29112-CLS-CLS GCN - 2016-25209-CLS-CLS Wales: Bats - 76324:OTH:CSAB:2017 GCN - 74760:OTH:SA:2017
Logan Maggs BSc(hons)	Lead Consultant Logan has a degree in Conservation and Land Management. He has 8 years' experience assisting with bat and newt surveys in England and Wales, as well as attending courses on different survey techniques.	Holder of survey licenses for bats and newts in England and Wales England Bats - 2016-24901-CLS-CLS GCN - 2017-29218-CLS-CLS Wales Bats - 75748:OTH:CSAB:2017 Newts - 75963:OTH:SA:2017
Rebecca Wilson BSc(hons) MSc	Becky has a degree in Biology and a Master's degree in "Managing the Environment".	

3.3 Habitats

An assessment of habitats was conducted following the "Extended Phase 1 methodology (Institute of Environmental Assessment 1995) and broadly the JNCC Handbook for Phase 1 Surveys 2010.

The level of survey is aimed to identify field signs of or habitats with the potential to support protected species and therefore assist in the determination for detailed phase 2 surveys

3.4 Species

3.4.1 Bats

The building was assessed for potential for bat roosts, foraging and commuting.

An external assessment of all structures on site was undertaken to determine potential roost features (PRF). The potential suitability of the structures assessed was assigned a rating of low to high in accordance with table 7.1 of Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition, Collins (2016).

An internal assessment of all accessible loft voids was undertaken by a Natural Resource Wales licensed surveyor for evidence of roosting bats such as droppings, feeding remains and staining.

Daytime surveys were conducted with the aid of a strong torch and a pair of Pentax Papilio 8.5x21 close focus binoculars.

Evidence for the presence of bats includes:

- Holes, cracks and rot holes used as roosts, marked by streaks of urine and faeces.
- Smoothed, darkened edges where bats have rubbed and left natural body oils when entering and exiting a space.
- Faeces under a roof access point, a well-used feeding point or a resting spot.
- Feeding signs such as discarded insect wings under a feeding point.
- Lack of cobwebs around eaves, roof spaces, beams or ceilings where routes are kept clear by bats.
- Presence of roosting or dead bats in or behind any object.

Phase 2 bat activity surveys were conducted to reinforce the findings using heterodyne and frequency division bat detectors (Anabat SD1 and 2, Wildlife Acoustics Echo Meter Touch, Bat Box).

Phase 2 dusk surveys commence 0.5hrs before sunset and end approximately 1.5hrs after.

Activity surveys are conducted to establish the presence of bats within a structure, what species they are, approximately how many are present, and if possible, where they are exiting a roost.

Bats were identified from the characteristic echolocation calls using appropriate computer sonogram analysis software.

Methodology used is in accordance with recommendations by BCT, Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition, Collins (2016).

3.4.2 Birds

Evidence of nesting birds, including barn owls using a building, hedge or tree involved looking for:

- Presence of nests
- Collections of droppings and/or feathers
- Highly distinctive droppings or splats under roosting points.
- Presence of owl pellets/feathers

3.4.3 Amphibians and Reptiles

The assessment of aquatic habitat is based on the Habitat Suitability Index (HSI) and is applied according to guidance set out by the National Amphibian and Reptile Recording Scheme (NARRS, 2007), superseded by ARG in 2010. The HSI is a quantitative method of assessing the potential quality of a body of water in terms of its ability to sustain a population of great crested newts.

A refugia search was conducted for amphibians and reptiles by looking under any logs, large stones and other debris where accessible.

The terrestrial habitats at the application site were surveyed and assessed for their suitability and potential value for the support of GCN. The general topography, ground conditions and presence or absence of vegetation were recorded.

3.5 Constraints of the Survey

It was conducted at an optimal time of the year for the assessment of flora and fauna. Standard techniques were followed. No specific constraints have been identified.

4 Site Description

4.1 Desk Study

4.1.1 Designated Sites

The map from Natural England presented in Appendix A indicates that the site is not within 1km of a designated area.

The closest RAMSAR/SSSI is Vicarage Moss, 1.3km to the east of the site. This is a characteristic bog/moss area, part of the Meres and Mosses designation.

4.1.2 Records

Bat species:

common pipistrelle (*Pipistrellus pipistrellus*),
soprano pipistrelle (*Pipistrellus pygmaeus*)
brown long-eared bats (*Plecotus auritus*),
noctule (*Nyctalus noctula*),
Daubenton's bat (*Myotis daubentoni*)

2 Soprano pipistrelles were recorded under the eaves of the building in 2013 but were not seen to emerge in 2017.

Other mammals:

Otter (*Lutra lutra*),
Water vole (*Arvicola amphibius*)
Badgers (*Mele meles*)
Pygmy shrew (*Sorex minutus*).

Data used from the NBN Atlas was provided by Wales Otter Survey Database (licence: OGL), Natural Resources Wales (NRW) Licence Return Dataset (licence: OGL), Mammal records from Britain from the Atlas of Mammals (1993), with some subsequent records (licence: CC-BY).

Birds:

Peregrine (*Falco peregrinus*)
Merlin (*Falco columbarius*)
Redbacked shrike (*Lamius collurio*)
Barn owl (*Tyto alba*)
Red kite (*Milvus milvus*) although not within 1km

Amphibians and Reptiles

Great Crested Newt (*Triturus cristatus*)
Palmate newt (*Trirurus lissotriton*)

GCN were recorded in an area 170m to the east in 2011, with a smaller population in 2013.

Invertebrates

Large heath butterfly (*Caenonympha tullia*)

Most of these records are from the SSSI to the east of the site and many may not be pertinent to this application as the site is considered to be highly unlikely to support them.

4.2 Phase 1 Description and Observations

The site comprises a building constructed of brick with a tiled roof, an area of ruderal and a leylandii hedge. The site extends to a triangle area of land of approximately 0.01ha.

The habitats on and around the site can be summarised as follows:

	Habitat	JNCC code
i.	Buildings	J3.6
ii.	Cultivated/disturbed land	J1.3
iii.	Ruderal vegetation	C3.1
	Boundaries	
iv.	Intact hedge-species poor	J2.1.2
v.	Wall (target notes on lichens and mosses)	J2.5
vi.	Fence	J2.4

4.2.1 Building

The building is constructed of brick with timber framework added for decoration. It comprises a two-storey building with garaging and a WC on the ground floor and a single room on the first floor.



Figure 2: Building from the drive

The building has a cavity wall and a lined slate roof. It was examined externally and considered to have low potential for bat roosts. No evidence of house martins nesting on the exterior was noted.

Care was taken to observe the timberwork and eaves to look for potential bat roost areas.



Figure 3: Fake timber frame

4.2.2 Grounds

Land in the curtilage of the site comprises a significant amount of ruderal, predominantly nettle and bramble with hog weed. Conditions have deteriorated since the surveys in 2011 and 2013.

The site was examined for potential for protected species, no evidence of badger activity was found and no areas suitable for basking reptiles observed.

Birds recorded in the vicinity include common passerine birds such as blackbird, blue tit and robin.



Figure 4: Grounds with significant ruderal growth

4.2.3 Boundaries

Access to the site is along the drove to the care home. This comprises a timber fence with occasional shrubs such as elderflower along it.



Figure 5: Site from the road

The boundary of the site to the south comprises leylandii hedge along the boundary with the Care Home. During the initial surveys in 2011 and 2013, this was a low hedge, but it has been allowed to increase in size. This is considered to be of low ecological value. Management of this will be determined by nesting birds, and will necessitate hedge cutting out of the bird nesting season, February to August inclusive. There is significant tarmac to the south of the site.



Figure 6: Leylandii hedge

Beside the road the site is bordered with a low stone wall with occasional trees (sycamore). There is no intention to remove any of these.



Figure 7: Wall and trees

4.2.4 Open Water

Scrutiny of the OS map (Fig 1) and a walk around the locality showed one pond within 250m of the site.

Land separating this pond with the proposed development area comprises car parking and a busy lane to the care home and significant arable land. Whilst newts have previously been recorded in this pond, it is considered that local conditions such as land management have been altering so that there is little opportunity for newts to travel successfully to the proposed development site.



Figure 8: View toward pond

Ponds		
Pond Number	OS Grid Reference	Distance from Site (m)
1.	SJ346539	165

Pond 1



Figure 9: Pond

The pond was seen to support low numbers of duck and fish were recorded from ripples in the water. Little plant material suitable for egg laying was observed, principal aquatic plants included flag iris. However, it is known that GCN are supported in this pond from previous surveys, with a medium population recorded in 2011 and a small population in 2013.

Pond 1		
Geographic Location	1	Zone A
Pond Area	0.9	The pond was approximately 1400m ²
Permanence	0.9	The pond does not dry out
Water Quality	0.67	Moderate invertebrate diversity low invertebrate diversity
Shade	1	There was estimated to be 50% shading of the area within 1m of the perimeter
Waterfowl	0.67	Waterfowl present, but little indication of impact on pond vegetation
Fish	0.33	Small numbers of fish known to be present
Pond Count	0.35	1 pond within 1km that is not separated by significant roads and infrastructure
Terrestrial Habitat	0.67	The immediate surrounding land is a scrubby woodland area, however this made up significantly less than 25% of the 250m radius area. The rest is grazed or arable fields, or hardstanding.
Macrophytes	0.5	There was very little floating or emergent vegetation in this pond, cover was estimated to be <10%
HSI Score	0.66 average	

It is considered that the pond offers average conditions for Great Crested Newts.

4.3 Phase 2 surveys for bats

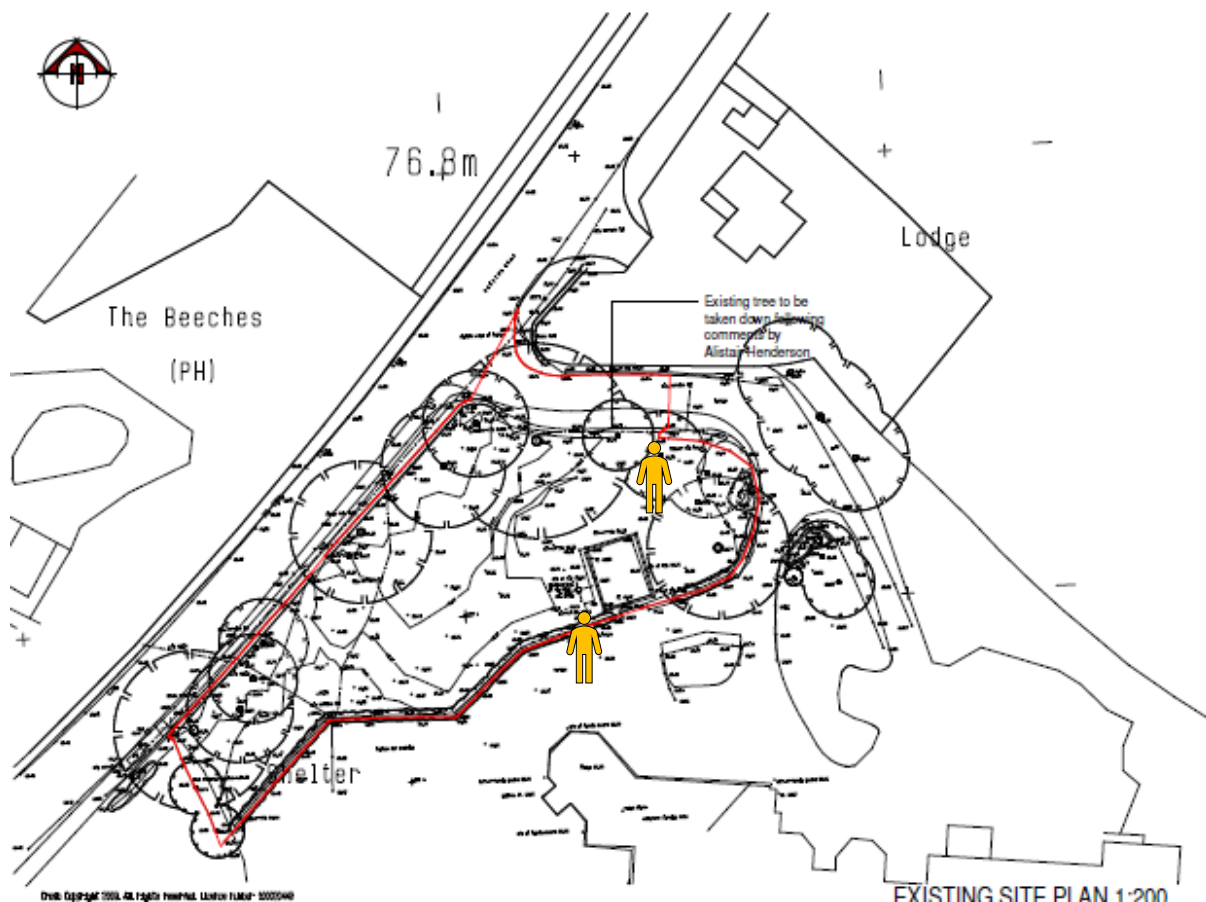


Figure 10: Plan from 2011, trees not accurate

First activity survey

The plan above shows the position of the surveyors.

Care was taken to observe the access point for bats observed in 2013. This was from underneath the eaves. No emergence was recorded.

Second activity survey

Bats recorded foraging in the area included common and soprano pipistrelles, but no emergence was recorded.

Third activity survey

No emergence was recorded, but the survey had to be shortened due to rain falling later in the evening. It is considered that bats would have emerged in the time on site.

5 Evaluation of Results

5.1 Potential Impacts on Designated Sites and Recorded Species

5.1.1 Designated Areas

The nearest SSSI is approximately 1.3km to the east of the site. Significant development is occurring in the area, and this development is very small in comparison. No negative impact is expected on the SSSI site.

5.2 Habitats on Site

Determination of Ecological Value is based on the general criteria provided by IEEM (IEEM 2006).

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

Habitat type	Is the habitat capable of supporting protected species	Further action
Buildings	Low potential for protected species	Work will be conducted under RAMS
Trees	Low potential for protected species	Work will follow a strict method statement
Ruderal	Bramble dominated area,	Work will be conducted under RAMS
Wall	Stone wall around the entrance to site	No further action required

The building has hosted roosting bats in the past although none were found on the latest surveys. As the roost is not currently in use it considered appropriate that work be done under a strict Reasonable Avoidance Method Statement (RAMS) to protect against the risk of harm to individual bats.

The trees have the potential for nesting birds, none were identified with potential for roosting bats. Clearance, if needed, will be done under a method statement to avoid risk to nesting birds.

Ruderal vegetation and ground clearance around the site has a small risk of harm to individual newts. Work will need to be conducted under RAMS for GCN.

5.3 Ecologically Important Species

Summary of status of protected species on site with recommendations

Species	Observations	Impact without consideration	Recommendations
Mammals			
Bats	No suitable habitat on site	Low negative impact	Work under strict RAMS
Badgers	No evidence found around site	No negative impact	No action required
Water vole	No suitable habitat around site	No negative impact	No action required
Hazel Dormouse	No suitable habitat on site	No negative impact	No action required
Otter	No suitable habitat on site	No negative impact	No action required
Birds			
Barn Owl	No evidence in trees on site	No negative impact	No action required
Nesting birds	Some suitable habitat around site, no evidence seen	Low negative impact	All clearance to be undertaken outside nesting period Feb-Aug inclusive New nest box provision
Herpetofauna			
Reptiles	No suitable habitat around site	No negative impact	No action required
Great Crested Newts	No suitable habitat around site	Low negative impact	Work under strict RAMS
Amphibian	No suitable habitat around site	No negative impact	No action required

5.3.1 Bats

All bat species are protected under the Conservation of Habitats and Species (Amendment) Regulations 2012 which implements the EC Directive 92/43/EEC in the United Kingdom. It is an offence, with certain exceptions, to:

- deliberately capture or kill any wild animal of a EPS;
- deliberately disturb any such animal;
- damage or destroy a breeding site or resting place of such a wild animal;
- keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of a EPS, or any part of, or anything derived from such a wild animal or plant.

All bats are European Protected species as all are listed on Annex IV of the Habitats Directive. Some species are also listed on Annex II of the Directive. These species include *Rhinolophus hipposideros*, *R. ferrumequinum*, *Barbastella barbastella* and *Myotis bechsteinii*.

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine or to both.

Local Planning Authorities in England and Wales have a duty to ensure that protected species issues are taken into account as a material consideration when determining planning applications. The Technical Advice Note 5 (TAN5) in Wales provides guidance on protecting and enhancing biodiversity during the planning process.

To allow a development that might result in an offence, a derogation licence can be sought via the implementation of a European Protected Species Licence. This is provided by Natural Resources Wales / Natural England.

Work can be conducted under derogation licence from Natural England providing suitable compensation and mitigation is provided and the "three tests" can be met. These are:

1. Regulation 53(2)(e) states: a licence can be granted for the purposes of "preserving public health or public safety" or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
2. Regulation 53(9)(a) States: the appropriate authority (Natural England) shall not grant a licence unless they are satisfied "that there is no satisfactory alternative"
3. Regulation 53(9)(b) states that the appropriate authority shall not grant a licence unless they are satisfied "that the action licensed will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in its natural range."

Species observed at this site.

The site has been shown to support low numbers of soprano pipistrelles in previous years although no roosting bats were found in 2017. Potential death or damage of individual bats would constitute an offence therefore work will need to be conducted under strict Reasonable Avoidance Method Statement.

The Bat Mitigation Guidelines (2004) has been used to assess the significance of these roosts.

Soprano pipistrelle bats are locally, regionally and nationally common so loss of a roost of this size is unlikely to have a high impact on the favourable conservation status of the species.

Using the Bat Mitigation Guidelines 2004, page 37 and 39, the loss of a day roost of a common species is considered to be low impact.

The mitigation and compensation requirement is flexibility to new buildings, and no conditions about timing or monitoring. It is therefore concluded that the work can be conducted under RAMS.

Work will need to be conducted under a strict method statement and compensation in the form of a bat box erected on the site.

5.3.2 Badgers

Badgers and their setts are specifically protected under the Protection of Badgers Act 1992. The act was primarily brought into force to prevent the deliberate injury to or death of badgers. Some aspects of the act affect developers. It is important that developers are aware of any badger setts located on the land they intend to develop.

All personnel working on sites where there are badgers should be aware of the Protection of Badgers Act 1992. Under this legislation it is an offence to:

- Damage a badger sett or any part of it.
- Destroy a badger sett.
- Obstruct access to, or any entrance of a badger sett.
- Causing a dog to enter a badger sett.
- Disturbing a badger when it is occupying a badger sett.

A badger sett is defined by the Act as "any structure or place, which displays signs indicating current (within the last 12 months) use by a badger".

No evidence of badgers was found around the site, no further consideration is required.

5.3.3 Otter

The European Otter is a European protected species and is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended 2010). This makes it illegal to:

- Capture, kill, disturb or injure otters (on purpose or by not taking enough care)
- Damage or destroy a breeding or resting place (deliberately or by not taking enough care)
- Obstruct access to their resting or sheltering places (deliberately or by not taking enough care)
- Possess, sell, control or transport live or dead otters, or parts of otters

Whilst otters have been recorded within 2km, it is not considered likely that this development will have any impact on the species. No negative impact on the species is expected.

5.3.4 Birds

Birds, their nests and young are all protected from damage during the breeding season in particular, under Section 1 of the Wildlife and Countryside Act 1981 (as amended). The Act allows for fines or prison sentences for every bird, egg or nest destroyed. It makes it an offence to:

- Intentionally kill, injure or take any wild bird
- Take, damage or destroy the nest of any wild bird whilst it is in use or being built
- Take damage or destroy the egg of any wild bird
- To have in one's possession or control any wild bird, dead or alive or egg or any part of a wild bird or egg

There is potential for nesting bird around the site, but no evidence of ground nesting birds was found. Any site clearance of shrubs or trees around the site has the potential to harm nesting birds if done during the breeding season. Site clearance will follow the method statement provided in this report.

5.3.5 Barn Owls

All birds, their nests and eggs are protected by law under Part 1 of the Wildlife and Countryside Act 1981 (as amended). Barn owls are listed on Schedule 1 which gives them special protection.

It is an offence to:

- Intentionally kill, injure or handle any wild barn owl.

- Intentionally take, damage or destroy any wild barn owl nest whilst in use or being 'built'
- Intentionally take or destroy a wild barn owl egg
- Have in one's possession or control a wild barn owl (dead or alive) or egg (unless one can show it was obtained legally)
- Intentionally or recklessly disturb any wild barn owl whilst 'building' a nest or whilst in, on, or near a nest containing young
- Intentionally or recklessly disturb any dependent young of wild barn owls.

It is not an offence to:

- Take a disabled wild barn owl solely for the purpose of tending it until fully recovered and then returning it to the wild
- Kill, injure, take or disturb barn owls if these were incidental results of a lawful operation and could not reasonably have been avoided

No evidence of barn owls was found around the site, no further consideration is required.

5.3.6 Newt Species

All species of amphibians receive a measure of protection under legislation.

The Wildlife and Countryside Act 1981 has been amended by the Countryside and Rights of Way Act (CROW) 2000. This applies to England and Wales only. The key relevant fact is:

- Section 9(4) is amended to create an additional offence of reckless damage to, destruction of, or obstruction of access to, any structure or place used for shelter or protection; and reckless disturbance while occupying such a structure or place.

This means that any application for planning permission has to offer mitigation to the planners to alleviate any potential damage (i.e. provide reasonable avoidance).

GCN are protected under the Conservation of Habitats and Species Regulations 2010 (as amended) which implements the EC Directive 92/43/EEC in the United Kingdom. It is an offence, with certain exceptions, to:

- Deliberately capture or kill any wild animal of an EPS
- Deliberately disturb any such animal
- Deliberately take or destroy eggs of any such wild animal
- Damage or destroy a breeding site or resting place of such a wild animal
- Keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of an EPS, or any part of, or anything derived from such a wild animal or plant.

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine, or to both.

Work can be conducted under derogation licence from Natural England providing suitable compensation and mitigation is provided and the "three tests" can be met. These are:

1. Regulation 53(2)(e) states: a licence can be granted for the purposes of "preserving public health or public safety" or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
2. Regulation 53(9)(a) States: the appropriate authority (Natural England) shall not grant a licence unless they are satisfied "that there is no satisfactory alternative"
3. Regulation 53(9)(b) states that the appropriate authority shall not grant a licence

unless they are satisfied "that the action licensed will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in its natural range."

A small population of newts was found in the pond 165m to the east from site during the 2013 surveys, this is reduced from a medium population in 2011. Pond conditions had also deteriorated in this time, with evidence of fish being noted in 2017 reducing suitability further.

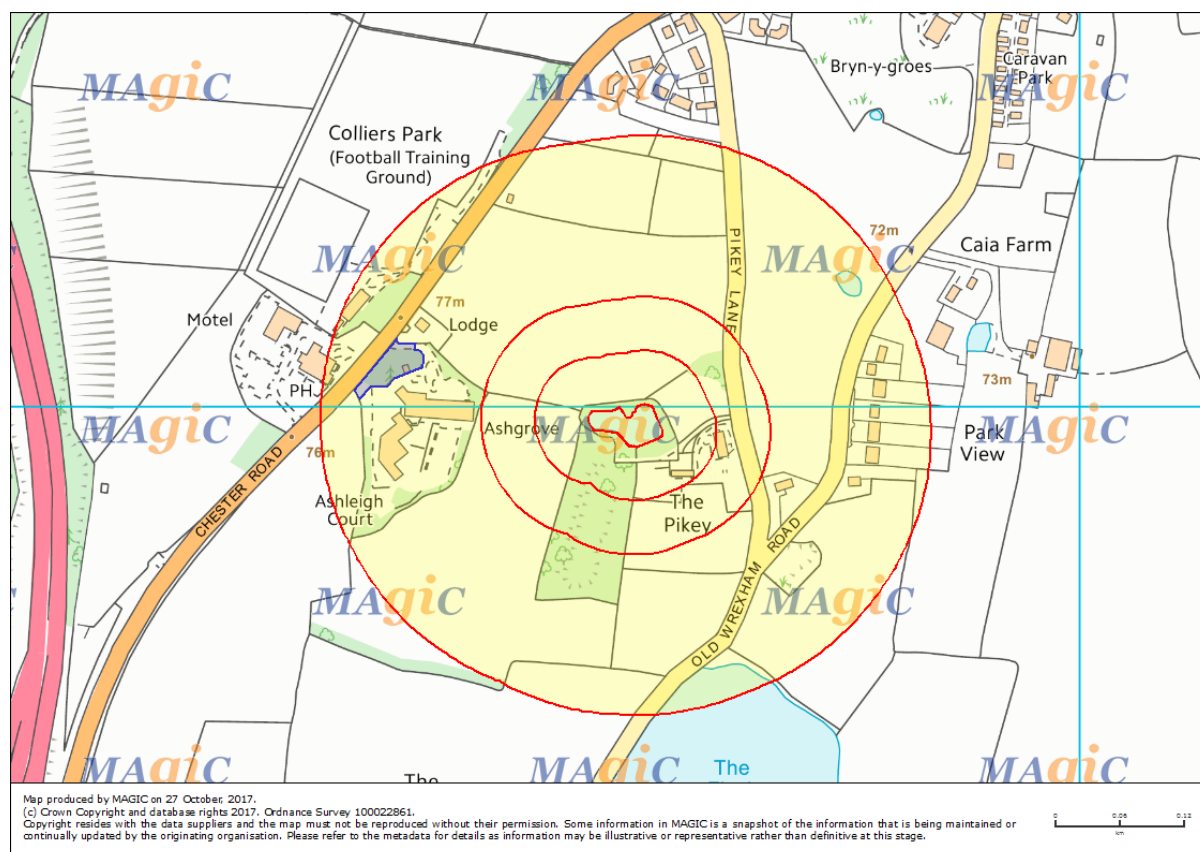


Figure 11: Showing a 50, 100 and 250m buffer around the pond, site highlighted in blue

The rapid risk assessment from Natural England has been used to assess the potential impact from the development.

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
Maximum:		0.1
Rapid risk assessment result:		GREEN: OFFENCE HIGHLY UNLIKELY

The site totals 0.14ha and not all of this is being developed. Using the whole site still shows that an offence is highly unlikely.

D2 Pre-and mid-development impacts**i. Core terrestrial habitat (<50m from pond)**

The area immediately around pond 1 will not be directly affected by the development.

ii. Intermediate Terrestrial habitat (50-250m)

There is no negative impact on the intermediate habitat up to 100m away from the pond, between 100 and 250m there will be less than 0.1ha land disturbed. This is ruderal land with poor connectivity between the pond and the site due to changes in management practice. It is considered the loss of this terrestrial habitat is of low significance and that individual newts are highly unlikely to be present in the area.

iii Distant terrestrial habitat impact (>250m)

There is no permanent or temporary loss of habitat beyond 250m of the pond

D3 Long term Impacts

The core terrestrial habitat around the pond will not be impacted by the development.

D4 Post development interference impacts

Post development there is unlikely to be any interference with the population of newts. The pond to the west of the site will be fenced off from the public to reduce potential for interference.

D5 Other impacts

No other impacts are expected.

E1 The Mitigation Solution

The development is not likely to lead to a net loss of habitat. Work will follow a strict method statement outlining reasonable precautions for securing the safety of individual newts.

Summary

The development will not need to be conducted under licence from Natural England as an offence is considered to be highly unlikely from the Rapid Risk Assessment. With strict RAMS it is considered that the risk to individual newts can be mitigated.

5.3.7 Reptiles

Native species of reptiles such as slow worm are protected by the Wildlife and Countryside Act 1981 (as amended). Part of section 9(1) and all of Section 9(5) apply. This means they are protected against intentional killing and injuring, and against sale and transporting for sale.

There was no evidence of reptiles on site and little suitable basking habitat, no further consideration is needed.

6 Impacts and Mitigation Measures

To reduce or minimise negative impact on biodiversity, the following recommendations have been made.

6.1 Landscaping

1. It is recommended that the landscaping around the new buildings will include some hedging and tree planting to enhance the area for biodiversity.
2. Plants to use for landscaping will include locally sourced native species. These will be planted in accordance with BS3936 (part 1, 1992, Nursery Stock, Specifications for trees and shrubs). Planting will occur between November and April of the following year depending on timing of development.
- 3.

Plant	Latin Name
Blackthorn	<i>Prunus spinosa</i>
Crab Apple	<i>Malus sylvestris</i>
Field Rose	<i>Rosa arvensis</i>
Field Maple	<i>Acer campestre</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Spindle	<i>Euonymus europaeus</i>
Wild Cherry	<i>Prunus avium</i>
Wild Pear	<i>Pyrus communis</i>
Wild Service Tree	<i>Sorbus torminalis</i>

6.2 Bats

6.2.1 Reasonable Avoidance Method Statement

It is recommended that the work be conducted under RAMS, with a suitably licensed Ecological Clerk of Works (ECoW) being employed, who will perform a pre-commencement check and be on site when work on the roof occurs.

1. Work on the conversion will need to follow a rigid method statement.
2. The ECoW will conduct final site check immediately prior to work commencing to check for alterations in conditions.
3. The developer and contractors will be made aware that there is a possibility that bats may be found during works and will be advised to work in a way to ensure bats are not harmed during the soft demolition of the roof, and around the eaves. They will be provided with a simple emergency procedure to follow if bats are found at any stage of the work on site. It will be ensured the method statement is on site.
4. A pre-commencement check will be conducted by the RC using a strong torch and borescope where appropriate.
5. The ECoW will be present on site when the roof is removed carefully by hand, particularly the ridges and around gables.
6. If a bat is found when the ECoW is not present then work will stop in that area IMMEDIATELY and the RC contacted for advice.
7. The bat must only be handled by the ECoW or authorised person unless it is in immediate danger. The bat must be carefully be placed in a well ventilated lidded box with a small container (preferably a plastic bottle lid) with water in it. The container must be kept in a quiet and safe place.
8. If a bat is found it may be necessary to consider the need for a European Protected Species Licence from Natural England.
9. Care should be taken to avoid rousing the bat whilst transferring to a suitable location, this may be a suitable bat box or alternative roost. This must provide a safe, quiet environment with stable cool temperature with relatively high humidity which is safe from disturbance.
10. If the bat is underweight or injured it will be cared for by an experienced bat carer until such times that is strong enough to be released into a suitable alternative replacement roost on site.
11. The bat compensation will be created following the instructions in the method statement and the client will agree that any bat box erected must stay in place for a minimum of 5 years post development.
12. The removal of the roof will not take place if the temperature has been below 40C for 4 consecutive days and nights.
13. Gaps will be created by leaving a 20mm gap at the end of ridge tiles every 3m along the roof.
14. Lining material under the ridge will comprise Bitumen Hessian material to BS747 (F1) so bats cannot come into contact with modern breathable membranes.

15. Once the building has been re-roofed bat access will be limited by sealing all doors and windows, thus reducing the potential for bats to re-enter where they are not expected.
16. The RC will check the bat provision once it has been constructed, but there will be no requirement for monitoring.

6.2.2 Enhancements for Bats

1. It is recommended that provision will be made for roosting opportunities for bats with the erection of at least one Schwegler 3FF bat box in the nearby trees or the new extension. These will be erected at a height of 3-4m and in a southerly, westerly or easterly facing direction.



Figure 12. Schwegler 3FF bat box

6.2.3 Lighting

1. A lighting scheme will be drawn up following the guidance provided by the BCT.
2. There will be no direct illumination of the eaves of the building.
3. There will be no illumination of the trees around of the site.
4. All external lighting will be below 1 lux, orientated towards the ground and set on a short timer, controlled by PIR (Passive Infra-Red).

6.3 Birds

6.3.1 Reasonable Avoidance Measures

1. Any tree or hedge removal will occur out of the bird nesting season, which is February to August inclusive. If this is not possible, a suitably experienced ecologist will conduct a check within 24 hours of work commencement to ensure no nesting birds will be affected.
2. All nesting birds will be left undisturbed until young have fledged. A 4m buffer will be left.

6.3.2 Enhancements for Birds

1. It is recommended that a range of woodcrete/wooden bird boxes are erected around the site to provide an enhancement for passerine birds. A selection of the following nest boxes is recommended.



Cedarwood Sparrow Terrace



House Martin Nest Box



Schwegler 1b Bird Box



Schwegler 2H Robin Box

Figure 13: Provision for bird boxes

6.4 Newts

6.4.1 Reasonable Avoidance Measures

Pre-construction Phase

1. The site will be kept under cultivation prior to construction. This will reduce the potential for newts to cross the land and reduce the potential for the terrestrial features to improve. All plants will be kept short (<10cm) to ensure there is no shelter for GCN on the site.

Site set up

2. A consultant will be employed as the Ecological Clerk of Works (ECoW) to oversee the work in areas sensitive to GCN on site. This person will need to be licensed and an experienced surveyor for GCN.
3. The ECoW will provide contractors with a toolbox talk prior to work commencing. This will include information about the legal status of newts and responsibilities of the construction company to ensure no offence is committed. A document to assist the identification of newts will be left on site and available for all contractors to view.
4. The site will be checked thoroughly by the ECoW prior to construction commencing with a walkover and fingertip search. This will confirm there are no newts present and that there are no places where newts could be sheltering, prior to commencement.
5. Soil and vegetation will be stripped prior to setting up the site compound to ensure the compound contains no vegetation which could potentially attract GCN.
6. All cabins and equipment will be located on firm compacted ground, preferably a stone or concrete base.
7. Contractors are advised not to handle newts at any time.

Construction phase

8. The Site Foreman will be responsible for ensuring all contractors are aware of the potential to find newts and that they are familiar with the appearance of newts. If in doubt the ECoW will be contacted.
9. Contractors are advised NOT to handle newts at any time.
10. Stored subsoil must not be tipped onto any tall vegetation. The location of the storage area will be checked by an ecologist immediately before the topsoil is moved to the storage area.
11. Any plants around the site will be kept short to stop the development of a long sward suitable for the terrestrial habitat for newts.
12. Removal of any unwanted plants will be conducted between February and May when there is least opportunity for newts to be hibernating in the roots. The ECoW will be on site when this occurs
13. The ECoW will conduct a fingertip search around the roots before plant removal occurs.
14. A fingertip search will be conducted over the whole site prior to the development commencing.

15. Ground work will commence between February and October once the fingertip search has been conducted.
16. All work will be conducted during daylight hours as newts are least likely to move during this time.
17. All groundwork will be conducted during daylight hours as newts are least likely to move during this time.
18. Trenches will be dug and filled in on the day created or will be covered over with close fitting boards at the end of each working day and checked the following morning. This is particularly important when newts are most active, between March and November.
19. If necessary, a ramp will be placed in trenches to allow newts and small mammals to escape.
20. Any heavy machinery will be stored on an area of hard standing to avoid refugia being created.
21. Stored material will be raised on pallets to reduce the potential they might act as a temporary resting place. This reduces the potential for damage or destruction of individual newts
22. All waste will be placed straight into skips to reduce the potential of creating refugia.
23. If a newt is found then work WILL stop immediately and the ECoW contacted for advice.
24. GCN will not be handled or moved without express permission from Natural England as this would constitute an offence.
25. It is recommended that regular site visits are carried out by the ecologist to ensure compliance with the legislation and the Method Statement. A record of these visits will be made as part of the audit trail.

Personnel awareness and emergency procedures

26. It will be ensured all construction workers and personnel are aware of GCN legal protection. This will be by a toolbox talk and the ongoing briefing of contractors by the site foreman.
27. A copy of this document will be on site at all times during construction work.
28. If any GCN are found on site at any time, the consultant will be contacted immediately for advice.
29. If a GCN is found on site, all construction activities should be stopped immediately until the consultant has advised how to proceed.
30. If a GCN is found on site, the animal should not be handled or moved from its resting place and any sheltering material should be carefully replaced. If there is immediate danger of injury (e.g. if the newt is found on a road) then the animal will be placed in a clean lidded bucket and stored in a cool but frost free place for the ecologist to attend to.

7 Concluding Remarks

Bats have been recorded roosting in the eaves of the building in 2013 but were not found roosting in 2017. It is possible that the building is a temporary or transitory roost. It is thought that work can be conducted under a strict Reasonable Avoidance Method Statement with enhancements in the form of bat roost boxes, this will minimise the risk to individual bats and maintain the favourable population of the species.

Great crested newts have been recorded in a pond over 150m to the east, surveys in 2011 and 2013 found dwindling numbers of newts and the pond itself has deteriorated in its suitability for newts in this time. The area to be developed does not form part of the core habitat for the pond and the Rapid Risk Assessment tool from Natural England shows that an offence for a development of this scale is highly unlikely. A strict RAMS will be implemented to minimise the risk to individual newts.

The trees and shrubs around the site might offer suitable nesting habitat for birds. If any clearance is required this will follow the recommendations outlined in this report with nest boxes being put out to enhance the area for birds.

This will result in there being no further ecological constraints to the development.

Appendices

A Ordnance Survey Map Abstract

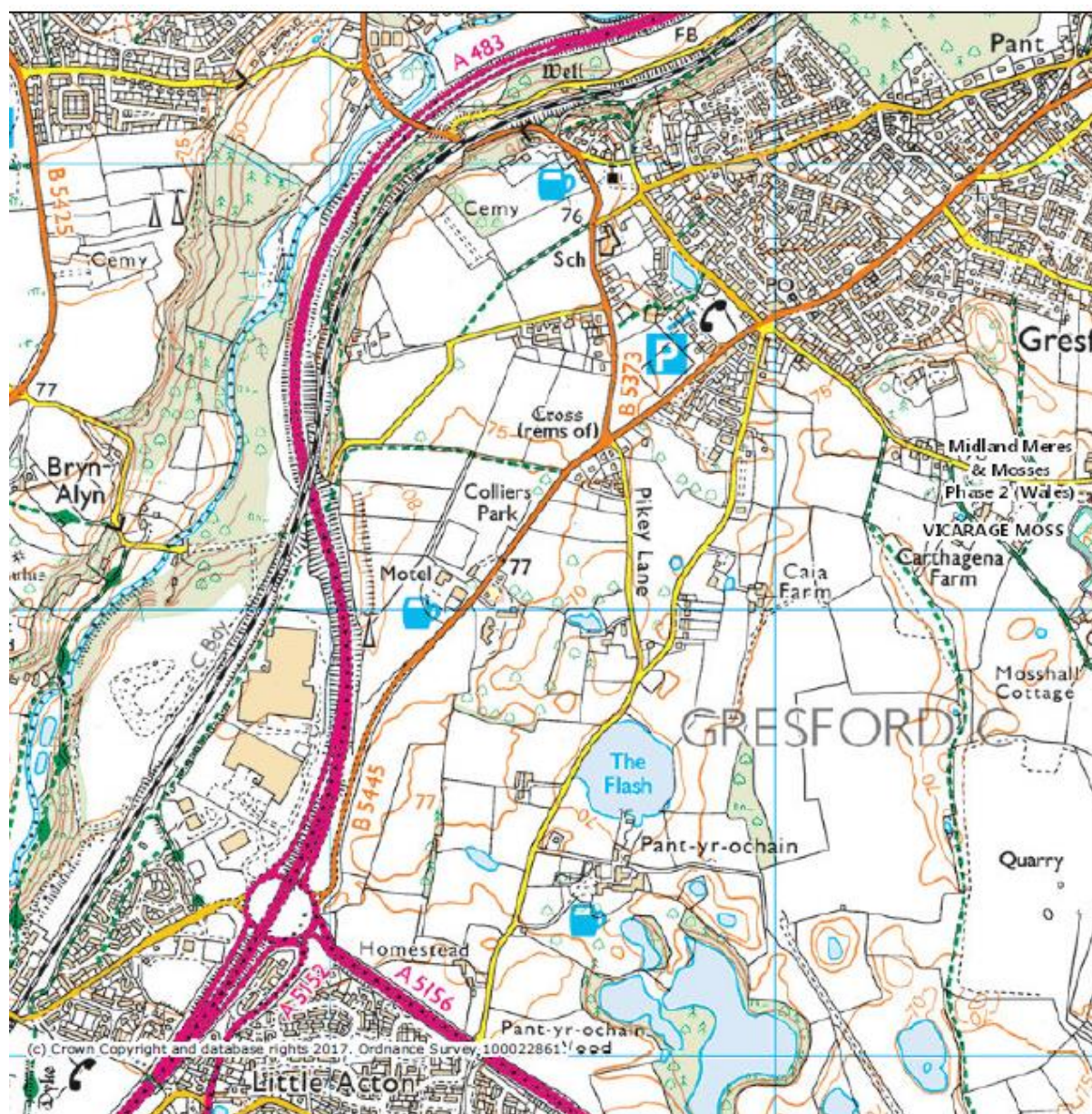
Sheet(s): 1

B Site Plan

Sheet(s): 1

C Bibliography

Sheet(s): 1

A Environmental Map**Legend**

-  National Nature Reserves (Wales)
-  Ramsar Sites (Wales)
-  Sites of Special Scientific Interest (Wales)
-  Special Protection Areas (Wales)

0 0.35 0.7
km

Projection = OSGB36

xmin = 331400

ymin = 352600

xmax = 337600

ymax = 355600

Map produced by MAGIC on 26 October, 2017.
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Environmental map for Gresford taken from - Nature on the Map- Magic Maps
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B Site Plans



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