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Benjamin Rowe (Pegasus Planning Group)
On behalf of:
Mr and Mrs L Ricciardi
Clapton Farmhouse
Clapton, BERKELEY
Gloucestershire, GL13 9QX

22nd February 2022
Our ref: 7078/TB/170720/TC

Dear Benjamin,

Interim Ecology Report – Clapton Farmhouse, Berkeley, GL13 9QX

Further to being commissioned to undertake an ecological survey of Clapton Farmhouse in Berkeley, Gloucestershire, I am pleased to provide in the Annex below the methods and results of the survey, which was carried out on 26th January 2022. I have also provided an assessment of our findings and recommendations considered necessary to ensure the proposed works comply with legislation and planning policy.

This document acts as an Interim Ecology Report with the intention that an Ecological Impact Assessment is prepared following completion of the further ecological surveys that are recommended within this report, and also once the proposals (including landscaping design) have been finalised.

The survey appraised the suitability of the outbuilding associated with Clapton Farmhouse and associated garden, for evidence of, or potential to support, protected and notable species. The outbuilding was found to contain potential roost features for bats and a small amount of feeding evidence was found inside the building. It was considered to be of 'Moderate' suitability for roosting bats according to the Bat Conservation Trust Guidelines (2016). The building was also found to provide opportunities for nesting birds (an old bird nest was found).

An external and internal building inspection will need to be undertaken of the adjoining outbuilding within the neighbouring property (once access permission for this is obtained), in order to fully assess the impacts of the proposals on roosting bats.

We have recommended that two dusk emergence and / or pre-dawn re-entry bat surveys, along with a static detector survey are undertaken of the entire building (i.e. including the half of the building in the neighbouring property) to confirm the presence or likely absence of roosting bats. If roosting bats are identified, a licence from Natural England to legally permit loss of the roost(s) as a result of the proposed demolition will be necessary.

A pre-demolition check for nesting birds has also been recommended to be carried out no more than 48hrs prior to demolition in order to ensure no nesting birds are disturbed (if works take place March – August inclusive). If any active nests are found to be present, the demolition works will need to be delayed until all young have fledged.

Please do not hesitate to contact me should you have any queries or comments on the enclosed information.

Yours sincerely,

[redacted]

Assistant Ecologist

Interim Ecology Report
Clapton Farmhouse, Berkeley, GL13 9QX

1.0 Introduction

Clarkson and Woods Ltd were commissioned on 17th January 2022 to undertake an ecological survey at Clapton Farmhouse, Berkeley, South Gloucestershire, GL13 9QX (Figures 1 and 2 below).

The proposals for the Site include the demolition of the existing outbuilding within the ownership boundary and the construction of a new outbuilding with associated parking and landscaping. The ecological survey assessed the potential of the building and garden to support protected and notable species in order to ensure the proposed works comply with wildlife legislation and planning policy.

Unless the client indicates to the contrary, information on the presence of species will be passed to the county biological records centre in order to augment their records for the area.

This document is an interim report which provides the results and recommendations following completion of the ecological building inspection and survey of the garden, with the intention that an Ecological Impact Assessment is prepared following completion of the further ecological surveys that are recommended within this report.

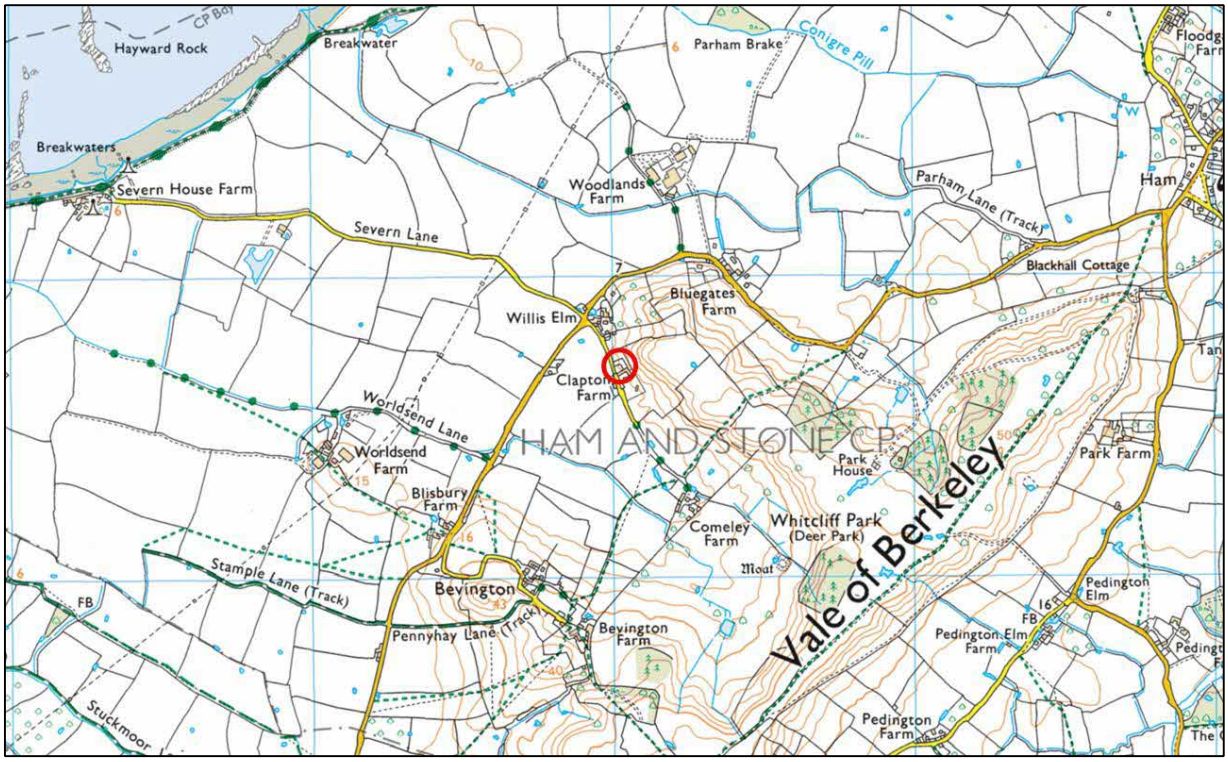

Figure 1: Ordnance Survey Map Showing Location of the Site (©2022 Bing Maps)

Figure 2: Aerial Photograph of the Site Boundary (red line) and the building surveyed (blue line) (©2022 Google)

2.0 Methodology

Desk Study

At this stage a detailed desk study, including purchase of data from the local environmental records centre has not been completed. Given the survey findings to date, however, a data search will be required to provide more detail of bat records within the locality of the Site for context. Clarkson and Woods' own database has been consulted for existing records collected within the local area. Freely available online resources such as aerial photography, JNCC information, and www.MAGIC.gov.uk have also been consulted to provide contextual information on the presence/distribution of designated sites and protected and notable habitats and species. In addition a report from Natural England relating to the house within the Site, dated to 2010, was also consulted.

The Stroud District Local Plan (adopted November 2015) was consulted for details of planning policies relevant to designated sites, protected species and habitats, and general ecological and environmental protection.

The Gloucestershire Biodiversity Action Plan (BAP) was consulted for information on conservation priority species and habitats which may require further consideration and weight within an Ecological Impact Assessment.

Field Survey

The survey was carried out on 26th January 2022 [redacted]

[redacted]

The building inspection was carried out in accordance with the Bat Conservation Trust's *Bat Surveys Good Practice Guidelines* (2016). The exteriors of the outbuilding were examined through the use of ladders, torches and binoculars for potential roosting features (PRFs). Wherever possible, these points were thoroughly investigated using a video fibrescope to determine the likelihood of their occupation and evidence of presence. Other factors taken into consideration included the potential for noise disturbance to the potential roost feature, exposure to the elements, lighting levels, proximity/connectivity to vegetation and water and whether these PRFs led on to cavities further into the structure.

Internally, all accessible roof voids and accessible parts of the building were entered where safe and possible to do so in order to describe their characteristics and to look for PRFs. A one million candle-power torch, ladders and a video fibrescope were used where necessary. Any signs of occupation including urine staining, prey remains, fur rubbing marks and droppings were noted where found. Droppings were compared against reference material to identify likely species, but DNA analysis may be undertaken in certain circumstances to confirm species identification.

Following the inspection, the building was assigned a 'high', 'medium', 'low' or 'negligible' category as a guide to inform any necessary further survey effort as stipulated in the BCT guidelines.

The building and land within the application Site was surveyed for signs of use by nesting birds and any birds seen or heard during the survey were noted. Surrounding habitats were also assessed for evidence of, or potential to support, protected and notable species such as badger, reptiles, amphibians, hedgehogs and harvest mouse (amongst others).

At the time of survey, the weather conditions were dry, 6°C, partly cloudy with a light breeze. Details of the legislative protection afforded to those species which have been identified as occurring or potentially occurring on the Site are given in Appendix A.

Survey limitations

Bats are very small creatures, capable of accessing small spaces and it is possible that these animals, or their signs, might have been missed during the survey if they are normally present opportunistically or in small numbers for a short period of time each year.

Not all features in buildings suitable for use by bats are visible from the ground and there can be no external evidence of use of features by bats; consequently it is only possible to make a best effort when carrying out a survey.

The southern half of the outbuilding surveyed was located within a neighbouring property and access permission had not been granted at the time of survey. Therefore, the southern half of the building could not be surveyed.

The outbuilding was used for storage and the large room was very cluttered, containing multiple stored items, meaning that access to all parts was not possible and subsequently some evidence of protected species could have been missed.

3.0 Desk Study Results

Statutory designated sites

Four statutory designated sites for nature conservation were identified within the desk study and are summarised in Table 1 below.

Table 1: Summary of Statutory Designated Sites for Nature Conservation

Site Name	Size, Distance and Direction from Site	Reason for Designation	Importance
Severn Estuary Special Area of Conservation (SAC)	73.715ha 1.35km north east	Severn Estuary SAC is designated primarily for its Annex I habitats including estuaries, intertidal mudflats and sandflats, reefs (*Sabellaria sp.*), and Atlantic salt meadows. Annex II species river lamprey *Lampetra fluviatilis*, sea lamprey *Petromyzon marinus* and twaite shad *Alosa fallax* are also a primary reason for this designation.	International
Severn Estuary Special Protection Area (SPA)	17.600ha 1.35km north east	The Severn Estuaries SPA is nationally and internationally important for the breeding, feeding, wintering and migration of rare and vulnerable species of birds. It sustains populations of the Annex I species Bewick's swan *Cygnus columbianus bewickii* and regularly occurring migratory species such as Dunlin *Calidris alpina* and Gadwall *Anas strepera*.	International
Severn Estuary Ramsar Site	16.942ha 1.35km north east	Overall the species assemblage qualifies the site as a wetland of international importance under the Ramsar Convention.	International
Severn Estuary Site of Special Scientific Interest (SSSI)	15.950ha 1.35km north east	The Severn Estuary SSSI received national designated due to varied intertidal habitats that support internationally important populations of waterfowl, invertebrate populations of considerable interest and large populations of migratory fish.	National

A search of the MAGIC website revealed no records of bat licences with 2km of the Site.

Two European Protected Species licenses for great crested newts (GCN) were located within 2km of the Site, both located 1.75km north. One licence was dated 11/03/2011 – 28/01/2012 (EPSM2009-1604) and the other was dated 05/11/2013 – 31/03/2014 (EPSM2012-4724). Both licenses allowed the destruction of a resting place. A number of GCN records have also been recorded around the Site, with the closest records located approximately 1km to the north-east and the south-east.

A search of Clarkson and Woods' in-house records returned no records within 2km of the Site.

Clarkson and Woods was also made aware of a previous survey of Clapton Farmhouse undertaken on 23rd October 2010 by Natural England volunteer bat workers [redacted]. This survey was required to check for the presence of roosting bats within the main roof void of Clapton Farmhouse in regards to treatment of cluster flies in the roof space. A brown long-eared *Plecotus auritus* bat roost was identified within the roof apex of the property. No bats were seen at the time of the visit but droppings were found scattered under the roof

apex. Bat access points were identified at the south facing lead valley on the roof (Reference: GLO_GL139QX_081010, Natural England, 15 November 2010).

The following policies have been identified within the Stroud District Local Plan (adopted November 2015), which are considered relevant to the Site.

Policy ES6 – Providing for biodiversity and geodiversity
Protected Species
Development proposals that would adversely affect European Protected Species (EPS) or Nationally Protected Species will not be supported, unless appropriate safeguarding measures can be provided (which may include brownfield or previously developed land (PDL) that can support priority habitats and/or be of value to protected species).

Policy ES8 – Trees, hedgerows and woodlands
Development should seek where appropriate to enhance and expand the District's tree and woodland resource.
Development that would result in the unacceptable loss of, or damage to, or threaten the continued well-being of protected trees, hedgerows, community orchards, veteran trees or woodland (including those that are not protected but are considered to be worthy of protection) will not be permitted.
Where the loss of trees is considered acceptable, adequate replacement provision will be required that utilise species that are in sympathy with the character of the existing tree species in the locality and the site.

The following species are listed within Gloucestershire Biodiversity Action Plan, which are considered relevant to the Site:

- Bats (barbastelle, Bechstein's bat, pipistrelle, greater horseshoe bat, lesser horseshoe bat)

4.0 Survey Results

The outbuilding was a single storey L-shaped building located across two ownership boundaries, with the northern half of the building located within the grounds of Clapton Farmhouse and the southern section located within the neighbouring grounds of Clapton House. Due to access restrictions, the southern section of the building was not surveyed.

Recent vegetation clearance had taken place prior to the survey, including the removal of a mature ash tree on the eastern aspect and two large trees along the northern aspect of the outbuilding. The ground surrounding the outbuilding to the north and east comprised bare ground at the time of survey. The western hip of the outbuilding had also previously been demolished.

The building appeared to date to the 1800s and comprised stone walls along the northern and eastern aspect, which were built into the hillside, with the remaining walls of breeze block construction, and had a single pitched, slate tiled roof. The outbuilding was used for storage and had fallen into disrepair, with the existing (original) timber framework supported by modern timber and acrow props.

Externally, the building was in poor condition and contained a number of structural defects including holes within the mortar of the stone walls and missing and damaged roof tiles. Along the northern aspect the mortar was largely intact with the exception of the middle section of the wall where several gaps were noted. A number of gaps were also noted within the eastern wall. These were thoroughly inspected using an endoscope and were found to be between 10 – 20cm deep. They were considered to have low potential for roosting bats due to the low height from the ground (approximately 75cm – 1m above the ground).

A gap was noted within the join of the wall plate on the southern aspect of the building, located west of the sliding door. This hole was found to extend up through a hole in the boarding above to the roof lining.

The single pitched, slate roof contained several lifted and damaged tiles. The ridge tiles were filled with mortar and contained no suitable gaps for roosting bats. Lifted tiles were present along the southern and western aspect of the building below the ridge tiles and gaps were present along the valley of the roof. Broken and missing tiles were located on the north-eastern corner of the building, with a significant gap present on the eastern aspect which corresponds to a tear in the felt lining below, providing potential access for bats into the building.

The western hip of the building had previously been demolished, resulting in exposed timber framework. Wooden slats had been used to board up the roof void; however, several gaps were present between these slats which provided potential access into the building.

Two security lights were located on the southern aspect of the building and a third light was located on the western end of the building. All three lights were motion sensor activated and appeared to be in working order.

Internally, the section of outbuilding within Clapton Farmhouse ownership boundary was split into two rooms. A boiler room was present at the western end of the building. This room was boarded out with exposed timber framework and a roof void above. The ridge beam was tightly fitted to the boards. All walls were intact and the door and window were tightly fitted. Several crevices were noted within the ceiling boards leading into the roof void, and further gaps were noted on the northern wall around the timber framework and above the wall plate, with exposed rafters present. Ivy was growing through this gap. No evidence of bats was found within the boiler room and it was considered unsuitable for roosting bats largely due to lack of access.

The roof void was lined with bitumen felt and the ridge beam and rafters were covered in a thick layer of cobwebs. The void was accessible from outside via the wooden slats at the western end of the building, which allowed light into the void and created unstable internal conditions (particularly temperature), limiting the suitability for day roosting bats. The eastern end of the void was open, with access into the larger storage room within the outbuilding.

The larger room was used for storage and was cluttered at the time of survey. A sliding door present along the southern aspect of the building was tightly fitted but contained a hole where the door handle was missing. Double doors were located on the western aspect, along with two windows. These features were not tightly fitted. The double doors were rotten at the bottom, with gaps present at the bottom and top of the doors large enough for bats to enter the building. The southernmost window contained no glass pane and was covered by a board propped loosely against the window frame. Gaps were present surrounding the window frame of the other window where the frame was no longer connected to the surrounding wall.

The majority of the room contained no roof void, with the exception of a small section in the centre of the outbuilding, which comprised broken boards and was lined with polystyrene and insulation. The ridge beam and rafters were covered in a thick layer of cobwebs throughout the room. The felt lining contained several tears which exposed the slate tiles above.

A hole was noted within the northern stone wall, approximately 10cm deep and 2cm in width. The hole was filled with cobwebs and woodlice. Access gaps were also noted above the wall plate along the eastern wall, with ivy growing into the building in these areas.

Gaps were present within the timber framework where old timber was rotting away and was held together by new timber beams, which provided crevice roosting opportunities.

A number of broken butterfly wings (mostly small tortoiseshell) were found in the centre of the room surrounding a block post and a wooden post. A possible old bat dropping was found within the building, however it was in a disintegrated condition. It is possible that some evidence may have been missed due to the cluttered nature of the room.

Numerous mouse droppings were found throughout the room, along with several piles of likely fox faeces. A cache of woodmouse Apodemus sylvaticus nuts were found on the wall plate in the centre of the eastern wall and three wasps nests were seen within the building.

The storage room was considered suitable for nesting birds, with an old birds nest found in the south western corner of the room.

The internal dividing wall along the ownership boundaries of the properties contained no gaps and the boards were tightly fitted to the timber beams. It was considered highly unlikely that bats could access the adjoining room beyond the Clapton Farmhouse ownership boundary internally. The roof, however, is continuous along the length of the building and bats could potentially use crevices under the slates to move between the two halves of the building.

Photograph 1: Western aspect of the outbuilding. The brick wall delineates the ownership boundary

Photograph 2: Southern aspect of the outbuilding, showing one of the security lights

Photograph 3: Western end of the outbuilding where hip has previously been demolished. Gaps present between the wooden slats allow access into the roof void above the boiler room

Photograph 4: North eastern corner of the outbuilding, highlighting multiple broken and lifted tiles along the eastern aspect and corner of the northern aspect. Also shows evidence of extensive vegetation clearance surrounding the building

Photograph 5: Slipped tile and ripped felt lining below provides a large access hole into the storage room

Photograph 6: The middle section of the northern stone wall, showing gaps within the mortar providing crevice roosting potential

Photograph 7: Holes within the ceiling board within the boiler room

Photograph 8: Old bird nest (likely robin Erithacus rubecula or blackbird Turdus merula) within the south west corner of the storage room

Photograph 9 and 10: Tears in the felt lining corresponding with gaps in the slate tiles above

Photograph 11: Gap in felt lining above the wall plate on the eastern boundary

Photograph 12: Garden to the north of the outbuilding

The garden was south facing and comprised amenity grassland that was approximately 10-15cm high at the time of survey, as well as scattered trees. The ground immediately surrounding the outbuilding had been cleared of vegetation recently, with the removal of an ash tree on the eastern boundary and two large trees (species unknown) along the northern aspect, as well as a hedgerow immediately adjacent to the east of the outbuilding. Hedgerows/line of trees were present along the northern and western boundaries of the Site. These hedgerows were relatively sparse at the base (although may be fuller in the growing season) and appeared unmanaged being relatively tall and wide. A post and wire fence line was present along the eastern boundary, with a defunct and immature gappy hedgerow, comprising mostly scrub, present along the northern section of the fence.

No evidence of any other protected/notable species were noted during the Site survey. The grassland has limited suitability for common reptile species such as slow worm Anguis fragilis and widespread amphibians may be present on Site within the boundary habitats. The grassland is also suitable for foraging hedgehog Erinaceus europaeus and nesting opportunities are limited to denser parts of the hedgerows. Hazel dormouse Muscardinus avellanarius may also be present in the hedgerows, although records of their occurrence within the immediate area appear to be lacking.

With regard to great crested newt Triturus cristatus, habitats within the Site, such as the grassland edge and hedgerows may provide foraging and shelter opportunities for this species during their terrestrial life stage. There are 25 ponds within 1km of the Site (five of these are within 250m of the Site boundary) as identified on the OS map for the area, and we know that great crested newt have previously been recorded within 1km of the Site. As such, the presence of this species within the Site cannot be ruled out at this stage.

Evaluation

Roosting bats - Although no bats were found during the inspection, the possible old dropping and the group of butterfly wings indicates the building has been used by a bat as a feeding perch (most likely by a long-eared bat) in the past. The main farmhouse is a known brown long-eared roost, and it is likely that the outbuilding could be used by these bats as a night and/or day roost in conjunction with the main roost. The roof structure and walls contain many gaps and crevices which could support crevice roosting bats. As such the outbuilding was considered to offer Moderate suitability for roosting bats.

Foraging and commuting bats – The hedgerows/lines of trees along the northern and western Site boundaries likely provide a commuting corridor for bats within the local landscape and the grassland and trees are likely to provide some foraging opportunities. However, the overall quality of foraging and commuting habitat within the Site has likely deteriorated due to the removal of trees and scrub surrounding the outbuilding. At present the Site is likely to be of Site importance to foraging and commuting bats (although this may increase depending on the occurrence of roosts within the buildings).

Nesting birds - The building was considered suitable for nesting birds, with an old bird nest found within the storage room of the building. The garden was largely unsuitable for nesting birds at the time of the survey due to vegetation clearance that had taken place surrounding the outbuilding and the loss of the large trees. A small number of semi-mature trees and the hedgerows within the garden may provide suitable nesting habitat for birds, and are likely to be used for foraging and shelter. Overall the Site is likely to be of Site importance to nesting birds.

Hedgehog and hazel dormouse – The hedgerows and garden may support foraging and nesting hedgehog and dormouse in conjunction with the wider landscape if these species indeed occur within the area. The value of the Site to these species is unknown at present but is likely to be of at least Site importance if they occur within the locality.

Reptiles – The habitats within the garden, particularly rubbly south facing areas within the amenity grassland, may support more common reptile species such as slow worm. The ecological importance of this is not known at present but would most likely be of Site importance given the relatively small size of the suitable habitat present.

Common toad and other widespread amphibians – As with hedgehogs, the most likely habitats to support these species would be the hedgerows and denser vegetation within the gardens, plus any rubble piles or scrubby areas. Given the number of ponds in the wider landscape, there is an increased likelihood of such species using these habitats during their terrestrial life phase. The Site is likely to be of at least Site importance to these species.

Great crested newts – Suitable terrestrial habitat is present within the Site including hedgerows and grassland. No ponds are present but at least five ponds occur within 250m of the Site boundary (25 ponds within 1km). This species is known to occur within the area and their presence cannot therefore be ruled out. The ecological value of the Site to this species cannot be ascertained at this stage, but given the relatively small size of the garden and limited habitat suitability (restricted to hedgerows and some small areas of grassland), it is likely to be of Site value if this species is present.

5.0 Recommendations

Bats

The outbuilding at Clapton Farmhouse was considered to offer Moderate suitability to support roosting bats. In the first instance it will be necessary to complete an external and internal inspection of the southern section of the outbuilding which falls within a neighbouring property, in order to determine the full impact of the proposals on roosting bats within the outbuilding.

Following this, and in accordance with the BCT guidelines, it is recommended that a minimum of two dusk emergence and / or pre-dawn re-entry surveys of the outbuilding are conducted. These surveys may need to include the entire building as impacts resulting on the demolition could also affect bats roosting in the southern half of the structure. In addition, a static detector survey is also recommended within the building for a period of five consecutive nights to record overnight bat activity such as night roosting inside the structure. These surveys can only be conducted between May and August/September inclusive (ideally mid-June to end of July). If roosting bats are identified, a licence from Natural England to legally permit loss of the roost(s) will be necessary, subject to mitigation such as the provision of alternative roost habitat appropriate for the species and type of roost affected. Such roost habitat may comprise bat boxes, new crevice roost features in the new building and/or night roost habitat in an open structure. These can be designed on completion of the further surveys.

Given the presence of a brown long-eared bat roost within the roof void of the farmhouse following an inspection in 2010, an internal inspection of this roof void is would be helpful to assess the current status of the bat roost, which may assist with the impact assessment (providing context), particularly in relation to lighting impacts and landscaping to restore connectivity between the roost and wider landscape.

The landscaping proposals for the Site should be designed with input from the project ecologist to ensure features/species are included to benefit bats and other wildlife. The lighting strategy should also be designed with ecological input to ensure that lighting impacts are avoided/minimised (bats and most other wildlife are negatively affected by night time light pollution so this will need to be carefully considered as part of the scheme).

Birds

The demolition of the building should take place outside the bird nesting season (usually March to August inclusive). If this is not possible, a nesting bird check will be required by a suitably qualified ecologist no more than 48 hours prior to demolition, in order to rule out their presence. If any nesting birds are found to be present, the demolition works will need to be delayed until all young have fledged (as advised by the ecologist).

Hedgehog, dormouse, reptiles, widespread amphibians and great crested newt

The occurrence of these species is unknown within the Site but they could be present, particularly within denser vegetation such as the hedgerows, and rougher areas of grassland. The recent vegetation and tree clearance will have diminished the Site for wildlife but these species could still occur in more sheltered/protected areas. It is recommended that the landscape proposals are assessed by an ecologist to determine the risk of harm to protected/notable species and proposed measures to minimise such risk. The inclusion of suitable habitats and species to benefit local wildlife can also be discussed.

Ecological Impact Assessment (EcIA)

An EcIA will be prepared following completion of the required further bat surveys. The EcIA will assess the potential for impacts on protected and notable species and will provide detailed mitigation measures where necessary to ensure that any potential impacts are not significant.

6.0 Summary

This document acts as an interim report with the intention that an Ecological Impact Assessment is prepared following completion of the further ecological surveys that have been recommended. The EcIA will assess the potential for impacts on protected and notable species and will provide detailed mitigation measures where necessary to ensure that any potential impacts are not significant. A detailed conclusion will be made on completion of the further work.

The outbuilding at Clapton Farmhouse was found to contain potential roost features for bats and was considered to be of 'Moderate' suitability according to the BCT guidelines. The building was also found to provide opportunities for nesting birds.

It is recommended that further bat surveys are undertaken to confirm the presence or likely absence of roosting bats. If roosting bats are identified, a licence from Natural England to legally permit loss of the roost(s) will be necessary, subject to mitigation.

An external and internal inspection on the adjoining outbuilding within the neighbouring property will need to be undertaken in order to determine the full impact of the proposals on roosting bats.

A brown long-eared roost was identified within the roof void of the main building during a survey in 2010. An update inspection of this roof void is recommended to assess the current status of any bat roost within the property and inform the impact assessment.

A pre-demolition check for nesting birds has also been recommended no more than 48hrs prior to demolition in order to ensure no nesting birds are disturbed by the proposed works (if works take place March – August inclusive). If any nesting birds are found to be present, the demolition works will need to be delayed until all young have fledged. Further monitoring of the inactive badger sett has also been recommended.

It is recommended that the landscape proposals are assessed by an ecologist to determine the risk of harm to protected/notable species including hedgehog, dormouse, reptiles, widespread amphibians and great crested newt, and proposed measures to minimise such risk. The inclusion of suitable habitats and species to benefit local wildlife can also be discussed.

APPENDIX A: WILDLIFE LEGISLATION & SPECIES INFORMATION

BATS

All 17 species of bat known to breed in England and Wales, and their roost sites, are protected under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'. This makes it an offence to deliberately kill or injure a bat, or to deliberately disturb a bat such that its ability to hibernate, breed or rear young, or such that the species' distribution, were significantly affected. It is also an offence to damage or destroy any breeding site or resting place. Intentional or reckless disturbance of bats in their resting places, and damage to or obstruction of resting places are also offences under the Wildlife and Countryside Act 1981 (as amended). Under UK law a bat roost is "any structure or place which any wild [bat]...uses for shelter or protection". As bats tend to reuse the same roosts, legal opinion is that the roost is protected whether or not the bats are present at the time. Penalties for offences against bats or their roosts include fines of up to £5,000 and/or up to six months in prison.

As a result, development works which are likely to involve the loss of or alteration to roost sites, or which could result in killing of or injury to bats, need to take place under licence. Works which could disturb bats may also be licensable, though this needs to be assessed on a case by case basis, as bats' sensitivity to disturbance varies depending on normal background levels, and the definition of disturbance offences under the Habitats Regulations is complex. In practice this means that works involving modification or loss of roosts (typically in buildings, trees or underground sites) or significant disturbance to bats in roosts are likely to be licensable.

Licences can be obtained from Natural England or the Welsh Government to permit works that would otherwise be illegal, provided it can be demonstrated that the proposed works are needed to protect public health or safety, or for other reasons of overriding public interest including social and economic reasons. It is also necessary to demonstrate that there is no satisfactory alternative to the proposed works, and that the conservation status of bats in the area will be maintained. Appropriate mitigation and post-construction monitoring are therefore a requirement of all licences.

BIRDS

All British birds, their nests and eggs (with certain exceptions) are protected under the Wildlife & Countryside Act 1981 (as amended) which makes it an offence to: intentionally kill, injure or take a wild bird; intentionally take, damage or destroy nests which are in use or being built; intentionally take or destroy birds' eggs; or possess live or dead wild birds or eggs. A number of species receive additional protection through inclusion on Schedule 1 of the Wildlife and Countryside Act; for these it is also an offence to intentionally or recklessly disturb birds while nest building, or at a nest containing eggs or young, or to disturb the dependant young of such a bird. Penalties for offences against bird species include fines of up to £5,000 and/or up to six months in prison.

General licences for control of some bird species are issued by Natural England and Natural Resources Wales in order to prevent damage or disease, or to preserve public health or public safety, but it is not possible to obtain a licence for control of birds or removal of eggs/nests for development purposes. Consequently if nesting birds are present on a development site when works are programmed to start it is usually necessary to delay works, at least in the areas supporting nests, until any chicks have fledged and left the nest. It is usually possible, once chicks have hatched, for an experienced ecologist to predict approximately when they are likely to fledge, in order to inform programming of works on site.

AMPHIBIANS

Great Britain supports seven native amphibian species. The four most widespread species; smooth and palmate newts, common frog, and common toad, receive partial protection under the Wildlife and Countryside Act 1981 (as amended) which prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy. The great crested newt, pool frog and natterjack toad are also fully protected in England and Wales under the Conservation of Habitats and Species Regulations 2017. Penalties for offences against amphibian species include fines of up to £5,000 and/or up to six months in prison.

Four amphibian species (great crested newt, pool frog, common toad, natterjack toad) are listed as priority species under the UK Biodiversity Action Plan, and are therefore considered to be Species of Principal Importance in England and Wales (excluding the pool frog, which does not occur in Wales) under the Natural Environment and Rural Communities (NERC) Act 2006. All public bodies including local and regional authorities have a duty under this legislation to have regard for the conservation of biodiversity.

GREAT CRESTED NEWTS

Great crested newts are protected in England and Wales under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'. This makes it an offence to deliberately kill or injure a great crested newt, or to deliberately disturb a great crested newt such that its ability to hibernate, breed or rear young, or such that the species' distribution, were significantly affected. It is also an offence to damage or destroy any breeding site or resting place for great crested newts. Intentional or reckless disturbance of great crested newts in places of shelter (ponds or terrestrial refuges), and damage to or obstruction of places of shelter are also offences under the Wildlife and Countryside Act 1981 (as amended). Penalties for offences against great crested newts include fines of up to £5,000 and/or up to six months in prison.

As a result, development works which are likely to involve the loss of ponds or terrestrial habitat, or which could result in killing of or injury to great crested newts, need to take place under licence. Works which could disturb great crested newts may also be licensable, though this is rarely the case unless loss of great crested newt habitat is also proposed, and should be assessed on a case by case basis. In practice this means that works involving any removal of or significant modification to ponds or terrestrial habitats (typically rough grassland, scrub, hedgerow bases and woodland) supporting great crested newts are likely to be licensable.

Licences can be obtained from Natural England or the Welsh Government to permit works that would otherwise be illegal, provided it can be demonstrated that the proposed works are needed to protect public health or safety, or for other reasons of overriding public interest including social and economic reasons. It is also necessary to demonstrate that there is no satisfactory alternative to the proposed works, and that the conservation status of great crested newts in the area will be maintained. Appropriate mitigation and post-construction monitoring are therefore a requirement of all licences.

REPTILES

All six native reptile species receive protection under the Wildlife and Countryside Act 1981 (as amended). The four more common species (common lizard Zootoca vivipara, slow-worm Anguis fragilis, adder Vipera berus and grass snake Natrix helvetica) receive partial protection which makes it an offence to intentionally kill or injure a reptile. The two other reptile species (smooth snake Coronella austriaca and sand lizard Lacerta agilis), both of which are rare with very restricted UK ranges receive full protection under the Conservation of Habitats and Species Regulations 2017. Penalties for offences against reptile species include fines of up to £5,000 and/or up to six months in prison.

Works such as site clearance or topsoil stripping which could result in killing or injury of reptiles could be considered result in an offence unless measures are taken to minimise the risk of this occurring. Any inadvertent impacts on common reptile species despite these mitigation measures being in place would be considered an 'incidental result of an otherwise lawful operation' which 'could not reasonably have been avoided' and therefore not an offence. Works which could affect smooth snakes or sand lizards, or their habitats, would need to take place under licence from Natural England or Natural Resources Wales. However sites supporting smooth snakes or sand lizards are very rarely affected by development proposals.

In practice, mitigation for impacts of development on common reptiles generally comprise one or more of the following techniques: displacement, in which reptiles are encouraged to move to suitable retained habitat by changing the management of areas affected by development; exclusion, where reptile-resistant fencing is provided between a development site and suitable retained habitat allowing reptiles to be trapped from the development footprint and released elsewhere on the site; and translocation, where animals are trapped from a development site and released on another suitable site nearby. Reptile mitigation proposals, particularly those involving translocation of animals, should be agreed in advance with the local planning authority.

DORMICE

Dormice and their nests are protected in England and Wales under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'. This makes it an offence to deliberately kill or injure a dormouse, or to deliberately disturb a dormouse such that its ability to hibernate, breed or rear young, or such that the species' distribution, were significantly affected. It is also an offence to damage or destroy any breeding site or resting place. Intentional or reckless disturbance of dormice in their nests, and damage to or obstruction of nests are also offences under the Wildlife and Countryside Act 1981 (as amended). Penalties for offences against dormice or their nests include fines of up to £5,000 and/or up to six months in prison.

As a result, development works which are likely to involve the loss of nest sites, or which could result in killing of or injury to dormice, need to take place under licence. Works which could disturb dormice may also be licensable, though this is rarely the case unless loss of dormouse habitat is also proposed, and should be assessed on a case by case basis. In practice this means that works involving any removal of habitat (typically woodland, hedgerows, and scrub) supporting dormice are likely to be licensable.

Licences can be obtained from Natural England or the Welsh Government to permit works that would otherwise be illegal, provided it can be demonstrated that the proposed works are needed to protect public health or safety, or for other reasons of overriding public interest including social and economic reasons. It is also necessary to demonstrate that there is no satisfactory alternative to the proposed works, and that the conservation status of dormice in the area will be maintained. Appropriate mitigation and post-construction monitoring are therefore a requirement of all licences.

PLANNING POLICY IN RELATION TO BIODIVERSITY – ENGLAND

The National Planning Policy Framework (NPPF), was published in March 2012 and revised in July 2021. Additional guidance can be found online at http://planningguidance.planningportal.gov.uk/blog/guidance/. The NPPF simplifies and collates a number of previous planning documents and outlines the government's objective towards biodiversity.

The NPPF identifies ways in which the planning system should contribute to and enhance the natural and local environment (Paragraph 174), including:

- (a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- (b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

- (f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate. protecting and enhancing valued landscapes, geological conservation interests and soils;

It also emphasises the importance of conserving biodiversity and areas covered by landscape designations (Paragraph 176):

Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

When determining planning applications, the NPPF states that local planning authorities should aim to conserve and enhance biodiversity (Paragraph 175) by applying principles including:

- (a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- (b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- (c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons[6] and a suitable compensation strategy exists; and
- (d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

The following should be given the same protection as habitats sites:

- (a) potential Special Protection Areas and possible Special Areas of Conservation;
- (b) listed or proposed Ramsar sites7; and
- (c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

There is a general presumption in favour of sustainable development within the NPPF. It is noted in Paragraph 182 that this presumption does not apply where the plan or project is likely to have a significant effect on a habitat site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

The Natural Environment and Rural Communities Act (2006) states that a 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; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "Conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them".

ECOLOGICAL ENHANCEMENTS

The Natural Environment and Rural Communities Act (2006) states that a 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; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat". DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "Conserving biodiversity can include restoring or enhancing a population or habitat"".

In England, the National Planning Policy Framework (NPPF), issued in July 2021, states that the planning system should contribute to "minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;. It also states that "opportunities to incorporate biodiversity in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity".

UK BIODIVERSITY ACTION PLANS

The UK Biodiversity Action Plan (UK BAP) 2011 is a policy first published in 1994 to protect biodiversity and stems from the 1992 Rio Biodiversity Earth Summit. The policy is continuously revised to combine new and existing conservation initiatives to conserve and enhance species and habitats, promote public awareness and contribute to international conservation efforts. Each plan details the status, threats and unique conservation strategies for the species or habitat concerned, to encourage spread and promote population numbers.

Species or habitats identified as priorities under the UK Biodiversity Action Plan receive some status in the planning process through their identification as Species/Habitats of Principal Importance in England and Wales, under the Natural Environment and Rural Communities (NERC) Act 2006 (as amended).

Current planning guidance in England, the National Planning Policy Framework, does not specifically refer to Species or Habitats of Principal Importance, though it includes guidance for conservation of biodiversity in general. Supplementary guidance is available online at

http://planningguidance.planningportal.gov.uk/blog/guidance/ and this guidance indicates that it is 'useful to consider' the potential effects of a development on the habitats or species on the Natural Environment and Rural Communities Act 2006 section 41 list.