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Land at Round Oak Cottage
Burford
Tenbury Wells
WR15 8HW

Preliminary Ecological Appraisal

DAWN GILLARD

VERSION 2

Final

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Contents

Executive Summary

BiOME Consulting Ltd was commissioned by Dawn Gillard (in March 2023) to undertake a Preliminary Ecological Appraisal (PEA) to inform the construction of an eco-build dwelling and new access within a field located to the south of Round Oak Cottage, Burford, Tenbury Wells (The '*site*'). The site was situated in a rural area, with predominantly farmland and occasional scattered dwellings present in the wider area.

The PEA was completed in order to determine the baseline ecological conditions of the site, with particular attention given to the possible presence of protected, controlled or otherwise notable species. The ecological issues identified during the PEA were:

Designated Sites: One nationally designated site was present within the relevant search areas: River Teme Site of Special Scientific Interest, 1.51km to the southeast. Standard pollution control measures should be implemented during construction to protect habitats on/adjacent to the site and designated site.

Assuming environmental best practice and taking into account the small-scale nature of the project, no impacts to designated sites are anticipated.

Habitats: Habitats within the site are of low ecological value. Mitigation and compensation measures are recommended to offset impacts relating to habitat loss.

Badger and other Mammals; The site could provide foraging habitat for Badgers (and other animals) and these species should be considered during development of the site, with appropriate mitigation implemented to minimse the risk of harm.

Bats: No potential roost features were present in areas to be directly or indirectly impacted. The presence of occasional foraging/commuting bats in the vicinity of the site was identified; a sympathetic lighting scheme should be developed to ensure that impacts to foraging/commuting bats is minimised so far as practicable possible.

Nesting Birds: In its current state, it is considered highly unlikely that birds would nest within the site.

The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. Management of the site should continue in its current form. In the highly unlikely event that any active nests are found a Suitable Qualified Ecologist (SQE) should be contacted immediately and it would be necessary to delay works until the nesting attempt has reached a natural conclusion.

Report Validity: The findings of this report are considered valid for up to 12 months from the date of this report. If the project is delayed beyond this period, an updated assessment of potential impacts will be required.

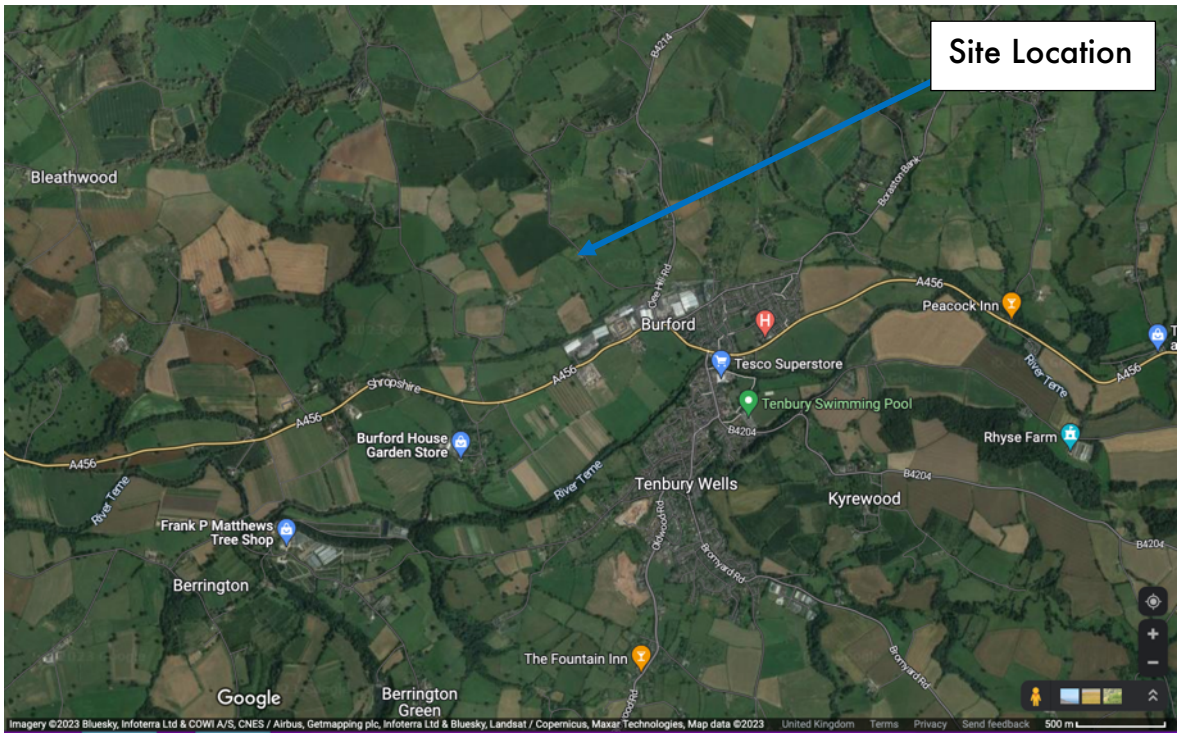
1. Introduction

BiOME Consulting Ltd was commissioned by Dawn Gillard in February 2023 to undertake a Preliminary Ecological Appraisal (PEA) of a field/garden (the 'site') located to the north of Round Oak Cottage, Burford, Tenbury Wells. It is proposed to construct an eco-build dwelling and new access within the site.

The site (**Figure 1**) (centred on National Grid Reference SO 58552 69756) encompassed an area of approximately 0.2 hectares and included managed/mown grassland and a small vegetable garden. The site was located in a rural area, with scattered dwellings and roads also present.

The ecology surveys detailed within this report were completed in order to determine the baseline ecological conditions of the site, with particular attention given to the possible presence of protected, controlled or otherwise notable species. The results have been used to identify further ecological work/mitigation/licencing required to enable the proposed works at the site to proceed lawfully.

Figure 1. Site location



2. Relevant Legislation

Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Habitats Regulations convey special protection to a number of species, which are listed in Schedule 2 of the Regulations and are referred to as European Protected Species (EPS). These species are listed below, with those of potential relevance to this project (based on known distribution and habitats requirements) are emboldened:

- **Horseshoe Bats (all species)**
- **Typical bats (all species)**
- Large blue butterfly *Maculinea arion*
- Wild cat *Felis silvestris*
- Dolphins, porpoises and whales (all species)
- **Hazel dormouse *Muscardinus avellanarius***
- Sand lizard *Lacerta agilis*
- **Great Crested Newt *Triturus cristatus* (GCN)**
- **Otter *Lutra lutra***
- Smooth Snake *Coronella austriaca*
- Sturgeon *Acipenser sturio*
- Natterjack Toad *Bufo calamita*
- Marine turtles (*Caretta caretta, Chelonia mydas, Lepidochelys kempii, Eretmochelys imbricate, Dermochelys coriacea*)
- Shore Dock *Rumex rupestris*
- Killarney Fern *Trichomanes speciosum*
- Early Gentian *Gentianella angelica*
- Lady's Slipper *Cypripedium calceolus*
- Creeping Marshwort *Apium repens*
- Slender Naiad *Najas flexilis*
- Fen Orchid *Liparis loeselii*
- Floating-leaved Water Plantain *Luronium natans*
- Yellow Marsh Saxifrage *Saxifraga hirculus*

Regulation 43 makes it an offence to:

- Deliberately capture, injure or kill any wild animal of a EPS;
- Deliberately disturb wild animals of such a species;
- Deliberately take or destroy the eggs of such a species;
- Damage or destroy a breeding site or resting place of such an animal.

Disturbance in the context of the offences above is disturbance which is likely to impair the ability of the animals to survive, to breed or reproduce, to nurture their young, to hibernate, to migrate; or to affect significantly the local distribution of the species.

Licences can be granted by the relevant Statutory Nature Conservation Organisation (SNCO) for developments (sometime referred to as EPS Licences or Derogation Licences) providing the purpose of the licence is for "*preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment*".

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) provides protection to both EPS and other species including wild birds, Water Voles *Arvicola amphibius* and reptiles.

All wild birds, their nests and eggs are protected, with some rare species afforded extra protection from disturbance during the breeding season (these species are listed in Schedule 1 of the Act). It is illegal to take any wild bird or damage or destroy the nests and eggs of breeding birds. There are certain exceptions to this in respect of wildfowl, game birds and certain species that may cause damage.

In England (and Wales) Water Voles are listed on Schedule 5 of the Act, receiving full protection since 2008. The Wildlife and Countryside Act 1981 together with amending legislation, lists the following offences:

- Intentionally killing, injuring, or taking a Water Vole by any method.
- Intentionally or recklessly damaging or destroying a water vole place of shelter or protection.

- Intentionally or recklessly damaging disturbing a water vole whilst it is occupying such a structure or place it uses for shelter or protection.
- Intentionally or recklessly obstructing access to a Water Vole's place of shelter or protection.
- Selling, offering for sale, or possessing or transporting for the purposes of sale, any live or dead water vole, or any part or derivative, or advertising any of these for buying or selling.

All native reptilian species in the UK are subject to partial protection from intentional or reckless killing or injury only.

The Act also includes provisions for the control of invasive non-native species (INNS). Under these provisions it is an offence to:

- Release or allow to escape into the wild any animal which is not ordinarily resident or a regular visitor to Great Britain or is included in Schedule 9 of the Act.
- Plant or otherwise cause to grow in the wild any plant which is included in Schedule 9 of the Act.

People undertaking works in proximity to invasive non-native plant species should take all reasonable steps and exercise all due diligence to avoid committing an offence.

The Invasive Alien Species (Enforcement and Permitting) Order 2019

The order came into effect on the 1 December 2019 to allow for enforcement of EU Regulations (Regulation (EU) No. 1143/2014 on the prevention and management of the introduction and spread of invasive alien species in England and Wales) also known as the IAS Regulations.

There are currently 19 species listed in the Order:

- Chinese Mitten Crab *Eriocheir sinensis*
- Red Swamp Crayfish *Procambarus clarkii*
- Crayfish Signal *Pacifastacus leniusculus*
- Spiny Cheek Crayfish *Orconectes limosus*
- Muntjac Deer *Muntiacus reevesi*

- Ruddy Duck *Oxyura jamaicensis*
- Egyptian Goose *Alopochen aegyptiacus*
- Grey Squirrel *Sciurus carolinensis*
- Himalayan Balsam *Impatiens glandulifera*
- Fanwort (otherwise known as Carolina Water Shield) *Cabomba caroliniana*
- Giant Hogweed *Heracleum mantegazzianum*
- Water Hyacinth *Eichhornia crassipes*
- Parrots Feather *Myriophyllum aquaticum*
- Floating Pennywort *Hydrocotyle ranunculoides*
- Floating Water Primrose *Ludwigia peploides*
- Water Primrose *Ludwigia grandiflora*
- Giant Rhubarb *Gunnera tinctoria*
- Curly Waterweed *Lagarosiphon major*
- Nuttall's Waterweed *Elodea nuttallii*

Natural Environment and Rural Communities (NERC) Act 2006

The UK Biodiversity Action Plan (BAP) was a programme designed to help conserve the UK's biodiversity. It led to the production of 436 action plans between 1995 and 1999 to help many of the UK's most threatened species and habitats to recover. A review of the UK BAP priority list in 2007 led to the identification of 1,150 species and 65 habitats that met the BAP criteria at UK level.

Currently 56 Habitats of Principal Importance and 943 Species of Principal Importance are included within Section 41 of the NERC Act 2006 and these include species and habitats which were identified in the UK BAP and which continue to be considered to represent the conservation priorities of England in the UK Post-2010 Biodiversity Framework.

National Planning Policy Framework (NPPF) 2021

The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

174 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);

174 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;

174 c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

174 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;

174 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

174 f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

3. Methodologies

3.1. Suitably Qualified Ecologist Details

The PEA site survey and assessment was completed by experienced ecologist, Martyn Owen BSc (Hons) MCIEEM. Martyn holds NE survey licences in relation to bats, GCN and a variety of Schedule 1 birds.

3.2. Desk Study

A desk study was undertaken to identify any existing ecological information relating to the site and its surroundings. The Multi-Agency Geographic Information for the Countryside (MAGIC) website[1] was reviewed for information on internationally designated sites of nature conservation importance within 5km of the study area and nationally designated sites of nature conservation importance within 2km. The search included the following internationally designated sites: Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar Sites, and the following nationally designated sites: Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs).

In addition, ecological records were obtained from MAGIC for information relating to Granted EPS applications and GCN Class Survey Licence Returns within 2km.

Due to the nature of the proposals, the extent of potential impacts and the results of the site survey, the purchase of species records from the local biological records centre was not considered necessary.

3.3. Preliminary Ecological Appraisal Survey

A PEA site survey[2] was undertaken on 1 March 2023 in suitable weather conditions (overcast and dry). Prior to the completion of the site survey, aerial imagery was reviewed[3] to provide an indication of habitat types present in the area.

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1 www.magic.gov.uk

2 CIEEM (2017) *Guidelines for preliminary ecological appraisal* [online] available at: https://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea- (accessed 1 March 2023)

3 Google Maps [online] available at: https://www.google.co.uk/maps (accessed 1 March 2023)

During the survey all areas within the site and adjacent areas were walked and habitat types assessed. Signs of protected species, invasive plants (*i*.e. those included on Schedule 9 of the WCA 1981 (as amended)) and other notable species were also searched for, as well as noting habitats considered to have the potential to support protected species.

The ultimate purpose of this PEA was to identify potentially valuable habitats and plant species assemblages, and to identify the presence and/or potential for protected/controlled species. This report presents an assessment of the ecological significance of the features present and discusses the potential for the site to support legally protected species and/or species of conservation interest which may be impacted by the project.

3.4. Limitations

The findings presented in this report represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys can be limited by factors affecting the presence of plants and animals, such as the time of year, migration patterns and behaviour.

Whilst not a full protected species or botanical survey, a PEA allows an experienced ecologist to obtain a sufficient understanding of the ecology of a site in order to either evaluate the conservation importance of the site, and assess the potential for impacts on habitats and species likely to represent a material consideration in planning terms, or to ascertain that further surveys will be required before such an evaluation can be made.

The survey was undertaken in early March, at a time when the majority of floral species would not be evident. However, it is acknowledged that the survey does not intend to provide an exhaustive species list. It is considered that the habitats present within the site could be appropriately identified and a likely conservation value assigned at the time of the survey.

The absence of evidence of any particular species should not be taken as conclusive proof that the species is not present or that it will not be present in the future.

4. Results

The results of the desk study (**Section 4.1**) and the site surveys (**Section 4.2**) are presented below.

4.1. Desk Study

4.1.1. Designated Sites

There were no internationally designated sites within the 5km search area with one nationally designated site was present within the 2km search area. Detail is provided within **Table 1**.

Table 1. Designated site details

Designated Site	Distance/ Direction	Reason(s) for Designation
Nationally Designated Sites (2km)		
River Teme Site of Special Scientific Interest (SSSI)	1.51km/SE	The River Teme is the second largest tributary of the River Severn, draining a hilly, predominantly rural catchment of Silurian and Devonian rocks. The notified channel is of special interest as a representative, near-natural and biologically-rich river type associated with sandstone and mudstones. This type has a mainly northern and western distribution in Britain but is especially characteristic of the Welsh Marches. The Teme demonstrates a close relationship with the underlying geology. A short, rapid flowing upland section, with nutrient-poor and relatively acidic waters, changes to a more basic and naturally nutrient-rich system for most of the river's length as it passes over Silurian shales and mudstones, and the Old Red Sandstone strata. At its lowest section, the Teme is a sluggish, lowland river on soft deposits. These attributes and the high-water quality, support significant river plant, fish and invertebrate communities and Otter populations.

4.2. PEA/PRA Site Survey

4.2.1. Habitats

The site comprised a grassed field, which was largely mown and used as a garden area (**Photograph 1**). A small vegetable patch (**Photograph 2**) was present in the southern corner. Around the periphery, which was defined by stockproof fencing and/or a Hawthorn *Crataegus monogyna* hedge, the grassland was less frequently mown and included thistles *Cirsium* spp., umbellifers *Apiaceae* spp., docks *Rumex* spp. and Ribwort Plantain *Plantago lanceolata* (**Photograph 3**)

Photograph 1. The site, viewed from the south

Photograph 2. Vegetable garden, viewed from the north

Photograph 3. Typical grassland around the site periphery

The habitats present were not considered to be of significant ecological value and no further survey work in relation to these habitats is deemed necessary.

4.2.2. Species

4.2.2.1. Bats

The desk study identified two EPS mitigation licences in relation to bats:

- 1.56km/SE – Damage of a resting place: Common Pipistrelle *Pipistrellus pipistrellus*
- 1.63km/SE – Destruction of a breeding site: Common Pipistrelle, Soprano Pipistrelle

There were no buildings/structures or trees within the site or in areas where potential impacts may occur.

It is probable that the site is used by bats for foraging/commuting purposes, although the habitats present and its exposed nature suggest that this would be infrequent. No further works in relation to bats are deemed necessary.

4.2.2.2. Badger

No evidence of Badger was present within the site/adjacent areas, however, the possible presence of occasional foraging Badgers within the site is considered possible, if present in the wider area.

No further survey work is considered necessary, however, mitigation is required during the construction period to ensure no Badgers are harmed.

4.2.2.3. Other Section 41 Mammals

It is likely that Hedgehogs *Erinaceus europaeus* are present in the local area. Optimal habitats for other Section 41 mammal species are absent from the site and immediate surrounding area. Taking into account the abundance of similar habitats in the vicinity, the potential for adverse impacts to Hedgehog, or any other Section 41 mammal species within the site as a consequence of the proposed works, is considered highly unlikely.

No further work in relation to other Section 41 mammals is considered necessary. Section 41 mammals are not considered further within this report.

4.2.2.4. Amphibians

No information relating to granted EPS mitigation licences for GCN were available on MAGIC.

Following review of aerial imagery and Ordnance Survey maps, no ponds were identified as present within 0.25km of the site (considered to be the typical ranging distance from a breeding pond for the majority of a population of GCN[4]).

Based on the results of the desk study and PEA, the presence of GCN in areas to be impacted by the proposal is considered highly unlikely. No further works are considered necessary and amphibians are not considered further within this report.

4.2.2.5. Reptiles

Habitats favoured by reptiles tend to be sunny, well-drained and often south-facing. Typical habitats include grass and heather heathland, chalk downland, coppiced woodland, sand dunes, disused allotments, suburban wasteland, road/railway embankments, golf course roughs, rough grassland, open woodland and woodland edge, immature plantation forestry, sea cliffs, moorland, disused quarries, non-intensive farmland and wild gardens. In addition, Grass Snakes *Natrix helvetica* favour damp habitats[5].

Taking into account the nature of the habitats to be impacted/adjacent areas, the potential for impacts to any reptilian species is considered highly unlikely. No further works are considered necessary and reptiles are not considered further within this report.

4.2.2.6. Birds

No birds were recorded within the site or in the immediately surrounding area during the site survey. It its current state, no suitable bird nesting habitat will be impacted by the proposal.

4 English Nature (2001). *Great Crested Newt Mitigation Guidelines*

5 Froglife (1999). *Froglife Advice Sheet 10; Reptile Survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*

No further survey work in relation to breeding/nesting birds is considered necessary. However, mitigation may be required (**Section 5**).

4.2.2.7. Invertebrates

Taking into account the nature of the habitats on-site/nearby it is considered highly unlikely that significant populations/species of invertebrates are present and no further works relating to invertebrates are considered necessary. Invertebrates are not considered further within this report.

4.2.2.8. Invasive Plants

No non-native invasive plant species listed on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) were observed during the survey.

No further work in relation to invasive plants is considered necessary. Invasive plants are not considered further within this report.

5. Conclusions and Recommendations

A PEA site survey/complimentary desk study have been completed to inform the construction of an eco-build dwelling and new access within a field located to the south of Round Oak Cottage, Burford, Tenbury Wells. These surveys identified the below detailed ecological considerations/requirements, along with recommendations to ensure that the works are carried out lawfully and in such a manner as to minimise ecological impacts.

5.1. Designated Sites

Standard pollution control measures should be implemented during construction to protect habitats on/adjacent to the site and designated sites.

Assuming environmental best practice, and taking into account the small-scale nature of the project, no impacts to designated sites are anticipated.

5.2. Habitats

Habitats within the site are of low ecological value. It is recommended that all hedgerows are retained and gaps infilled with locally sourced, native species. It is also recommended that a landscape/planting scheme is developed to maximise ecological gain. This could include:

- The planting of native trees around the site periphery.
- Management of grassland to increase sward diversity.

5.3. Badger and other mammals

The site could provide foraging habitat for Badgers and other animals and this should be considered during development of the site, to include:

- covering trenches at the conclusion of each working day, or include a means of escape for any animal falling into excavations, and
- any temporarily exposed open pipe system should be capped in such a way as to prevent Badgers gaining access.

5.4. Bats

No potential roost features were present on areas to be directly or indirectly impacted. The presence of occasional foraging/commuting bats in the vicinity of the site was identified; a sympathetic lighting scheme should be developed to ensure that impacts to foraging/commuting bats is minimised so far as practicable possible.

To minimise impacts to bats during construction, works during the period between 15 minutes before sunset and 15 minutes after sunrise should be avoided/minimised so far as practicably possible. If temporary lighting is necessary, it should be directed to where it is needed, and light spillage avoided.

To ensure that impacts commuting/foraging bats from permanent lighting are minimised so far as practicably possible, lighting should be directed to where it is needed and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.

The height of lighting columns in general should be as short as is possible as light at a low level reduces any ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reducing horizontal spill. For access lighting this can take the form of low-level lighting that is as directional as possible and below 3 lux at ground level.

Light levels should be as low as possible and if lighting is not needed, it should be avoided.

Many security lights are fitted with movement sensors which, if well installed and aimed, will reduce the amount of time a light is on each night. This is more easily achieved in a system where the light unit and the movement sensor are able to be separately aimed. If the light is fitted with a timer this should be adjusted to the minimum to reduce the amount of 'lit time'. The light should be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. A shield or hood can be used to control or restrict the area to be lit. Avoid illuminating at a wider angle as this will be more disturbing to foraging and commuting bats and other wildlife.

5.5. Nesting Birds

In its current state, it is considered highly unlikely that birds would nest within the site.

The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. Management of the site should continue in its current form. In the highly unlikely event that any active nests are found a Suitable Qualified Ecologist (SQE) should be contacted immediately and it would be necessary to delay works until the nesting attempt has reached a natural conclusion

5.6. Opportunities for Enhancement

The National Planning Policy Framework (NPPF) sets out national planning policies for the protection of biodiversity (and geological) conservation through the planning system. A key principle of NPPF is that, '*Opportunities to incorporate biodiversity in and around developments should be encouraged*'. Taking the requirements of NPPF into account, opportunities should be sought where possible for nature conservation enhancement at this site.

Opportunities may exist to create small habitat areas and to use native species in any landscape planting. Opportunities also exist to enhance the site for bird species through the incorporation of bat/bird boxes into built structures. Species of conservation concern (e.g. House Sparrow *Passer domesticus*) could potentially benefit from the provision of appropriate boxes. Such measures would therefore be beneficial to nature conservation and show compliance with the policy guidance.

5.7. Report Validity

The findings of this report are considered valid for up to 12 months from the date of this report[6]. If the project is delayed beyond this period, an updated assessment of potential impacts will be required.

6 CIEEM (2019). *Advice Note on The Lifespan of Ecological Reports and Surveys* [online] available at: https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf