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Ecological Surveys • Habitat Management • Arboricultural Surveys • Vegetation Clearance

Ecological Appraisal- Building Inspection

Envar Composting Ltd., Woodhurst

[NGR: TL 33406 75296]

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On behalf of: Envar Composting Ltd.

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1.0 Executive Summary

1.1 Rationale

Greenwillows Associates Ltd. was commissioned to conduct an ecological appraisal of an area of buildings at Envar Composting Ltd., Woodhurst, Cambridgeshire.

The aim of the ecological appraisal was to provide *inter alia*, an assessment of the likely impacts a proposed scheme might have upon notable and/or protected species and habitats and the results of follow up detailed/specialist surveys.

The construction proposals relate to the demolition of an area of buildings and the construction of new industrial buildings related to a new Dry Anaerobic Digestion Facility and Clinical Waste Incinerator.

Within this report, the term ‘wider site’ refers to the entire site under Envar ownership (including those areas outside the survey area), the ‘works’ footprint’ refers to those areas where works are expected to take place as per proposed plan GPP/E/CWH/21/03 (see Appendix One) and the ‘survey area’ is confined to those areas surveyed by Greenwillows Associates Ltd (see Appendix Two).

1.2 Essential Evidence, Conclusions and Recommendations

1.2.1 General Wider Site Description

The wider site is a working composting processing site comprising a variety of industrial structures, offices, car parks, lagoons and frequently disturbed ground. Within this, the survey area includes a large concrete built industrial unit (currently used as storage) with adjoining derelict fan rooms. Adjoining the survey area are derelict material roofed tunnels previously used to grow mushrooms. These areas are to be demolished to make way for the construction of new units.

Table One: Conclusions and Recommendations

Potential Receptor	Conclusions	Recommendations
Berry Fen SSSI and Ouse Fen SSSI	As the proposed new works include a new Dry Anaerobic Digestion Facility and Clinical Waste Incinerator, the survey area falls into the SSSI Impact Risk Zone for Berry Fen and Ouse Fen SSSI.	Natural England will need to be consulted to assess the impact of the proposed works on these sites.
Nesting Birds	There is potential for nesting birds within the structures to be demolished. Swallows were observed using the wider site and a small number of swallow and	It is recommended that mitigation procedures are followed to avoid impacting on nesting birds and that nesting habitat compensation is included in the design of the site.

	<p>pigeon nests were noted within the buildings to be demolished.</p> <p>If nests are disturbed during the process of incubation and rearing, then mortality of chicks could occur.</p>	<p>See Section 8 for more details.</p>
<p>Bats</p>	<p>The structures to be demolished were generally assessed as being unsuitable to support roosting bats. However, there are a low number of potential roosting features present within a supporting wall that could support low numbers of bats. These were closely inspected by torch from a ladder at the time of surveying and no evidence of bats was found.</p> <p>The wider site generally offers suitable habitat to support foraging and commuting bats.</p> <p>If buildings used as roosting habitat are removed/worked on without mitigation, there is a risk of killing/injuring bats and destroying roosting habitat.</p>	<p>As a precautionary measure, mitigation practices will be followed to avoid impact on bats potentially using the survey area. See Section 8 for more details.</p>

2.0 Introduction and Terms of Reference

2.1 This report was commissioned to provide *inter alia*:

- An assessment of the likely impacts the proposed scheme might have upon notable and/or protected species and where such features might be affected to identify the need for any follow up detailed/specialist surveys.
- Recommendations to avoid potential adverse impacts upon notable and/or protected species identified as potential receptors within the construction footprint or the relevant zones of influence associated with each receptor.
- An informative document for use by the Local Planning Authority as part of the planning process.

1.2 Based on the Bat Conservation Trust's Good Practice Guidelines (2016) a preliminary roost assessment was undertaken by means of an inspection of both the internal voids and externals of the buildings within the target survey area.

1.3 The surveys were based on proposed plans (Drawing Reference: GPP/E/CWH/21/03, see Appendix One) provided by the client, aerial photographs and discussions with the client. This report was commissioned solely to assess any ecological impacts of the proposed works regarding the demolition of a specific area of onsite buildings, with particular regards to impacts on bat species. It is noted that the proposed works' footprint encompasses other areas of the site outside of the survey area. Greenwillows Associates Ltd. was not commissioned to assess these areas for any ecological impact, and thus the scope of this report is limited to assessing any impacts that the demolition of the buildings described in this report may have on ecological features.

1.4 Within this report, the term 'wider site' refers to the entire site under Envar ownership (including those areas outside the survey area), the 'works' footprint' refers to those areas where works are expected to take place as per proposed plan GPP/E/CWH/21/03 and the 'survey area' is confined to those areas surveyed by Greenwillows Associates Ltd (see Appendix Two).

1.5 This report outlines the methodology employed to undertake the surveys, results obtained and a discussion of the implications arising there from.

3.0 Site Location

3.1 The survey area is situated at Envar Composting Ltd., Somersham Road, Woodhurst, Somersham, Huntingdon, PE28 3BS [NGR: TL 33406 75296] (see Appendix Two).

4.0 Legislation and Policy

4.1 Statutory Legislation

The Conservation of Habitats and Species Regulations 2017, or the ‘Habitats Regulations 2017’, transposes European Directives into English and Welsh legislation. This has recently been amended to the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) which continues the same provision for European Protected Species after Brexit. Under these regulations, wild animals of a European Protected Species and their breeding sites or resting places are protected.

All bats are listed under Annex IV and some (Horseshoe bats, Bechstein’s and Barbastelle) are also listed under Annex II which relates to Special Areas of Conservation. These Regulations make it an offence to inter alia:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb bats in a way as to be likely significantly to affect the ability of any significant groups of bats to survive, breed or rear or nurture their young, or to affect the local distribution of abundance of that species;
- Damage or destroy a breeding site or resting place of a bat.
- Penalties are fines of up to £5000 per bat and up to 6 months custodial sentence. The CRoW Act 2000 made these arrestable offences.

The Wildlife and Countryside Act 1981 (as amended) adds further protection to wildlife in England and Wales under Part 1. It is unlawful to intentionally kill, injure or take any wild bird or take, damage or destroy the nest of any wild bird whilst the nest is in use or being built. If the bird is included on the Schedule 1 list, it is additionally an offence to intentionally disturb its nest during the breeding season.

Certain species of animal are protected under the Wildlife and Countryside Act 1981 (as amended) by being included in Schedule 5 in respect of certain offences under Section 9. Such offences include:

9(1) Intentional killing, injuring or taking of a Schedule 5 animal,

9(4a) Damage to, destruction of, obstruction of access to any structure or place used by a Schedule 5 animal for shelter or protection,

9(4b) Disturbance of a Schedule 5 animal occupying such a structure or place.

4.2 Planning Policy

The National Planning Policy Framework relating to biodiversity (NPPF) is both guidance for local governing authorities on the content of their Local Plans and material consideration in determining planning applications. The NPPF has replaced much existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. However, the government circular 06/05: ‘Biodiversity and Geological Conservation- Statutory Obligations and their impact within the Planning System’, which accompanied PPS9,

remains valid.

The NPPF places much emphasis on sustainable development and the need for the planning system to perform a number of roles including ‘improving biodiversity’ by protection of designated sites, priority habitats and priority species, ancient woodland and veteran trees.

The NPPF places more emphasis on ecological networks and their creation and states that the planning system should:

- Avoid, mitigate and compensate for significant harm to biodiversity and protect Sites of Special Scientific Interest and irreplaceable habitats such as ancient woodland.
- Provide a net gain for biodiversity wherever possible and contribute to the Government’s commitment to halt the loss of biodiversity.

4.3 Notable Species and Habitats

4.3.1 The UK Biodiversity Action Plan (UK BAP) was drafted for ‘Priority’ species and habitats in which specific conservation targets were set and are regularly reviewed. UK BAP features do not receive any legal protection *per se*, but have biodiversity value within a national context. The UK BAP also serves as a framework for local biodiversity conservation efforts. UK BAP priority species and habitats were those that were identified as being the most threatened and requiring conservation action under the UK BAP. The original lists of UK BAP priority species and habitats were created between 1995 and 1999, and were subsequently updated in 2007, following a 2-year review of UK BAP processes and priorities, which included a review of the UK priority species and habitats lists. As a result of new drivers and requirements, the ‘UK Post-2010 Biodiversity Framework’, published in July 2012, has now succeeded the UK BAP. The UK BAP lists of priority species and habitats remain, however, important and valuable reference sources. Notably, they have been used to help draw up statutory lists of priorities in England and BAP species and habitats are still referred to at a local level (JNCC, 2013).

4.3.2 The Natural Environment and Rural Communities (NERC) Act 2006: Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.

4.3.3 The Section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

4.3.4 Section 17 of The Crime and Disorder Act (1998) places a duty on the local authority to *inter alia* “exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent, crime in its area”; this includes prevention of wildlife crime.

4.4 The Local Plan for Huntingdonshire (Huntingdonshire's Local Plan to 2036 (2019), Huntingdon District Council) states in Policy LP30 (Biodiversity and Geodiversity) that:

A proposal will be required to demonstrate that all potential adverse impacts on biodiversity and geodiversity have been investigated.

A proposal that is likely to have an impact, either direct or indirect, on biodiversity or geodiversity will need to be accompanied by an appropriate appraisal, such as a Preliminary Ecological Appraisal, identifying all individual and cumulative potential impacts on biodiversity and geodiversity. Any further research that is identified as necessary by this appraisal will need to have been carried out and submitted with the proposal.

Where a proposal has potential to affect an internationally important site (28) an 'appropriate assessment' in accordance with the Habitats Directive will be required and sufficient information to enable such an assessment to be completed must be submitted with the proposal.

All possible efforts must be taken to avoid adverse impacts. If it is demonstrated that adverse impacts are unavoidable they must be minimised as far as possible and then mitigated. Only where this process of avoidance, minimisation and then mitigation is insufficient to fully address adverse impacts will consideration be given to compensation measures. Following this process a proposal will only be supported subject to a hierarchy where:

- a. a site of international importance, being a Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar site would be affected there has to be exceptional overriding reasons of human health, public safety or environmental benefit;
- b. a site of national importance, such as a Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR) would be affected there has to be exceptional circumstances where the need for, and the benefits of, the proposal significantly outweigh both the potential impacts on the features of the site that make it of national importance and any broader impacts on the national network of such sites;
- c. a protected species, a priority habitat or species, a site of local or regional importance, the achievement of water body good ecological potential, or the biodiversity value of the proposed development site as part of the wider network would be affected, the need for and the benefits of the proposal must clearly outweigh the assessed impacts.

A proposal will not be supported if potential impacts would lead to the deterioration of water body ecological status/ potential.

A proposal will ensure no net loss in biodiversity and provide a net gain where possible, through the planned retention, enhancement and creation of habitats and wildlife features, appropriate to the scale, type and location of development. Large scale development

proposals should provide an audit of losses and gains in biodiversity produced according to a recognised methodology. In seeking to provide net gains for biodiversity reference should be had to the Natural Cambridgeshire publication 'Developing with Nature Toolkit' and the proposal should prioritise measures that:

- d. complement or enhance existing features of biodiversity value within the design and layout of development;
- e. provide new biodiversity features within the development;
- f. help reverse the decline of species;
- g. assist in achieving local targets for priority habitats and species including those set out in Habitat Action Plans;
- h. improve public access to nature;
- i. ensure the effective management of biodiversity or geological features;
- j. contribute to the provision of multi-functional green infrastructure to enhance ecological networks and the Green Infrastructure Priority Areas
- k. contribute towards the achievement of good ecological status in water bodies (or not compromise achievement of good ecological potential) in accordance with the Anglian River Basin Management Plan (RBMP) and accompanying catchment action plans; or
- l. will help species adapt to climate change.

5.0 Methodology

5.1 Desktop Study

A search of the Multi-Agency Geographic Information for the Countryside (MAGIC) website was undertaken with regards to the presence of statutory nature conservation sites within the potential zone of influence. In addition, a high-level screening review of the National Biodiversity Network (NBN) website was undertaken for an indication of the potential presence of protected species within 2km of the survey site.

5.2 Field Surveys

5.2.1 Preliminary Roost Assessment - Building Inspection

A building inspection bat survey (including an examination of the internal structures, roof spaces and external spaces of all the buildings on site) was undertaken on 2nd July 2021. The survey was carried out to assess the current usage of the building by bats and to advise on the impact on bats and legal obligations prior to building work being carried out.

The building inspection was carried out by Emma Parnwell, a level two class licensed bat surveyor [Licence No 2015-17704-CLS-CLS] and assisted by Alistair Grant, a trained bat surveyor. The building survey involved a thorough internal and external search of all suitable cavities, holes and crevices. All suitable areas and floors were inspected for the following signs:

- Bat droppings;
- Stains around roosting places and entrance points;
- Urine marks;
- Prey remains;
- Areas devoid of cobwebs;
- Live or dead bat;
- Suitable cracks and crevices for bats to enter.

Equipment available for the building survey included various sized torches, extending mirror, endoscope, close-focusing binoculars and ladders.

A scoring system was applied to the building using the following criteria from the Bat Conservation Trust's Good Practice Guidelines (2016):

Negligible probability of bat interest. Negligible features likely to be used by roosting bats.

Low probability of bat interest. Buildings in this category have one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by large numbers of bats and therefore unlikely to support a maternity or hibernation roost.

It must be borne in mind that a building from this latter group can become suitable for bats

due to refurbishment. This often happens to houses once the attic space has been cleaned and under-felted prior to timber treatment.

Moderate probability of bat interest. The buildings in this category contain one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status with respect to roost type only. Occasionally a light scattering of droppings will be recorded in an attic or a semi-derelict building, which is considered by the surveyor unsuitable for use as a bat roost. The moderate probability of bat interest category can be used based on the surveyor's experience.

High probability of bat interest. This group includes buildings with known roosts or signs of bat occupancy such as droppings and staining at a roost entrance. The structure will have one or more potential roost sites noted that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. The description of high probability buildings will also contain an indication as to the time of the year when it will be occupied by bats i.e. Summer – nursery roost. Winter – hibernation.

5.2.2 Assessment of Surrounding Habitat

The habitats immediately surrounding the buildings were assessed for their potential to support any protected flora/fauna that could be impacted by the proposed works (see Annex One for details). Waterbodies identified within 250m of the work site were assessed for their potential to support great crested newts.

6.0 Results

6.1 Background Data

6.1.1 Statutory and Non-Statutory Nature Conservation Sites

Within the records consulted there were no Statutory or Non-Statutory designations listed within 2km of the site.

As the proposed new works include a new Dry Anaerobic Digestion Facility and Clinical Waste Incinerator, the survey area falls into the SSSI Impact Risk Zone for Berry Fen and Ouse Fen SSSI (SSSI= Site of Special Scientific Interest).

6.1.2 Notable Species and/or Protected Species

The data search showed that an eDNA survey of the lagoons had been undertaken in May 2019 as part of the Natural England District Licensing scheme. The results are recorded as 'inconclusive'.

The data also showed that two pond surveys within 2km of the site had been undertaken in 2019, which both concluded great crested newts were absent, and one great crested newt class survey licence return which reported the species was present.

6.2 Buildings

There are two areas of buildings onsite to be affected by the proposed works. Some of these are semi-derelict and currently unused, and one area is used for storage of woodchip (see Table Two).

6.3 Wider Site

The survey area is located within the wider Envar Composting site. The entire wider site comprises approximately 17ha and contains areas of hard standing carpark, offices, industrial buildings, four waste treatment lagoons (L1-L4), and frequently disturbed, vegetated ground. The vegetated areas are reportedly scraped back regularly (within the last 6 months) and have been colonised by ephemeral species such as *Chenopodium sp.*, forget-me-not (*Myosotis sp.*), curled dock (*Rumex crispus*) and creeping thistle (*Cirsium arvense*).

6.4 Neighbouring Habitat

The Envar site is situated in a rural location outside the village of Woodhurst in Cambridgeshire. The wider site is mainly surrounded by arable land, with the relatively busy rural road B1040 to the west.

6.5 Field Survey – Notable and/or Protected Species

6.5.1 Nesting Birds

There is potential for nesting birds within the structures to be demolished. Swallows were observed using the wider site and swallow nests were found in Structure 1c (TN4) and Structure 2 (TN2). A remnant pigeon's nest was found in Structure 1a (TN3). There is also

potential for nesting birds to be present within the elder scrub located in the fan rooms and adjoining tunnel areas.

6.5.2 Bats

6.5.2.1 Buildings

The buildings on site were assessed for their potential to support roosting bats, the results of which are given in Table Two.

Table Two: Results of Preliminary Roost Assessment – Building Inspection

Building	Description	Potential Roosting Features (PRFs) and General Comments	Bat Roost Potential H = high, M = moderate , L = low, N = negligible
Structure 1	Consists of three industrial fan units attached to each other by supporting walls. These are described in detail below. Adjoining the three units are fabric tunnels, originally used to farm mushrooms. The fabric tunnels were not inspected in detail as these fell outside of the scope of the survey, but from vantage points, were seen to be overgrown inside with elder scrub.	See below	N/A
Structure 1a	Small, single storey, square, concrete block industrial fan unit with flat cement board roof. Connected to adjacent unit (Structure 1b) via concrete/brick wall with metal extraction chimney. Large sliding	<u>Unit</u> High levels of ambient light as unit almost completely open to eastern elevation due to damaged wall. Roof girders intact but several panels missing. Abandoned ventilation equipment dominates internal space. Other than incomplete front wall concrete blocks	N

	<p>metal door on wall leading to long oblong fabric roofed tunnel. Building in very poor state of repair and has not been in use for many years after originally being used to farm mushrooms.</p>	<p>generally in good condition with few gaps in mortar other than where girders enter wall. Remains of old pigeon nest on far wall (TN3). Intact cobwebs throughout. No evidence of bats seen and general lack of suitable roosting features.</p> <p><u>Connecting Wall</u></p> <p>Structure in poor condition with several crevices visible due to crumbling of the concrete blocks and deterioration of the mortar (TN1). Cobwebs present within crevices. Elder growing to height of structure.</p>	
Structure 1b	<p>Small, single storey, square, concrete block industrial fan unit with flat cement board roof. Connected to adjacent unit (Structure 1c) via concrete/brick wall with metal extraction chimney. Large sliding metal door on wall leading to long oblong fabric roofed tunnel. Building in poor state of repair and has not been in use for many years after originally being used to farm mushrooms.</p>	<p><u>Unit</u></p> <p>Structure similar to 1a except wall and roof intact. Concrete blocks generally in good condition with few gaps in mortar other than where girders enter wall. Intact cobwebs throughout and significant dust on all surfaces. No evidence of bats seen and general lack of suitable roosting features.</p> <p><u>Connecting Wall</u></p> <p>Structure generally intact and no significant gaps observed that would allow opportunities for crevice dwelling bat species to roost. Area overgrown with nettle and elder growing to height of structure.</p>	N
Structure 1c	<p>Small, single storey, square, concrete block industrial fan unit with flat cement board roof. Building in poor state of repair and has not been in use for many years after originally being used to farm mushrooms.</p>	<p><u>Unit</u></p> <p>Structure similar to 1b. Concrete blocks generally in good condition with few gaps in mortar other than where girders enter wall. Remains of old swallow nest on far wall (TN4). Intact cobwebs throughout and significant dust on all surfaces. No evidence of bats seen and general lack of suitable roosting features.</p> <p><u>Connecting Wall</u></p> <p>Structure generally intact and no</p>	N

		significant gaps observed that would allow opportunities for crevice dwelling bat species to roost. Area overgrown with nettle and elder growing to height of structure.	
Structure 2	Large, single storey, rectangular, concrete block barn with corrugated cement board upper walls and roof. Barn at right angles to, and an integral part of larger structure used for waste management although barn itself currently used for the storage of dry wood pulp.	High levels of ambient light as barn open to western elevation via high roller door and multiple skylights in roof. Upper corrugated panels overlap lower concrete blocks creating a 'vent' to the outside. Large heap of wood pulp for biomass at far end. Void noted behind wood pulp heap due to damaged internal wall which was accessible from the outside via a missing panel. Swallow nest noted on high girder in void and swallow observed flying out of void (TN2). Throughout working hours continuous heavy plant and HGV traffic carrying waste materials driving into overall larger structure (and occasionally using barn to manoeuvre into position) via roller door. No evidence of bats seen and general lack of suitable roosting features.	N

6.5.2.2 Foraging/Commuting

The wider site offers good foraging habitat for bats with lagoons, rough vegetation and hedgerows present.

6.5.3 Great Crested Newt

The lagoons (approximately 10-25m from the working footprint) are used to treat wastewater and have very high COD (Chemical Oxygen Demand) levels, meaning the pollution level is likely too high to sustain amphibian species. The management of the lagoons also makes it unlikely that amphibians utilise the waterbodies as they are drained twice annually in the drier months, making them unsuitable to support a full breeding lifecycle.

6.5.4 Barn Owl

Whilst the larger building (S2) offers some suitable habitat for barn owl, no evidence of barn owls was noted onsite and the area is frequently disturbed by heavy machinery making it less likely for them to utilise this area.

7.0 Impact Assessment Criteria

Where possible, features have been subjected to a full impact assessment using the criteria below. For those features where further surveys are deemed necessary, a full impact assessment will be undertaken once sufficient information is available, based on the results of such surveys.

The assessment of the impacts and effects¹ on important ecological features within the Zone of Influence (Zoi) of the Scheme has been based on the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines (2018). This process includes:

- Identification of ecological features likely to be affected;
- Identification of which ecological features are ‘important’, and therefore should be subject to detailed assessment;
- Characterising whether the effect on these ecological features is ‘significant’ in terms of the extent, magnitude, duration, reversibility, frequency/timing and whether it is likely to have a positive or negative effect.

7.1 Identifying the Zone of Influence (Zoi)

The ‘Zone of Influence’ for a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This may be confined to within the site boundaries and land immediately adjacent, but for some ecological features may extend beyond the project site.

7.2 Evaluation

7.2.1 Determining Importance of Ecological Features and Resources

The CIEEM Guidelines acknowledge that determining importance of ecological features and resources is a complex and subjective process, but it provides key factors to take into consideration. These include geographic context; legal protection or control; site designations and features; habitat type and priority; biodiversity value; species of conservation value (including; population size, distribution and abundance); ecosystem value/natural capital.

Focusing on assessments of biodiversity value, there are various characteristics that can be used to identify ecological resources or features that are likely to be important in terms of biodiversity. These include:

- Rare or uncommon species in the local, national or international context;

¹ Note: The following definitions are used for the terms ‘impact’ and ‘effect’:

Impact – Actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.

Effect – Outcome to an ecological feature from an impact. For example, the effects on a dormouse population from loss of a hedgerow (CIEEM 2018).

- Endemic or locally distinct sub-populations of a species;
- Species on the edge of their distribution;
- Notably large populations of animals or concentration of animals considered uncommon or threatened in a wider context;
- Species-rich assemblages of plants or animals;
- Ecosystems and their component parts which provide the habitats required by the above species, populations and/or assemblages;
- Plant communities (and associated animals) considered typical of valued natural/semi-natural vegetation types;
- Habitat diversity, connectivity and/or synergistic associations.

This assessment also measures the contribution to nature conservation interest from non-statutory sites, and the presence of habitats and species which, although not specially protected, are still considered to be of local, regional or national conservation importance.

This latter category includes identification of flora and fauna that are listed as Species of Principal Importance under the Natural Environmental and Rural Communities Act 2006 (NERC), those prioritised under the UK Biodiversity Action Plan (UK BAP)/Local Biodiversity Action Plans (LBAP), as well as Red Data Book Species.

7.2.2 Considering Geographic Context

The following frame of reference² is used when considering the importance of an ecological feature:

- International and European;
- National;
- Regional;
- Metropolitan, County, vice-county or other local authority-wide area;
- River Basin District;
- Estuarine system/Coastal cell; and
- Local³

² Note- this is not a hierarchy

³ Where appropriate, impacts may also be assessed at the site scale, although it is acknowledged that this can be difficult to assess

7.2.3 Prediction of Ecological Impacts and Effects

This assessment has considered potential impacts on each ecological feature determined as 'important' from all phases of the project. Impacts are characterised, through consideration of their magnitude and/or extent, the route through which they occur (whether direct, indirect, secondary or cumulative) and their duration and their reversibility. Positive impacts are assessed as well as negative ones.

7.2.4 Significance of Effects

The CIEEM guidelines (2018) explain 'significant effect' with the following definition:

“For the purpose of EclA, ‘significant effect’ is an effect that either supports or undermines biodiversity conservation objectives for ‘important ecological features’ or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site) or broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local.”

A significant effect is an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project.

The following characteristics are considered when describing ecological impacts and effects:

- positive or negative
- extent
- magnitude
- duration
- frequency and timing
- reversibility

Following the characterisation of impacts and effects, an assessment of the ecological significance of an effect is made. The Guidelines promote a transparent approach in which a beneficial or adverse effect is determined to be significant or not, in ecological terms, in relation to: the conservation objectives of the defined site, the structure and functions of the ecosystem(s) and/or the conservation status⁴ of habitats or species within a given geographical area. The Guidelines also advise that it is important to consider the likelihood of a predicted impact.

⁴ Habitats: conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area

Species: conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

The Guidelines also state that:

“After assessing the impacts of the proposal, all attempts should be made to avoid and mitigate ecological impacts. Once measures to avoid and mitigate ecological impacts have been finalised, assessment of the residual impacts should be undertaken to determine the significance of their effects on ecological features. Any residual impacts that will result in effects that are significant, and the proposed compensatory measures, will be the factors considered against ecological objectives (legislation and policy) in determining the outcome of the application.”

For the purposes of this report, a detailed impact assessment has only been presented for residual effects present after mitigation, although the above assessment has been undertaken for each important ecological feature pre-mitigation, to inform the recommendations outlined in Section Eight.

7.2.5 Key Principles Underpinning Recommendations

The following hierarchy of principles underpin EclA and are followed in the assessment undertaken in this report:

- Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site). This is the preferred option.
- Mitigation - Negative effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.
- Compensation - Where there are significant residual negative ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.
- Enhancement - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

7.2.6 Potential Effects

Based on the results outlined in Section Six, Table Three provides a summary of the important species and habitats that are known to be present and/or have potential to be significantly affected by the proposed construction without mitigation.

Table Three: Potential Receptors

Potential Receptor
Nesting Birds
Bats

8.0 Impact Assessment, Conclusions and Recommendations

8.1 General Description and Best Practice Recommendations

8.1.1 Conclusions

The survey area comprises two buildings which are currently used for storage of agricultural machinery and/or are disused and partially derelict.

8.1.2 Recommendations

The survey area is generally considered to be of low ecological value.

8.2 Desktop Search Results - Designated Sites and Notable/Protected Species

8.2.1 Conclusions

As the proposed new works include a new Dry Anaerobic Digestion Facility and Clinical Waste Incinerator, the survey area falls into the SSSI Impact Risk Zone for Berry Fen and Ouse Fen SSSI.

The data search showed that an eDNA survey of the lagoons had been undertaken in May 2019 as part of the Natural England District Licensing scheme. The results are recorded as 'inconclusive'.

The data also showed that two pond surveys within 2km of the site had been undertaken in 2019, which both concluded great crested newts were absent, and one great crested newt class survey licence return which reported the species was present.

8.2.2 Recommendations

Natural England will need to be consulted to assess the impact of the proposed works on the SSSI sites.

Impacts on great crested newts have been scoped out taking into account the habitats within, and immediately adjacent to, the survey area.

8.3 Nesting Birds

8.3.1 Conclusions

The buildings within the survey area provide suitable habitat for nesting birds, with remnant/active swallow nests identified at TN2 (Structure 2) and TN4 (Structure 1C), and a remnant pigeon nest identified at TN3 (Structure 1A).

The elder scrub present in the fan rooms of S1 and the adjoining fabric tunnels, also has the potential to support nesting birds.

If birds' nests are disturbed during the process of incubation and rearing, then mortality of chicks could occur. There will be a very small loss of bird nesting habitat as a permanent consequence of the proposed works.

8.3.2 Recommendations

Any works involving building clearance will avoid the bird breeding season (late February to August inclusive) to avoid damage to nesting species. If this is not practicable then an experienced ecologist will undertake a nesting bird survey to ascertain the amount of birds using the site and where they are so they can be avoided. Results of nesting bird surveys are only valid for 48hrs and, therefore, multiple surveys may be required for phased works.

It is recommended that the new site plans include a provision of nesting habitats in the form of nest boxes (see Appendix Four for designs and numbers to be installed).

Following mitigation and compensation measures, no significant effect is anticipated.

8.4 Bats

8.4.1 Conclusions

The buildings within the survey area are generally assessed as unsuitable to support roosting bats and no evidence of bats was found during the building inspection. However, the supporting wall between S1A and S1B was noted to have some areas of damage where crevices and small voids had appeared (TN1). It was possible during the inspection to inspect these areas using a torch and ladder and no evidence of bats was found, with cobwebs present suggesting no recent use of the area by bats. There is a low risk that bats may utilise these areas as roosting habitat.

If bats are present at the time of the demolition works then there is a risk of injuring/killing individuals.

8.4.2 Recommendations

As a precautionary measure it is recommended that a follow-up close inspection of those areas identified of TN1 is undertaken by a licensed bat ecologist immediately prior to demolition, to ensure no bats are present at the time of demolition.

It is recommended that lighting of the wider site is kept to a minimum to maintain its suitability for bat foraging/commuting habitat, particularly on areas such as the lagoons and hedgerows/tree lines. Lighting types to be avoided include any blue-white light sources, metal halide and mercury lamps, and any form of up-lighting, which lights above the horizontal plane, illuminating trees, buildings and foraging habitat.

To compensate for the demolition of the buildings, it is recommended that one Schwegler 2F bat box is installed within the final site plans.

Following mitigation and compensation and measures, no significant effect is anticipated.

9.0 References

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10.0 Photographs



General view of Structure S1a showing poor state of repair and abandoned ventilation equipment



Open roof of Structure S1a due to missing roof panels and remanent of pigeon nest (TN3)



Wall between Structure S1a and S1b showing multiple crevices due to deteriorating construction materials (TN1)



Close up of largest crevice (TN1)



Close up of crevices (TN1)



Close up of crevices (TN1)



Swallow nest in Structure 1c (TN4)



Interior of one of fabric roofed tunnels.



Interior of Structure 2



Far end of Structure 2 showing wood pulp pile and damaged interior wall



Internal void at far end of Structure 2



Looking through waste processing area to Structure 2



Typical frequently disturbed ground around site



One of the four existing settlement lagoons

11.0 Appendices

Appendix One: Proposed Plans

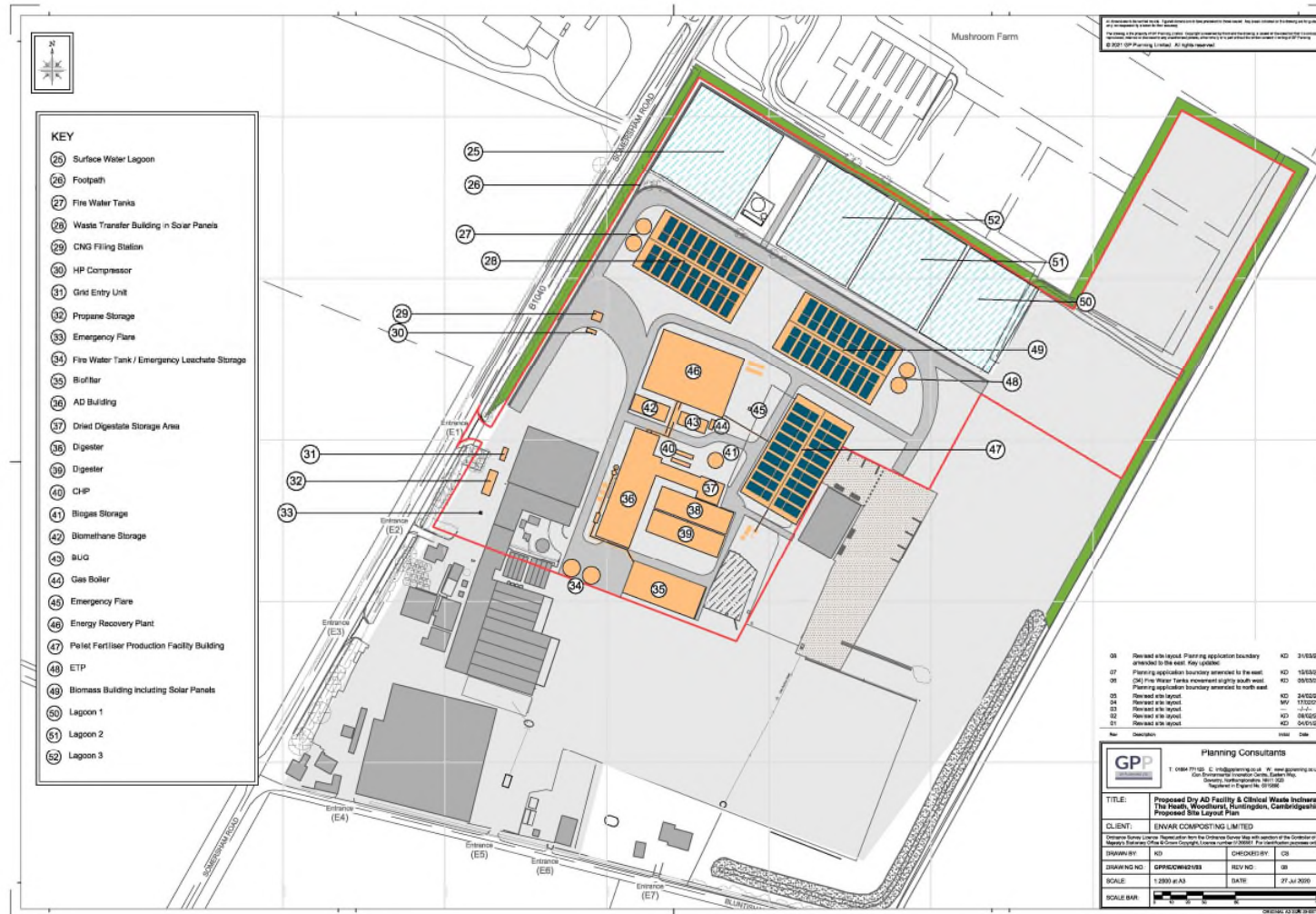
Appendix Two: Location Plan

Appendix Three: Building Plan with Target Notes

Appendix Four: Recommended Site Compensation

Annex One: Standard Survey Methodologies

Appendix One: Proposed Plans

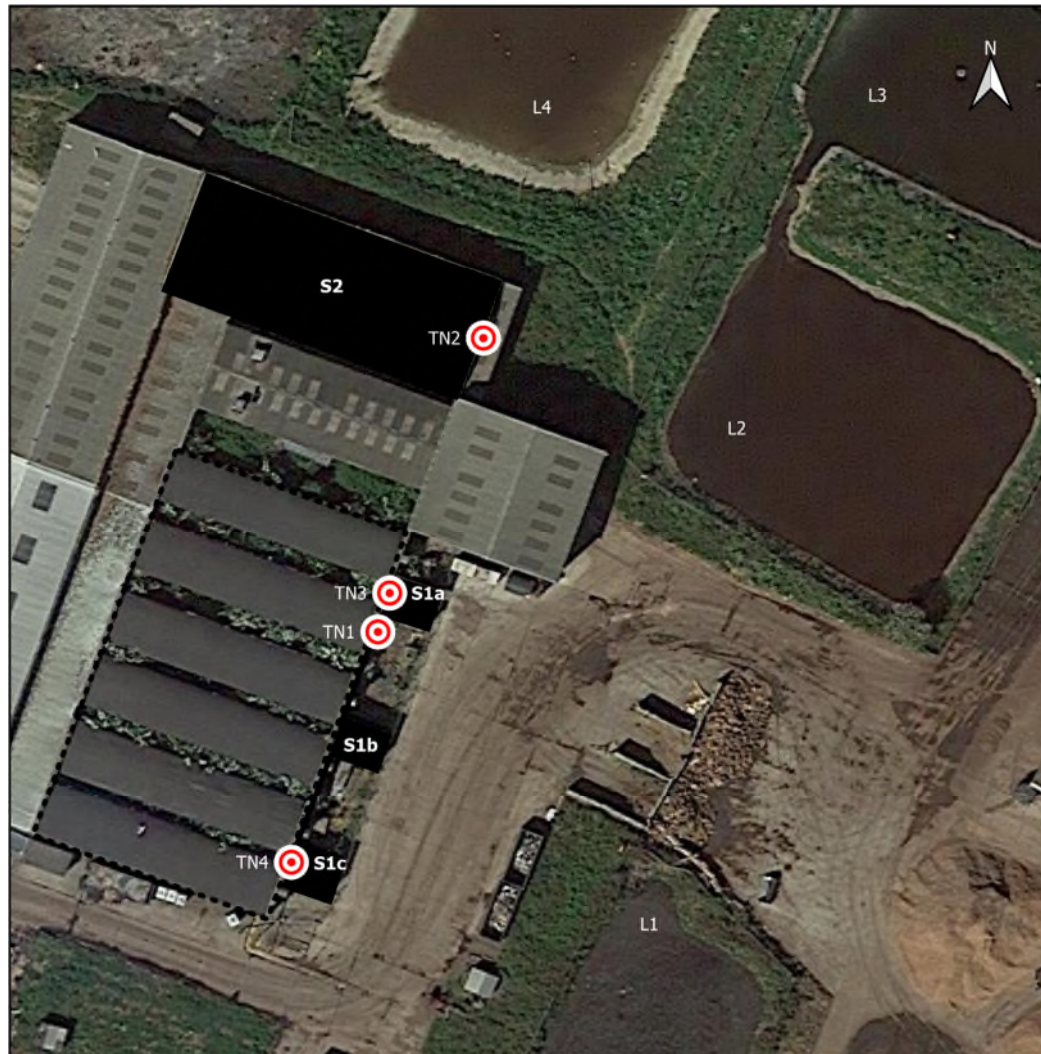






Appendix Two: Location Plan



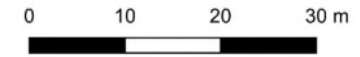
Envar Composting Ltd. Woodhurst
Location Plan
July 2021
V:001

Appendix Three: Building Plan with Target Notes



- Key**
-  Target Notes
 -  Tunnels
 -  Wall
 -  Buildings

TN	Description
TN1	Multiple crevices in wall
TN2	Swallow nest and flying swallow
TN3	Old pigeon nest
TN4	Old swallow nest



Aerial photograph taken from Google Earth

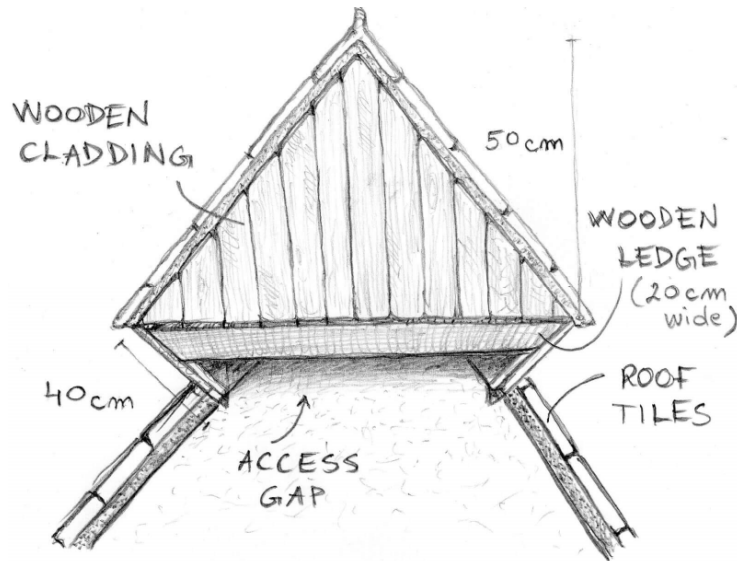


Envar Composting Ltd Woodhurst
Results of Building Inspection with Target
Notes
July 2021
V:001

Appendix Four: Recommended Site Compensation

Recommended Bird Box

One bird box constructed to accommodate swallows should be installed within the new site plans. These are not currently available off the shelf but can be constructed easily onsite following the plans below. As swallows are extremely site faithful, any new boxes should be located as close to the original nests to be lost as possible.



Design by Acer Ecology



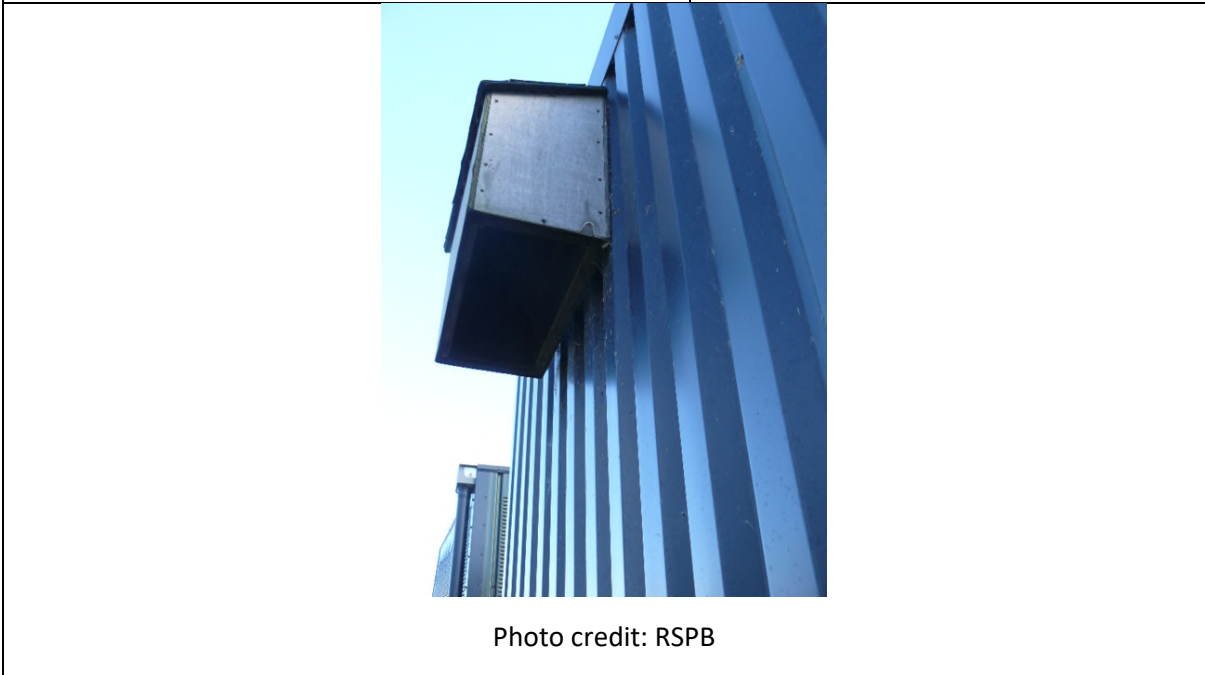


Photo credit: RSPB

Recommended Bat Box

One Schwegler 2F bat box should be provided as compensation for potential bat roosting features that will be lost as part of the development. Boxes will be installed on a south-to-south-westerly orientation at a height of 4-6m above ground level, with all lighting angled away to avoid direct illumination of the box. These can be installed onto buildings or trees. If installed onto a tree, branches will be cleared to provide an unrestricted flight path to and from the box.



Schwegler 2F Bat Box

ANNEX ONE**Standard Survey Methodologies**

A site walkover is undertaken to identify potential habitats suitable for protected species and/or evidence of field signs indicating presence of protected species and invasive plants.

Species Specific Methodologies

Great Crested Newts: A habitat suitability assessment for newts is undertaken taking due note of the presence of water bodies within 250 metres of the site (based on English Nature (2001) now Natural England) guidelines and potentially suitable terrestrial resting and shelter habitat.

At certain times of the year and/or in some years but not others, ponds may be seasonally dry but these are not necessarily ruled out as ephemeral ponds can be important 'stepping stones' from one pond to another and/or refuges from the ravages of fish populations that can build up in permanent ponds.

Ponds are assessed using a combination of professional judgment and applying the nationally accepted Habitat Suitability Index (HSI) for Great Crested Newts based on Oldham *et al* 2001 which uses nationally accepted formulae based on a number of factors which are assigned a score ranging from 0 to 1 with a score of <0.5 assessed as poor, 0.5 to 0.59 below average, 0.6 to 0.69 average, 0.7 to 0.79 good and >0.8 excellent.

If appropriate, follow-up pond surveys are undertaken in the spring to cover all ponds within 250 metres (or further where professional judgment dictates) of the construction footprint to determine presence/absence of this species. Night-torch surveys, egg searching, netting and funnel trapping are the main methods employed where practicable

Bats: A habitat suitability assessment for bats is undertaken by identifying buildings and trees likely to be affected by the proposed construction works.

The tree assessments involve looking for the following signs:

- Holes
- Fissures
- Broken Limbs
- Loose Bark
- Urine Staining
- Fur Rubbing
- Dense Ivy

A scoring system is applied to the buildings and trees using the following criteria:

- **Low/Negligible probability of bat interest.** Buildings in this category fall into two main types: Generally well maintained without cracks and crevices, no gaps between bargeboard or soffit and wall or without an attic space. Or those which contain some or all of the above features, but are both draughty and thick in cobwebs or contain strong odours such as solvents, diesel etc.

It must be borne in mind that a building from this latter group can become suitable for bats due to refurbishment. This often happens to houses once the attic space has been cleaned and under-felted prior to timber treatment.

No licence is required for development to a building classified as Low probability of bat interest.

Trees with low bat interest are usually young trees without any deadwood or holes. Most conifers fall into this category as they are usually planted as a crop and are then felled prior to becoming old, although once maturity is attained as in a landscape tree, suitable bat roosts may develop.

- **Moderate probability of bat interest.** The buildings in this category contain many sites suitable for roosting bats although no obvious signs were recorded during the survey. In exposed conditions on large buildings the signs of bat usage such as droppings and urine marks can be obliterated by heavy rain.

Occasionally a light scattering of droppings will be recorded in an attic or a semi-derelict building, which is considered by the surveyor unsuitable for use as a bat roost. The moderate probability of bat interest category can be used based on the surveyor's experience.

Whilst no licence is required for development to a building classified as Moderate probability of bat interest, it is often best practice to conduct sensitive roof stripping or architectural salvaging to minimise any possible disturbance.

Trees in this category will have holes, cracks and crevices and lose bark suitable for roosting bats but no obvious roost signs such as staining and droppings at entrances.

- **High probability of bat interest.** This group includes buildings with known roosts or signs of bat occupancy such as droppings and staining at a roost entrance. The description of high probability buildings will also contain an indication as to the time

of the year when it will be occupied by bats i.e. Summer – nursery roost, Winter – hibernation.

A licence is normally required for development to a building classified as High probability of bat interest.

Trees within this category will contain all the obvious roost features such as holes, cracks and crevices and loose bark and will also contain staining and droppings at the roost entrance or have been identified as a roost via a visual sighting of an existing bat.

If appropriate, follow-up surveys are undertaken incorporating detailed inspections of the buildings/trees by a licensed bat worker and where necessary bat activity surveys are also undertaken to determine presence/absence of this group of species.

Reptiles: A habitat suitability assessment for reptiles is undertaken looking for, *inter alia*, areas of rough scrub, tussocky/rank grassland, areas of structural diversity offering short open areas of grassland and bare soil for basking with taller vegetation and habitat edges offering shelter and rapid escape routes, natural refugia such as brash piles and rubble heaps.

Where appropriate, follow-up surveys are undertaken utilizing artificial refugia to determine presence/absence of this species.

Badgers: Field signs are searched for including setts, runs, prints, dung pits, hairs and feeding signs.

Otters: Field signs are searched for including holts, prints, spraints, haul out points and feeding signs.

Water Voles: A habitat suitability assessment for water voles is undertaken within riparian habitat assessment factors including, *inter alia*, water levels and seasonal longevity of water table, seasonal flash floods, bank profiles and substrates, vegetation for cover and suitable food sources, over shading, and evidence of the presence of mink. Where appropriate, follow-up surveys are undertaken where field signs are searched for including burrows, prints, runs, droppings, latrines and feeding signs.

White-Clawed Native Crayfish: A habitat suitability assessment for crayfish is undertaken within riparian habitat assessment factors including, *inter alia*, water levels and quality and seasonal longevity of water table, water flow, underlying geology, bank and watercourse substrates, suitable submerged refugia and known presence of signal crayfish. Where appropriate, follow-up surveys are undertaken to search for presence of this species by stone turning in the stream bed, netting and searching for burrows in the stream banks. Humane trapping may also be employed.

Harvest Mice: A habitat suitability assessment for harvest mice is undertaken within rough grassland and tall ruderal vegetation. Harvest mice build breeding nests in dense vegetation by weaving a nest out of leaves which will be at the top of a tussock of grass

or around halfway up the stem of cereals. To search for these nests surveyors walk transects of the target habitat checking within tussocks of grass and on stems. All areas of suitable vegetation are checked.

Notable Flora and Invasive Weeds: A habitat suitability assessment for notable flora (rare and protected) is undertaken and species are recorded. Evidence of the presence of invasive weeds included within Schedule 9 of the Wildlife and Countryside Act 1981 as amended is searched for.