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Site at Cherry Gate Farm
Mendlesham
Suffolk

Preliminary Roost Assessment

SuperSIPs Ltd

VERSION 2
Final

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1. Introduction

BiOME Consulting Ltd was commissioned by Anglia Design (on behalf of SuperSIPs Ltd) in October 2023 to undertake a Preliminary Roost Assessment in relation to a proposed development of a parcel of land ('the site') located at Cherry Gate Farm, Mendlesham, Suffolk.

The site (**Figure 1**) (National Grid Reference TM 117641) comprised two open structures and two small buildings (used for storage) at the south end of the site with predominantly bare ground/pioneer vegetation and storage areas to the north, where the construction of a new building is proposed. The wider landscape was dominated by arable land.

Figure 1. Site location



Due to the nature of the development project, this appraisal focused on assessing the potential presence/likely absence of roosting bats and/or nesting birds in areas to be impacted.

1.1. Development Proposals

It is proposed to demolish all existing buildings on the site and erect a new building, which will encompass the entire site. The proposed plans are included as **Figure 2 & 3**.

Figure 2. Proposed plans

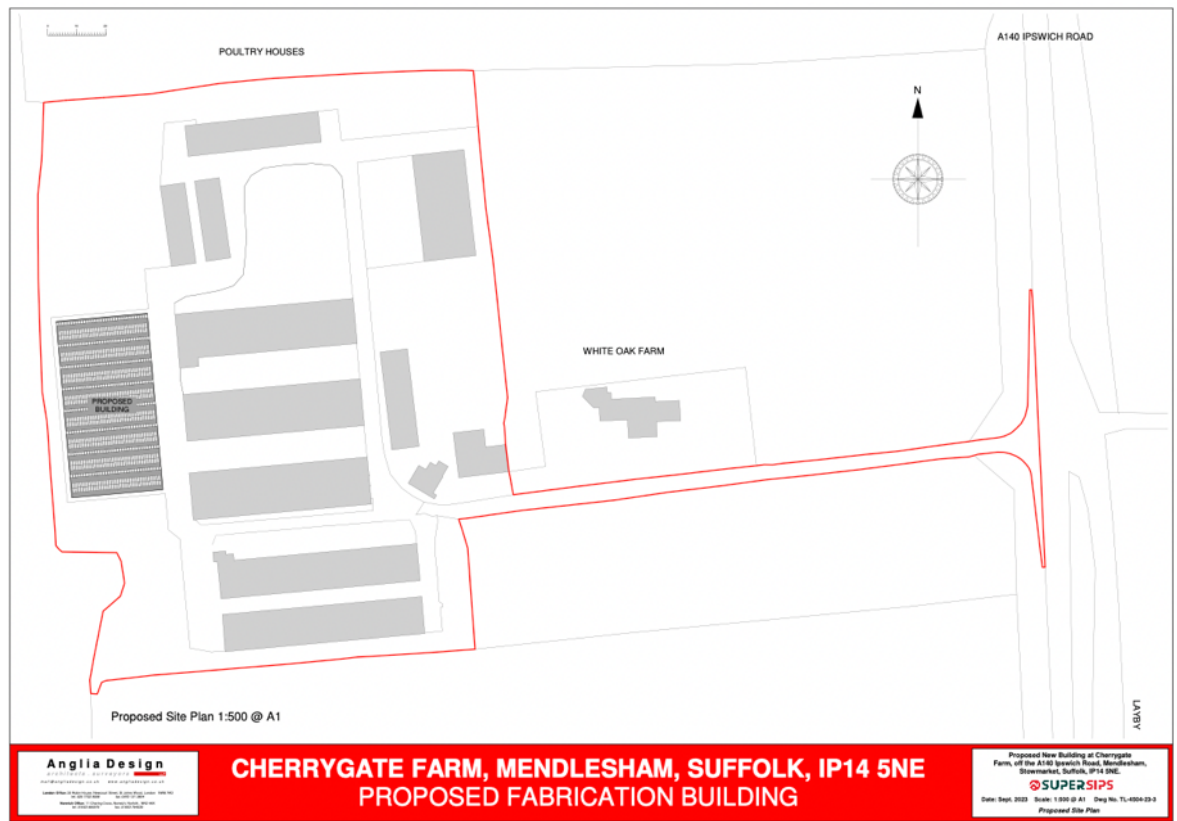
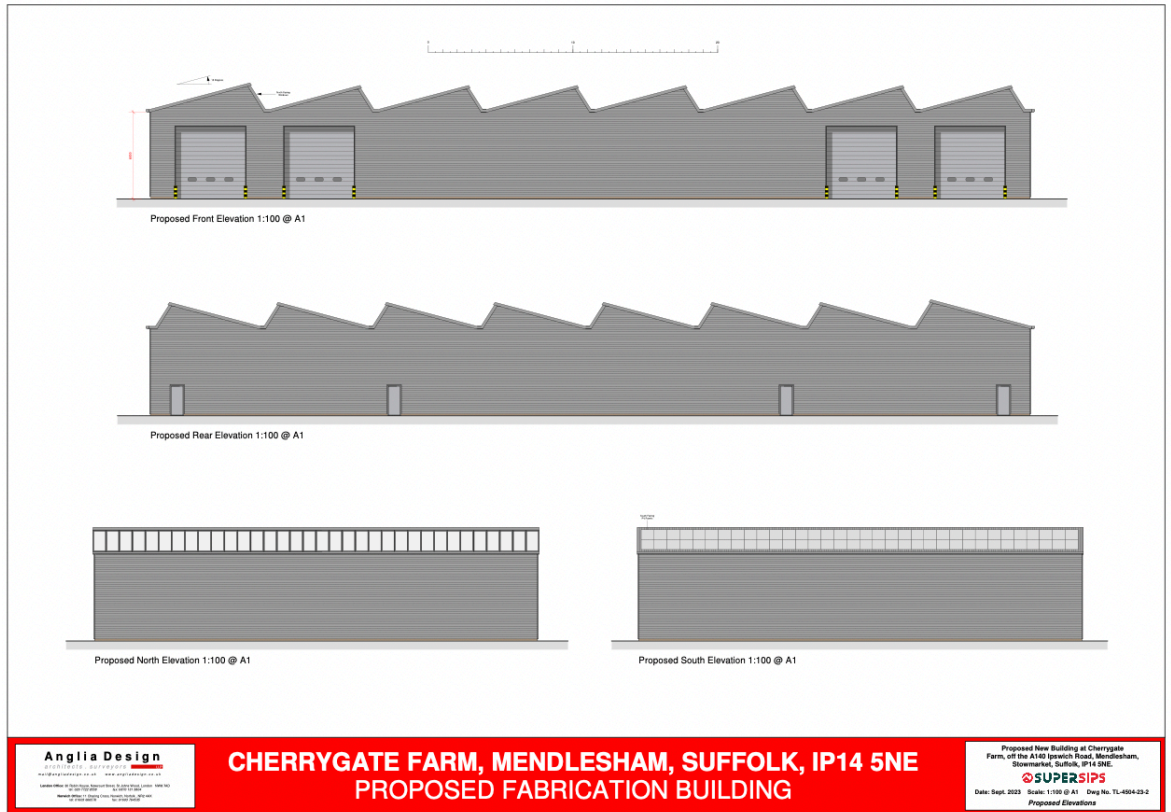


Figure 3. Proposed fabrication building



2. Legislative Context

2.1. Bats

All British bat species are fully protected at national and European levels, through their inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended)¹ and in Schedule 2 of the Conservation of Habitat and Species Regulations 2010². Under this legislation, it is an offence to deliberately kill, injure or take a bat as well as intentionally or recklessly damage, destroy or obstruct access to any structure or resting place used for shelter or protection by a bat or disturb an animal while it is occupying a structure or place which it uses for that purpose.

Four species of bat, Greater Horseshoe Bat *Rhinolophus ferrumequinum*, Lesser Horseshoe Bat *R. hipposideros*, Bechstein's Bat *Myotis bechsteinii* and Western Barbastelle *Barbastella barbastellus*, are included on Annex II of the Habitats Directive³, which requires the designation of Special Areas of Conservation to ensure the maintenance of favourable conservation status (and these are therefore generally considered as perhaps the most important UK species). Seven bat species are listed as Section 41⁴ priority species; Barbastelle, Bechstein's Bat, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat and Lesser Horseshoe Bat.

2.2. Nesting Birds

All birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird.
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.

1 The Wildlife and Countryside Act 1981 (as amended)

2 The Conservation of Habitats and Species Regulations 2010

3 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

4 Of the Natural Environment and Rural Communities Act 2006

- Intentionally take or destroy the egg of any wild bird.
- Have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954.
- Have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954.
- Use traps or similar items to kill, injure or take wild birds.
- Have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations (see Schedules).
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Penalties that can be imposed for criminal offences in respect of a single bird, nest or egg contrary to the Wildlife and Countryside Act 1981 (as amended) is an unlimited fine, up to six months imprisonment or both.

3. Methodologies

3.1. Desk Study

Details in relation to internationally designated sites and nationally designated sites within 2km were obtained from www.magic.gov.uk. A search was also completed using the same database for Granted European Protected Species (EPS) (bats) development licences, within 2km of the site.

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 considered unnecessary.

3.2. Field Survey

3.2.1. Suitably Qualified Ecologist

Fieldwork and assessment were completed by Richard Moores MCIEEM with support from Olivia Barnes. Richard holds survey licenses in relation to bats (NE bat licence no. 2015-12259-CLS-CLS) and a variety of Schedule 1 birds (including Barn Owl *Tyto alba*).

3.2.2. Preliminary Roost Assessment

A Preliminary Roost Assessment (PRA) survey was completed on 11 October 2023, in line with appropriate survey guidance⁵.

The survey involved a systematic search of the exterior of the buildings to identify potential or actual bat access points and roosting sites, and to locate any evidence of bats such as live or dead specimens, bat droppings, urine splashes, fur-oil staining and/or squeaking noises. It should be noted that sometimes bats leave no visible sign of their presence on the outside of a building (and even when they do wet weather can wash away evidence).

The external inspection also included the examination of the ground, particularly beneath any potential bat access points, for example any windowsills, window

⁵ Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn.). The Bat Conservation Trust, London

panes, walls, hanging tiles, weatherboarding, eaves, soffit boxes, fascias, lead flashing, gaps under felt, and under tiles/slates.

A systematic search of the interior of the buildings was completed, searching for actual/potential bat access points, roosting sites and to locate any evidence of bats (e.g. live/dead specimens, droppings, urine splashes, fur-oil staining, feeding remains (such as moth wings), squeaking noises, bat-fly *Nycteribiidae* or odour). Again, it should be noted that occasionally bats leave no visible sign of their presence in a building’s interior, particularly when there are hidden cracks, crevices and/or voids.

The inspection of buildings and built structures for evidence of bats⁵, which can be conducted at all times of year, was facilitated by the use of ladders, a high-powered torch, endoscope and small dental mirrors to inspect accessible crevices considered likely to support bats. Weather conditions on the day of the survey were appropriate for undertaking ecological fieldwork (humid and dry).

The potential suitability of the buildings for roosting bats was assessed in line with relevant guidelines⁵ and allocated to one of the categories detailed within **Table 1**.

Table 1. Guidelines for assessing the potential suitability of proposed development sites for bats

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure/tree with 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 larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure/tree with 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 – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).

Suitability	Description of Roosting Habitats
High	A structure/tree with one or more potential roost sites 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.
Confirmed Roost	Definitive evidence of roosting bats, i.e. live animals or accumulation of droppings associated with a PRF.

3.3. Limitations

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

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 are no internationally or nationally designated sites within the 2km search area.

4.1.2. Protected Species

The desk study did not identify any granted EPS development licences in relation to bats within the search area.

4.2. Site Survey

4.2.1. Bats

A small open-sided structure at the south end of the site was constructed of concrete with enveloping vegetation (**Photograph 1**).

Photograph 1. Open sided structure



A small, metal sheet building, housing electrics, and a small red brick building with a cement-bound asbestos sheet roof housing a generator (**Photograph 2**) were located in the south of the site.

Photograph 2. Metal sheet building (left) and red brick building (right)



During the survey, a small breezeblock structure without a roof was being demolished in the centre of the site (**Photograph 3**).

Photograph 3. Breezeblock structure (blue circle)



No bat evidence was found in/around any of the buildings on site and no Potential Roost Features (PRFs) were noted.

The buildings were assessed to be of **NEGLIGIBLE POTENTIAL** for roosting bats (**Table 1**).

4.3. Other Species

An old Wren *Troglodytes troglodytes* nest was found in the open sided structure. Another Wren nest and evidence of nesting Woodpigeon *Columba palumbus* was found in the red brick building. No evidence/potential for Barn Owl *Tyto alba* was identified on site and there was no potential for other nesting Schedule 1 (of the Wildlife and Countryside Act 1981 (as amended)) birds.

The main part of the site comprised predominantly bare ground and occasional concrete pads to store building materials. Amongst the bare ground, plants included common grasses, Bristly Oxtongue *Helminthotheca echioides*, Common Poppy *Papaver rhoeas*, Broad-leaved Dock *Rumex obtusifolius*, Rosebay Willowherb *Chamaenerion angustifolium*, Dandelion *Taraxacum*, Common Nettle *Urtica dioica*, Common Sowthistle *Sonchus oleraceus*, and Spear Thistle *Cirsium vulgare* (**Photograph 4**).

Photograph 4. The site, looking northeast



To the west of the site, adjacent to a hedge, a strip of tall ruderal vegetation and grasses was present (**Photograph 5**). The strip was dominated by thistles and nettles whilst the defunct hedge comprised Elm *Ulmus*, Hawthorn *Crataegus monogyna*, Dog-rose *Rosa canina*, Field Maple *Acer campestre* and Elder *Sambucus nigra*. A shallow ditch choked by leaves was present adjacent to the hedge, just outside of the site; this ditch was considered unsuitable for Water Vole *Arvicola amphibious* given its characteristics and lack of Water Vole evidence.

Photograph 5. Strip of tall ruderal vegetation outside of site to west (looking south)



No other protected species issues were identified.

5. Conclusions and Required Actions

5.1. Bats

Following a full and unconstrained survey, all buildings were assessed to be of **NEGLIGIBLE** potential value to roosting bats and consequently no further survey work will be required to establish if bats use the buildings for roosting, prior to the proposed works.

In the apparently unlikely event that bats are disturbed during works all work must cease and the advice of a Suitably Qualified Ecologist (SQE) sought.

Bats and Lighting

The hedgerow to the west of the site is likely to support foraging/commuting bats and as such it will be important to take this into account with regards to future site lighting proposals.

Artificial lighting can result in impacts to bats via a variety of mechanisms⁶. Many night flying species of insect are attracted to light, especially those lamps that emit an ultra-violet component, and particularly if it is a single light source in a dark area. Studies have shown that Noctule, Leisler's *N. leisleri* Serotine and pipistrelle *Pipistrellus* spp. bats swarm around white mercury street lights (this would also apply to metal halide) feeding on the insects attracted to the light. Such behaviour is not true for all bat species, notably the slower flying broad-winged species such as long-eared bats *Plectotus* spp, *Myotis* species and Barbastelle. In addition, it is also thought that insects are attracted to lit areas from further afield. This is thought to result in adjacent habitats supporting reduced numbers of insects. This is a further impact on the ability of the light-avoiding bats to be able to feed. It is noticeable that most of Britain's rarest bats are among those species listed as avoiding light. Clearly, effective mitigation where there is potential for impacts on bats has importance in the conservation of these species.

⁶ Bat Conservation Trust (2018). *Guidance Note 08/18; Bats and Artificial Lighting in the UK.*

Artificial lighting is thought to increase the chances of bats being preyed upon. Many avian predators will hunt bats which is one reason why bats avoid flying in the day. Observations have been made of a diurnal raptor, Kestrel *Falco tinnunculus*, hunting at night under the artificial light along motorways.

Lighting can be particularly harmful if used along river corridors, near woodland edges and near hedgerows used by bats. Artificial lighting disrupts the normal 24-hour pattern of light and dark which is likely to affect the natural behaviour of bats. Bright light may reduce social flight activity and cause bats to move away from the lit area. Studies have shown that continuous lighting along linear features (i.e. roads/paths) creates barriers which some bat species cannot cross. For example, Daubenton's Bats move their flight paths to avoid streetlamps. The lighting scheme for the development should be sympathetic to bats, this should include:

- the use of low-pressure sodium lamps or high-pressure sodium instead of mercury or metal halide lamps where glass glazing is preferred due to its UV filtration characteristics.
- 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. Planting can also be used as a barrier or manmade features that are required within the build can be positioned so as to form a barrier.
- The height of lighting columns in general should be as short as is possible as light at a low level reduces the ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reduce horizontal spill. For pedestrian lighting this can take the form of low-level lighting that is as directional as possible and below 3 lux at ground level. The acceptable level of lighting may vary dependent upon the surroundings and on the species of bat affected.
- The light should be as low as guidelines permit. If lighting is not needed, don't light.
- The times during which any lighting is on should be limited to provide some dark periods.

- 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. This lit area must avoid being directed at, or close to, any roost access points or flight paths from the roost. 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 as well as people and other wildlife.

5.2. Nesting Birds

A small number of old bird's nests were recorded in the buildings. The active nests of wild bird species (with certain exceptions) are legally protected from deliberate disturbance or destruction. If re-development works are proposed for the bird nesting season (March-August inclusive), it will be necessary to appoint SQE to complete a check for active birds' nests. Should any active nests be found then it would be necessary to delay works until the nesting attempt has reached a natural conclusion. If works are planned for outside of the bird nesting period, then no such check is necessary.

No other protected species issues were identified.

5.3. Report/Survey Validity

The findings of this report are considered valid until 1 October 2024⁷. If the project is delayed beyond this date, updated assessment work will be required to ensure the status of roosting bats within the site remains unchanged.

⁷ 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>