Ecological Survey of Martins Builders Yard, Startley, Wiltshire

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NATURAL SOLUTIONS

Written by Fairbrass Knowles MCIEEM

Crossman Associates
Ecological Consultants
Fire Engine House
Oakhill, Bath BA3 5BJ
01761 233414
info@crossmanassociates.co.uk

www.crossmanassociates.co.uk

crossman ASSOCIATES

Non-technical Summary

Background

In May 2023, Crossman Associates was commissioned by LPC to undertake an ecological appraisal of Martin's Yard a small, former builder's yard adjacent to Grange Lane, Startley, Wiltshire, SN15 5HG. Proposals are to clear the site and construct two number dwellings.

Methodology

The survey followed standard Phase 1 habitat survey methodology, that was extended to record provisional signs or evidence of protected or notable species. The survey work was undertaken by Fairbrass Knowles, an experienced ecologist, full member of CIEEM and licenced bat ecologist. Phase 2 surveys were undertaken for great crested newt, reptiles and bats.

Results

The site is located fairly centrally within the small rural settlement of Startley and consists of a former builder's yard that consists of a rectangular plot that amounts to approximately 1,500 m^2. There are five dilapidated buildings and areas of unmanaged vegetation.

One building is supporting two number low status non-breeding summer roosts used by low numbers of common pipistrelle and serotine bat.

A reptile survey confirms likely absence of reptiles.

Recommendations

It is recommended that the following is undertaken as part of the proposals;

- Application for a Natural England Bat Development Licence.
- Sensitive clearance in relation to birds and hedgehog
- New dwellings to be fitted with integrally fitted bat and bird boxes.
- Soft landscaping schemes to be wildlife friendly

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1. Background

1.1. In May 2023, Crossman Associates was commissioned by LPC to undertake an ecological appraisal of Martin's Yard which is a small, former builder's yard located adjacent to Grange Lane, Startley, Wiltshire, SN15 5HG (site Ordnance Survey grid reference ST 94434 82532).

1.2. Figure 1 under Appendix I provides a location map.

1.3. The objectives of the ecological appraisal were to;

- Produce a map of existing habitats on site
- Assess the likely presence of any rare or notable species
- Identify any planning or policy constraints relevant to the proposals
- Provide recommendations for further study, mitigation or compensation as appropriate.

Site Description

1.4. Martin's Builders Yard occupies a rectangular plot of land located centrally within the small village of Startley and adjacent to the eastern side of Grange Lane, which is the main throughfare road. The site covers approximately 1,500 m^2 and includes five buildings that formerly acted as workshops and stores and a small poultry shed. The main building remains in use.

1.5. A lack of recent management has allowed an area of the site to become overgrown with grass, ruderals, tall herb and bramble scrub. A short length of managed native hedgerow and four trees are also present.

1.6. The yard occupies a central location within the village, immediate surroundings to the north, east and south are characterised by two medium-sized mixed use, hedge bound fields, with a few scattered dwellings and farmsteads. To the west are well-spaced dwellings and occasional farmsteads that occupy the sides of Grange Lane and extend both north and south.

1.7. The wider landscape is dominated by a largely agrarian landscape which to the east consists of mainly intensively farmed fields, while to the north, south and west fields tend to be less intensively managed.

1.8. The closest area of significant woodland is Seagry Wood which is situated approximately 700 m to the south-west.

Ponds

1.9. Two ponds lay within a 250 m radius to the site as outlined below (and shown on Figure 3, Appendix I).

- Pond 1 is a large circular pond that is situated on a farm and approximately 170 m to the north-west.
- Pond 2 is a small pond that is situated within the garden of Heath Farm, which is a private residential dwelling and is located approximately 160 m to the north.

Proposals

1.10. Proposals are to redevelop the site for residential with two detached dwellings. A soft landscaping plan will include new species rich native hedgerows bounding the site and dividing the two plots.

1.11. A mature weeping willow located in the north-west corner will be retained.

1.12. Each dwelling will be fitted with a bespoke bat loft and integrally fitted bat box which will provide new and replacement bat roosting opportunities for both serotine *Eptesicus serotinus* and common pipistrelle *Pipistrellus pipistrellus* bats.

2. Methodology

Desktop Study

2.1. The MAGIC website was accessed to gain information on any statutory site designations within 2 km of the site. This was extended to 4 km for bats.

2.2. Wiltshire Biological Records Centre provided a 2 km search for protected / notable species.

National Planning Policy and Legislation

2.3. National Planning Policy and legislation has been reviewed for policies and laws that relate to nature conservation relevant to the site.

Field Survey

2.4. The ecological appraisal follows standard Phase 1 habitat survey methodology, which is a survey method and habitat classification system that was developed by the Nature Conservation Council, now Joint Nature Conservation Committee (JNCC, 2003) to map habitats and land use categories to a 'consistent level and accuracy'. Habitats present on site are shown in Figure 1, which is the Phase 1 Habitat Map, and are also described within the text below. Where appropriate, Target Notes are used within the map to locate features or areas of interest that are described in the text.

Species Observations

2.5. The Phase 1 habitat survey is extended to also record evidence of protected or notable species and assesses the suitability of the habitats on-site and within the accessible surroundings of the site to support such species.

Bat scoping survey

2.6. Bat scoping surveys were conducted on 5 number non-residential buildings the buildings are referred to buildings B1 – B5. The two significant trees were also assessed for their bat roosting suitability.

2.7. The buildings / trees were methodically inspected internally and externally for any evidence of roosting bats, including actual bats, droppings, urine staining and evidence of feeding activity such as discarded insect wings and cases.

2.8. The buildings / trees were also assessed for their suitability to support roosting bats by considering several factors including whether bats can access internal and external voids within the building / tree and whether these voids provide adequate protection and shelter for roosting bats. If the building / tree is not confirmed as a roost, it is assessed from Confirmed to Negligible Suitability as follows;

- **Confirmed –** An actual bat roost is identified to be present.
- **High Suitability** – many roosting opportunities. Buildings tend to be old, large and rural
- **Moderate Suitability** – some roosting opportunities. Building tend to be old, rural with some recent maintenance
- **Low Suitability** – few roosting opportunities. Buildings tend to be modern, urban and well maintained
- **Negligible Suitability** – insignificant roosting opportunities. Buildings tend to be small, modern, urban and very well maintained

Evening emergence / activity surveys

2.9. Building B2 was subject to two number evening activity surveys.

2.10. Buildings B4 and B4 were each subject to one number evening emergence surveys.

2.11. Surveys were conducted by suitably qualified personnel. Three surveyors attended the surveys for building B2 while buildings B2 and B3 were each attended by 2 surveyors. Surveyors were positioned so that all aspects of the buildings suitable for roosting bats could be observed. Surveys are undertaken during suitable weather conditions. Emergence surveys commence 15 minutes prior to sunset and continue for 1.5 hours.

2.12. Echo meter touch and Peersonic bat detectors were used together with visual observations on flight patterns and feeding behaviour to aid identification to species level. Recordings of bat calls were made and later analysed using dedicated computer software 'Kaleidoscope' by wildlife Acoustics.

Birds

2.13. The buildings were also inspected for the presence of birds including house sparrow *Passer domesticus*. The buildings were checked for field signs including nesting material, accumulations of droppings.

Reptile survey

2.14. A reptile presence / absence survey was undertaken in July, August and September 2023.

2.15. The reptile survey follows guidance set out in The Reptile Habitat Management Handbook (2010), Froglife Advice Sheet 10: Reptile Surveys (1999) and Gent and Gibson (2003).

2.16. Both visual encounter surveys and refuge surveys were employed.

2.17. 25 reptile refuges (600 mm lengths of roofing felt) were laid out within suitable habitat across the site approximately 2 m – 5 m apart. These were allowed to

establish for approximately 10 days. Seven site visits were subsequently made in July, August and September 2023 to check the refuges for signs of reptile presence.

2.18. For each site visit the site was systematically walked to check for reptile presence. Refuges were checked during optimum weather conditions during periods of cloud with sunny spells and little-no wind. Temperatures for each visit did not fall below 9°C and did not exceed 18.5°C.

Great crested newt

eDNA analysis

2.19. Efforts were made to contact the owners of the 2 number local ponds. It was however only possible to access pond 2; situated within the grounds of Heath Farm, situated approximately 160 m to the north of the surveyed site.

2.20. The pond was assessed for the presence/absence of great crested newts *Triturus cristatus* in June 2023 using eDNA analysis of collected water samples as outlined below.

2.21. When great crested newts (GCN) inhabit a pond, they deposit traces of their DNA in the water as evidence of their presence. By sampling the water, we can analyse these small environmental traces to detect GCN inhabitation.

2.22. On 23 June 2023 the following methodology was applied to the pond.

- 20 water samples measuring approximately 40 ml were extracted from the targeted watercourse using a sampling ladle. The ladle was used to gently mix the pond water from the surface to toward the bottom to achieve a mixed sample. Samples were decanted into a sterile bag that was then securely sealed and agitated for 10 seconds to ensure that the sample was mixed.

- Six c15 ml samples were then drawn from the bag under sterile conditions and added to plastic vials already containing preservative. The vials were shaken vigorously for ten seconds, labelled and sent to Surescreen Scientifics.

- The laboratory testing is conducted in two phases. The sample first goes through an extraction process where all 6 tubes are pooled together to acquire as much eDNA as possible. The pooled sample is then tested via real time PCR (or q-PCR). This process amplifies select part of DNA allowing it to be detected and measured. qPCR combines PCR amplification and detection into a single step. This eliminates the need to detect products using gel electrophoresis. With qPCR, fluorescent dyes specific to the target sequence are used to label PCR products during thermal cycling. The accumulation of fluorescent signal during the exponential phase of the reaction is measured for fast and objective data analysis. The primers used in this process are specific to a part of mitochondrial DNA only found in GCN ensuring no other DNA is amplified. Samples are tested in a clean room and the different phases of testing are kept separate to reduce any risk of cross contamination.

- Each pooled sample is replicated 12 times to ensure results are accurate. If one of the twelve replicates tests positive the sample is declared positive. The sample is only declared negative if no replicates show amplification

Site Evaluation

2.23. The site evaluation for the habitat areas and species present (where appropriate) is based on published criteria given in the CIEEM guidelines for ecological impact assessment. Values are assigned between International Value and Negligible Value to habitats that are likely to be directly or indirectly affected by the proposed development.

2.24. The value categories used the assessment are as follows:

- International – Europe
- National – England
- Regional – South-west
- District – Wiltshire
- Local – Startley
- Site – Within the immediate zone of influence

2.25. The conservation and ecological status of the site is assessed using the Ratcliffe criteria (1977).

3. Results

Desktop Study

Wiltshire Biological Records Centre

3.1. Wiltshire Biological Records Centre responded that there are no non-statutory site designations covering the site or lying adjacent to the site.

3.2. No records of notable/protected species were returned for the proposal site itself; there are over 357 records of notable and protected species within 2 km of the site since 1955. Significant records include:

- Slow worm
- Grass snake
- Hedgehog
- Badger
- Great crested newt – two records
- Bats – 6 species within 2 km; serotine, noctule, common and soprano pipistrelle, brown long-eared and Myotis sp.
- Bat roosts
    - Brown long-eared
    - Common and soprano pipistrelle
    - Serotine

MAGIC search

3.3. The MAGIC website informed of one statutory wildlife laying within 2 km of the site.

Harries Ground, Rodbourne, Site of Special Scientific Interest (SSSI)

3.4. Harries Ground provides an area of approximately 6.87 hectares and is situated approximately 1.8 km to the west of the site. The SSSI provides an area of nationally important species rich neutral grassland. The site also contains a population of a nationally scarce butterfly, the marsh fritillary *Euphydras aurinia.*

3.5. The proposals to redevelop a small former builder's yard to provide two number dwellings is assessed to result in no significant impact to the SSSI.

3.6. There are no sites specifically designated for bats within 4 km of the site.

Planning Policy

3.7. National policy guidance is provided by National Planning Policy Framework (NPPF), which sets out the Government' planning policies for England and how they should be applied to planning applications;

Conserving and enhancing the natural environment

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

  a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

  b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services –

including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

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

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

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

Habitats and Biodiversity

- When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either

individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Field survey

3.8. The habitats are described in the paragraphs below and mapped on Figure 1, Appendix I.

3.9. Habitats are considered to fall into the following categories;

- Tall herb and ruderal
- Scrub
- Grassland
- Hedgerows

- Trees
- Hard standing / walls
- Buildings

Tall herb and ruderal

3.10. A lack of recent management has allowed portions of the site to become well-established with tall herb and ruderal vegetation. The most established areas are present along the north-west boundary, along the north end of the eastern boundary and along the southern end. Vegetation is particularly dense within the old poultry run, which occupies the south-east corner.

3.11. Species include nettle *Urtica dioica,* common hog weed *Heracleum sphondylium,* spear thistle *Cirsium vulgare,* cow parsley *Anthriscus sylvestris,* ground elder *Aegopodium podagraria,* ribwort plantain *Plantago lanceolata,* cranesbill *Gerranium sp,* broad-leaved dock *Rumex obtusifolius*, white dead nettle *Lamium album*, red campion *Silene dioica,* cleavers *Galium aparine* and forget-me-not *Myotis sylvatica.*

Scrub

3.12. Small areas of bramble scrub *Rubus fruticosus agg* are present in association with the areas of tall herb and ruderal at the northern end of the site.

3.13. A more substantial and well-established thicket is present approximately mid-way along the eastern boundary.

Grassland

3.14. The majority of the site consists of what was originally managed lawns. Through a lack of recent management, the grass areas present at the northern and southern ends (Target Notes 1) has been left to follow a largely natural life cycle

and these areas have become tall and dense with a well-established herb content. The central area is less well established and is relatively sparse, this is likely due to the area having a densely compacted layer of chippings, which has hindered the colonization of vegetation, highlighted by Target Note 2.

3.15. Grass species include sweet vernal grass *Anthoxanthum odoratum,* cock's-foot grass *Dactylis glomerata,* perennial rye-grass *Lolium perrene* and other domestic grass species. Non-grass species include self-heal *Prunella vulgaris,* ground ivy *Glechoma hederacea,* creeping buttercup *Ranunculus repens,* chick weed *Stellaria media,* dandelion *Taraxacum officianale,* black medic *Medicago lupulina,* ground elder and daisy *Bellis perennis,*

Hedgerow

3.16. An approximately 25 m length managed native hedge is present along the northern end of the western boundary and in alignment with Grange Lane. The hedge is dominated with hawthorn *Crataegus monogyna,* with occasional ash and elder which have self-seeded. The hedge is approximately 3 m high and 2 m wide.

3.17. The field layer is dominated by ivy *Hedera helix.*

Trees

3.18. The site has four trees which are described below. The trees are labelled on Figure 2; the habitat map as TR1, TR2, TR3 & TR4. For bat assessment refer to Table 1.

Tree TR1

3.19. Tree TR1 is the only ecologically significant tree. The tree is present in the north-west corner and is an overly mature short trunked crack willow *Salix fragilis.* The tree has a trunk height of approximately 2 m which might be due to historical pollarding. Significant cavities and areas of decay are associated with the trunk

and at the unions of the principal boughs. Despite the decay the tree appears to be growing well with dense foliage.

3.20. The tree will be retained.

Tree's TR2 & TR3

3.21. Both trees are growing close together close to the northern end of the eastern boundary. Tree TR2 is a small Alder buckthorn *Frangula alnus,* tree TR3 is a small apple tree *Malus domesticus.* Both trees appears to be in a healthy condition.

Tree TR4

3.22. Tree TR4 is situated close to the south-east corner. The tree is a tall mature Norway spruce *Picea abies*. The truck has a light growth of ivy along much of its length. The tree appears to be in a healthy condition.

3.23. The tree will be retained.

Hardstanding & walls

3.24. An area of hardstanding is present towards the northern end of the western boundary and forms part of one of the two entrances. The area has a light covering of ruderal growth.

3.25. Low height bays used to store building materials are present midway along the eastern boundary and along the southern boundary. The bays are created from single skin concrete block. One bay along the eastern boundary and one bay along the southern boundary are in use as compost heaps, shown as target Notes T3.

Species observations

Flora

3.26. No non-native invasive species that are listed on Schedule 9 of the Wildlife and Countryside Act (1981) as Amended were noted during the visit; however, it is not possible to confirm with certainty that no such species are present.

3.27. The site is a former builder's yard which since the cessation of activities has lacked any significant management this allowed areas of the site to become overgrown with vegetation consisting largely of common pioneer species that have colonised the site through natural succession; these areas are composed of a variety of species which largely follow a natural cycle of flowering, fruiting, and setting seed.

Invertebrates

3.28. The site is likely to support a moderate assemblage of the commoner species of invertebrates associated with a farmland habitat. Unmanaged vegetation is likely to follow a natural cycle of flowering and setting seed and so will provide a supply of nectar, fruits and seeds.

Amphibians

3.29. Areas of overgrown vegetation provide shelter and refuge for common and widespread amphibians such as common toad *Bufo bufo* and common frog *Rana temporaria.* On site habitat also provides suitable terrestrial habitat for great crested newt *Triturus cristatus*.

Great crested newt

3.30. There are no on-site watercourses and according to Ordnance Survey mapping there are two number ponds that occur within 250 m of the site and a further 8 occurring within a 500 m radius of the site.

3.31. Great crested newts are known to occur in the greatest numbers within 250 m of suitable breeding ponds, so the density of individuals gradually decreases away from the breeding pond (Froglife 2001).

Wiltshire Biological Records Centre

3.32. WBRC returned three number records.

- One record @ ST 963 825, A garden pond at Broadfield Farm, Great Somerford, Cheltenham. Recorded in April 2003
- Two records @ ST 964 828, Great Somerford, West Street, The Langdales Pond. Recorded January and February 2004.

3.33. Both sites are located within the village of Great Somerford which is situated approximately 1.2 km to the east.

EDNA survey

3.34. An eDNA assessment was undertaken of the pond on Heath Farm (Pond 1) that was accessed by permission from the owner (refer to Figure 3, Appendix I).

3.35. The eDNA survey result provided a positive result indicating that the pond is inhabited by great crested newt which is probably using it as a breeding site.

Natural England Rapid Risk Assessment Tool for great crested newt.

3.36. The Natural England Rapid Risk Assessment Tool was consulted and after data was entered into the calculator it informed that even if the two number ponds were to be used as a breeding site for great crested newt the development is of a sufficient size and distance from the ponds that an offence is **highly unlikely.**

Reptiles

3.37. The site provides potential habitat for reptiles with areas of overgrown vegetation, compost heaps and piles of old building materials. These habitats provide foraging, concealment and hibernation opportunities which are particularly favourable for slow worm *Anguis fragilis* and grass snake *Natrix natrix Helvetica*.

3.38. A reptile survey was undertaken between 26 July – 19 September 2023. The results of the reptile survey are detailed in the table below.

Table 1: Reptile survey results.

Visit	Date	Weather Conditions	Slow worm	Other species
1	26 July 2023	Dry, overcast, Wind 1, Cloud 75% 18°C	0	0
2	17 August 2023	Dry, sunny intervals, Wind 1, Cloud 10 % 19°C	0	0
3	31 August 2023	Dry, Overcast, wind 1, Cloud 80% 15°C.	0	2 field voles
4	14 September 2023	Dry, slightly overcast but sunny intervals, wind 1, Cloud 70% 19°C.	0	3 field voles
5	15 September 2023	Dry, sunny, wind 1, cloud 10% 17°C.	0	0
6	18 September 2023	Dry, Sunny, Cloud 0%, Wind 1 18°C.	0	1 field vole
7	19 September 2023	Dry, overcast, Cloud 100%, Wind 1. 17°C.	0	1 field vole

3.39. The reptile survey confirms that reptiles are likely absent from the site.

Birds

3.40. The site offers potential nesting and sheltering opportunities in association with 4 of the buildings, while the denser areas of unmanaged vegetation and the 2 larger trees (Trees TR1 & TR4). Overgrown areas of vegetation offer a foraging resource in the form of insects, seeds and fruit. Wren *Troglodytes troglodytes*, dunnock *Prunella modularis* and blackbird *Turdus merula* were recorded on site during the survey.

3.41. Buildings B2 & B3 showed evidence of nesting jackdaw *Corvus monedula.*

- On the day of the survey (1 June 2023) a recently fledged jackdaw was observed emerging from the brick chimney stack present on the principal building which forms the northern building on building B2. Shown as Target Note T4 on Figure 2 the habitat map.
- An inactive jackdaw nest is present on an opening on the southern elevation of building B3. Shown as Target Note T5 on Figure 2 the habitat map.

3.42. Ivy has also encroached the exteriors of 3 of the buildings on site as outlined below. The ivy provides a suitable nesting location for a number of commonly encountered garden birds including wood pigeon *Columba palumbus* and blackbird *Turdus merula.*

- Building B1 – Moderate covering of ivy on the northern elevation.
- Building B3 – Moderate covering of ivy on the south-west corner.
- Building B4 – Moderate covering of ivy on the south-west corner.

Hedgehog

3.43. The site provides habitat for hedgehogs *Erinaceous europaeus*. Areas of unmanaged vegetation offer hedgehogs potential foraging, sheltering and hibernation habitat.

Badgers

3.44. There are no badger setts on site and no badger setts were recorded in close proximity of the site, where access allowed for inspection.

Bats

3.45. The site is located within a village setting and provides bats with sub-optimal foraging and commuting opportunities. The site on its own is small (C.1,500 m^2) and on its own provides bats with no significant habitat component.

3.46. The site might be used to a lesser extent by more light/urban tolerant bats (typically common pipistrelle) during foraging and commuting activity in conjunction with habitats with the wider surrounding landscape.

Buildings

3.47. The site has 5 number building's and 1 number significant tree and these are described in the table below.

Table 1: structures / trees and bat suitability

	Feature	Feature Description	Bat suitability
Building B1 **Small timber poultry shed**	Overview	A small timber-built poultry shed. The shed is approximately 3 m x 2 x 2 m high. The shed is in an advanced state of dilapidation and overall, is assessed to provide bats with no significant roosting suitability.	Negligible Suitability ☒
Building B2 **Main workshop**	Overview	Building B2 forms the principal building and consists of a collection of simple single storey interconnected, DIY built buildings that are built around an old rectangular brick built single storey industrial building with a traditional clay tile double pitched roof. In total the buildings collectively cover an area of approximately 200 m^2. Overall, the buildings collectively are in a ramshackle state but elements remain in use as a carpentry workshop and for general storage. The key Potential Roosting Feature's (PRF's) are as follows;	Moderate Suitability ☒

	Feature	Feature Description	Bat suitability
		The roof of the main brick building, is a traditional clay Roman tile design with timber planks forming the sarking layer. The roof is generally in a poor state, leading to the presence of numerous and significant crevices that provide access to the shallow cavity that lays in-between the roof tiles and the timber sarking. Timber feather edge cladding present on the sides of the eastern most building and an adjacent smaller building provide numerous warped boards which provide crevices. During the survey no bats or evidence of bats was found to be present. Refer to photographs 2, 3, 4, 5 & 7.	
Building B3	Overview	Building B3 consists of a large, old and simply constructed rectangular single storey shed type building with sides of both corrugated tin and timber feather edge cladding. The roof is a double pitched design clad with a single skin of corrugated steel sheets. The building has a single bay with a roof void with a basic floor. The building formerly acted as a general store / workshop.	Low Suitability ☒

	Feature	Feature Description	Bat suitability
		Built of the eastern side elevation is a newer and smaller building, which is a timber framed and feather edge clad storeroom, with a low mono-pitched roof clad with mineralised felt. The building provides a couple of rooms. In total the buildings collectively cover an area of approximately 80 m^2. The main building is rather dilapidated but remains watertight, the smaller extension remains in a sound state. The key Potential Roosting Feature's (PRF's) are as follows; Accessible roof void. Crevices associated with corrugated steel sheets, roof and sides. During the survey no bats or evidence of bats was found to be present. Refer to photographs 9 & 10	
Building B4.	Overview	A simple rectangular shaped single storey building with walls of solid red brick and a simple double pitched roof of corrugated steel roof	Low Suitability ☒

	Feature	Feature Description	Bat suitability
Brick shed		sheets. Internally the building provides one open bay with no roof void. The building measures approximately 26 m^2. The building is in a rather tired state and has a missing roof sheet on the eastern elevation. The key Potential Roosting Feature's (PRF's) are as follows; Accessible interior Crevices associated with the corrugated roof sheets. During the survey no bats or evidence of bats was found to be present. Refer to photographs 11, 12 & 13.	
Building 5 **Unfinished shed**	Overview	A small rectangular shed type building that is unfinished. The building consists of only 3 sides which are brick and block and the timber framework of the roof with no tiles. The building provides bats with no roosting suitability. Refer to photograph 14.	Negligible Suitability ☒

	Feature	Feature Description	Bat suitability
Tree TR1	Crack willow	Tree TR1 is the only ecologically significant tree. The tree is present in the north-west corner and is an overly mature short trunked crack willow *Salix fragilis.* The tree has a trunk height of approximately 2 m which may be due as a result of historical pollarding. Significant cavities and areas of decay are associated with the trunk and at the unions of the principal boughs. Despite the decay the tree appears to be growing well with dense foliage.	Moderate Suitability ☒

Evening emergence surveys

Previous activity surveys

3.48. In 2018 ACD Environmental carried out bat surveys on Buildings B2, B3 and B4.

- The surveys recorded one number common pipistrelle bat emerging from a loose roof tile adjacent to the chimney on the western end of the clay tile roof part of Building B2. The report assessed the roost to be a minor non-breeding day roost. Refer to photograph 5.
- Buildings B3 and B4 recorded no bat roosts.

3.49. In 2020 Ellendale Environmental carried out a refresher bat survey of Building B2. The survey recorded no pipistrelle roost but did record one number serotine emerging from a similar location which was a loose tile adjacent to the chimney on the western end of the clay tile roof part of Building B2. The report assessed the roost to be a minor non-breeding day roost. Refer to photograph 5.

2023 surveys

3.1. Building B2 has been assessed as having **Moderate Suitability** for roosting bats. Therefore, in line with survey guidance (2016), two evening emergence surveys were undertaken with three surveyors attending. The survey was led by Fairbrass Knowles MCIEEM, a licenced bat worker. The result is outlined below, in Table 2.

Table 2

Date	Emergence Survey 15/08/2023	Emergence Survey 14/09/2023
Structure	Building B2	Building B2

Survey Fundamentals	Cloud: 10% Weather: Dry Wind level: (1-12): 1 Start temp: 17^{0}C End temp: 16^{0}C Sunset time: 20:37	Cloud: 0% Weather: Dry Wind level: (1-12): 0 Start temp: 18^{0}C End temp: 15.5^{0}C Sunset time: 19:32
Emergence survey	**Serotine *Eptesicus serotinus*** *21:04* 1 Number serotine emerged from beneath a poorly seated roof tile adjacent to the chimney on the western end of the double pitched clay tile roof. Refer to photograph 5.	**Common pipistrelle** 19:41 1 number common pipistrelle emerged from a loose roof tile adjacent to the chimney on the western end of the double pitched clay tile roof. The location was close to the where the serotine emerged. Refer to photograph 5. **Serotine** 19:59 1 number bat emerged from a similar location to the first survey. Refer to photograph 5
General bat activity. Non emergence	**Common pipistrelle *Pipistrellus pipistrellus*** 20:45 – 21:31	**Common pipistrelle** 19:38 – 20:24 Activity was mainly focussed along Grange Road with

	Approximately 17 foraging passes carried out by individual bats in the local environs. Activity was predominantly focussed along Grange Road, which passes directly past the sites western side. **Serotine** 21:10- 21:15 Individual bats made frequent foraging passes up and down Grange Road which passes directly past the building's west elevation. Approximately 12 passes. **Noctule *Nyctylus noctule*** 20:29 – 21:15 6 foraging passes carried out by individual bats high over the site. **Myotis bats *Myotis sp*** 21:19 – 21:24 4 brief passes carried out by individual bats along Grange Lane.	individual bats carrying out foraging activity up and down the road. Approximately 20 passes were recorded. Activity within the site was lower with 7 passes recorded adjacent to the buildings eastern sides. **Serotine** 20:05 – 2016 4 number serotine passes recorded with individual bats carrying out brief foraging activity up and down Grange Road. **Noctule** 19:52 – 20:11 4 number passes by individual bats high over the side. **Myotis bats Myotis sp** 20:05 A brief pass carried out by an individual bat to the east of the building.

3.2. Buildings B3 and B4 have been assessed as having **Low Suitability** for roosting bats. Therefore, in line with survey guidance (2016), each building was subject to one number evening emergence. The surveys were undertaken with two surveyors attending each building. The survey was led by Fairbrass Knowles MCIEEM, a licenced bat worker. The result is outlined below, in Table 3.

Table 3

Date	Emergence Survey 09/08/2023	Emergence Survey 16/08/2023
Structure	Building B3	Building B4
Survey Fundamentals	Cloud: 10% Weather: Dry Wind level: (1-12): 1 Start temp: 19^{0}C End temp: 17^{0}C Sunset time: 20:48	Cloud: 0% Weather: Dry Wind level: (1-12): 1 Start temp: 19^{0}C End temp: 17^{0}C Sunset time: 20:35
Emergence survey	No bat emergence	No bat emergence
General bat activity. Non emergence	**Common pipistrelle** 20:48-21:40 Bat activity was higher to the west of the building in association with Grange Lane where individual bats carried out foraging activity up and	**Common pipistrelle** 21:07 – 22:05 Foraging activity was mainly focused along Grange lane which passes past the buildings west elevation, with mainly individual bats

	down the road. Approximately 22 passes were recorded. Activity within the site (east side of building) was sporadic, with occasional individual bats making brief passes. 5 Number in total. **Serotine *Eptesicus serotinus*** 21:28 – 22:15 Up to 2 bats recorded foraging up and down Grange Road. Activity was sporadic. Approximately 15 passes. Noctule *Nytalus noctule* 21:30 1 number brief pass high over the site	carrying out foraging up and down the road. Approximately 25 passes were recorded. Lower activity recorded within the site with 3 passes. recorded adjacent to the building's east elevation. **Serotine** 21:02-21:16 Up to 2 bats recorded foraging up and down Grange Road. Approximately 10 passes. **Noctule** 21:20 – 21:26 2 brief passes by individual bats flying high over the site.

Evaluation

3.3. The site consists of a former builder's yard within a rural village setting, historically the site has been well-managed, however since closing down the management of the site has fallen behind allowing areas of former lawn to become very overgrown and colonised by common ruderal and tall herb species, which has become well-established at the northern and southern ends providing an element naturalness.

3.4. Habitats on site are widespread and common within the surrounding landscape and therefore rarity is low. An element of fragility may also come about if the site proves to support protected species.

3.5. Overall, the site is considered to have **Local value.**

Bats

Buildings B1 & B5

3.6. During the scoping survey, no droppings, staining, feeding remains or actual bats were observed in association with either building B1 or B5.

3.7. Neither building provides bats with any significant bat roosting suitability and as such both are assessed to provide bats with Negligible Roosting Suitability.

3.8. Buildings B1 & B5 are all assessed as providing bats with Negligible Roosting Suitability and no further survey work is required.

Building B2

3.9. During the scoping survey, no droppings, staining, feeding remains or actual bats were observed in association with building B2.

3.10. The building consists of a collection of interconnected and dilapidated buildings that provide bats with a variety of roosting potential as highlighted below.

- Numerous crevices associated with the traditional Roman clay tile roof and the corrugated sheet roofs.
- Numerous crevices associated with the tired feather edge timber cladding which in various places has fallen away and / or warped. Further crevices associated with corrugated cladding sheets, which by design provides significant gaps.

- A large hidden void associated with the main carpentry workshop.

3.11. Building B2 is assessed to provide bats with Moderate Roosting Suitability.

Bat activity surveys 2023 (Building B2)

3.12. The building was subject to 2 number activity surveys (15 August & 14 September 2023).

- The first survey recorded 1 number serotine bat emerging from a loose / gappy tile adjacent to the chimney (which is situated close to the western verge) on the clay tile roofed part of the building. Refer to photograph 5.

- The second survey recorded 1 number serotine bat emerging from the same location as the previous survey. Also recorded was 1 number common pipistrelle bat emerging from a gappy roof tile in a similar location. Refer to photograph 5.

Roost characterisation (Building B2)

3.13. Previous surveys undertaken by ACD Environmental in 2018 recorded 1 number common pipistrelle emerging from a similar location but recorded no serotine emergence. Ellendale Environmental carried out a survey in 2020 and recorded 1 number serotine emerging from the same location but recorded no common pipistrelle emergence. Refer to photograph 5.

3.14. The combined data from the 2018, 2020 and 2023 surveys provide consistent evidence that the identified serotine and common pipistrelle roosts present are non-breeding summer day roosts. Such roosts are where individual bats, or small groups of mainly male bats, rest or shelter in the day but are rarely found by night in the summer. Bat occupancy can be intermittent and dependant on weather / temperature / levels of disturbance and food availability.

3.15. The low numbers of emerging bats during the main bat activity season, confirms that the roosts present are not maternity roosts.

Serotine bat

3.16. The serotine bat is one of the UK's less common and largest bat species, occurring mainly south of a line drawn from the Wash to parts of South Wales.

3.17. Summer roosts are almost exclusively found in buildings where they roost in hidden crevices around chimneys, in cavity walls, between felt or boarding and tiles or slates, beneath floor-boards and sometimes in the open roof space at the ridge ends or occasionally elsewhere along the ridge.

3.18. The decline in serotine numbers is probably due to loss of feeding habitat where large insects such as chafers can be found. As the serotine roosts almost entirely in buildings, it is subject to the effects of building work and the use of toxic chemicals in remedial timber treatment.

Common pipistrelle bat

3.19. The National Bat Monitoring Program (Bat Conservation Trust) shows a mixed picture for this species. Although there seems to be a decline in recorded roost sites, numbers of recorded bats are increasing. Overall, the population of this species is currently considered to be relatively stable. The species is one of the UK's smallest bats and is a crevice dweller and will readily roost in association with buildings where it will roost beneath roof and ridge tiles, lead flashings and within soffits and wall cavities. Common pipistrelle bats are able to make use of small crevice's measuring down to 15 mm.

Buildings B3 & B4

3.20. During the scoping survey, no droppings, staining, feeding remains or actual bats were observed in association with buildings B3 & B4.

3.21. Buildings B3 & B4 are less complex and simple in construction. Both buildings are, however, fully accessible to bats and provide bats with potential roosting opportunities which include open roof structures and gaps and crevices associated with the corrugated roofs.

3.22. Buildings B3 & B4 is assessed to provide bats with Low Roosting Suitability.

3.23. A single evening emergence survey confirm likely absence of bats within these buildings.

4. Recommendations

4.1. The recommendations in the paragraphs below are provided to help ensure that wildlife and important ecological features are protected during the course of works. Recommendations also set out mitigation measures to minimise harm where this cannot be avoided and provide compensation measures to allow the proposals to meet current legislative and planning policy objectives.

4.2. The Natural Environment and Rural Communities (NERC) Act (2006) states that a public authority must 'in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat'.

4.3. Under the Government's National Planning Policy Framework (NPPF) opportunities to incorporate biodiversity in and around developments should be encouraged.

Species recommendations

Bats

4.4. In the UK all species of bats are protected under the Wildlife and Countryside Act (1981) as amended and the Conservation of Habitats and Species Regulations. Under this legislation it is a strict liability offence to injure or destroy a bat or to disturb damage or destroy the resting place of a bat. Under this legislation the UK is obliged to fully take into account bats within the planning process and the level of bat activity on-site must be fully assessed prior to the assessment the planning application.

Building B2

4.5. Building B2 is supporting 2 number low status non-breeding summer day roosts as outlined below.

- One number serotine roost which has recorded a maximum of 1 number bat.
- One number common pipistrelle roost which has recorded a maximum of 1 number bat.

4.6. Bat roosts are protected whether bats are present or not. Both roosts are associated with loose / gappy tiles on the western side of the double pitched clay tile roof and adjacent to the brick chimney. Refer to photograph 5. A Natural England Protected Species Licence is required prior to carrying the demolition of the building. The licence requires full planning permission and once prepared takes approximately 30 working days to be processed.

Natural England Protected Species Development Licence.

4.7. The Licence is a legal document which consists of a set of documents that include the method statement which is supported by site figures and a work schedule. The licence documents provides detail on how works will be carried out, including timings, mitigation and compensation, the licence documents are prepared by an ecologist. An application form will also form part of the licence application and will provide the named licencee (this would normally be the developer, whether that be a company or private individual). The licencee is responsible for ensuring all works are delivered as per the licence docs. The application form will also provide the name of the ecologist (who will hold the appropriate licenced Natural England Bat licence), their role is to oversee the licensable activities.

Timing constraints

4.8. In the case of non-breeding summer roosts for abundant species there is not considered to be a timing constraint to the works.

Mitigation

4.9. Prior to works commencing there will be a requirement to undertake a toolbox talk which will be a conversation between the ecologist and the builders to inform them of their obligations in relation to roosting bats. The toolbox talk will cover basics such as bat biology and where bats might be found during the development and what to do with a bat is found during works.

4.10. Also prior to works commencing, 2 number temporary bat boxes will be installed within the grounds of the site. The bat boxes will function as a receptor for any serotine and common pipistrelle bats which are found during the development works. In the event that a bat of either species is found, it will be removed by an ecologist, using a gloved hand, and placed within the bat box. The bat box provides a safe place to put any bats that are found during the development. Common pipistrelle and serotine bats will be kept strictly apart, any sick or injured bats will be taken into care.

4.11. If works are to take place between 15 October – 31 April, then two number hibernation grade bat boxes will be available. In extreme cold weather any bats discovered will be taken into care and released only when the weather has warmed up sufficiently.

4.12. Roof tiles and allied roof structures will be dismantled by hand always checking underneath panels and behind masonry for the potential presence of bats. All development works associated with key procedures, such as the dismantling of the roof structure will be overseen by an ecologist or ecological clerk of works.

Compensation

Serotine

4.13. The southern end roof void of each of the new dwellings will be fitted with one number bespoke bat loft. Each bat loft will provide a dimension of approximately

6 m x 5 m x 1.8 m in height and will be comprehensively sealed off from the remaining area of roof void, enabling the area to be used by the home owners. The bat lofts will be fitted with a solid floor using something like Gyproc waterproof tongue and groove floorboards (or equivalent). To enable monitoring and maintenance a standard style access hatch will be provided.

4.14. Internally each bat roost will be fitted with bespoke bat roosting features as outlined below.

- The partitioning of the roof apex with 4 pairs of triangular panels of OSB approximately 600mm in height. The panels should be fitted in pairs, one either side of the rafters, this will provide bats with concealed roosting opportunities. Refer to Figure 4.
- The fitment of 4 number Kent style crevice bat boxes.

4.15. Information sheets on the above features is provided under Appendix III; information sheets.

4.16. Figure 4 provides the approximate layout of the bat lofts.

4.17. Access to each of the bat lofts for bats will be via two number lead bat access arches fitted on the western roof elevations. **That is 2 number bat access arches fitted to each roost.** The lead bat arches will be fitted in lieu of one or two roof tiles. A small hole approximately 150 mm x 150 mm will be cut through the sarking layer and the roof battens may need adjustment / cutting to allow bats free access into the roof void. The lead bat arches should be fitted approximately three/four tiles up from the eaves, but either way must provide direct and unobstructed access into the roof void.

4.18. Lead bat arches can be simply made by a roofer who works with lead or purchased directly from www.justlead.co.uk Telephone number 07899096860.

4.19. Figure 5 provides annotated reference to lead bat access arches.

Sarking layer

4.20. Modern breathable roofing membrane (BRM) is not suitable as the tile sarking layer on buildings known to or intending to support a bat roost.

4.21. Natural England except the following types of sarking layer to go beneath roof tiles that are associated with bat roosts or are intended for roosting bats.

- **Traditional type 1f bituminous felt.**
- **Timber planking.**
- **TLX 'Bat Safe'.**

4.22. Monarflex ridged eaves guard is acceptable along the eaves course.

Common pipistelle bat

4.23. Replacement bat roosts for common pipistrelle bat will consist of two integrated (in-built) Habibat type 001 bat roosting boxes. 1 number fitted to the each of the new dwellings' southern gables.

4.24. This model is designed for a variety of bat species (including common pipistrelle) and has good thermal properties making it suitable as both a maternity roost and hibernation roost. A variety of facings can be fitted to suit any existing brick, wood, stonework or rendered finish, making the box unobtrusive and aesthetically pleasing.

4.25. Apart from the front entrance, the box is fully sealed preventing bats from gaining entry to any interior part of the building. The boxes are the size of a large shoebox and are typically installed under the gable apexes of buildings and should not be

placed above windows, doors or near to climbing plants and away from exterior lighting. The boxes are self-cleaning and require no further maintenance.

Installation information:

4.26. Correct placement of Habibat is fundamental to the successful uptake by bats. The boxes are fitted into the outer skin of the wall and are incorporated within the wall as it is being built. A variety of facings can be fitted to suit any existing brick, wood, stonework or rendered finish to create an aesthetic finish. The boxes should be placed on an elevation that provides bats with the fastest route into natural / semi-natural habitat.

4.27. Habibat bat boxes are available direct from http://www.habibat.co.uk/, telephone number 01642 724626.

4.28. An information sheet on integrally fitted bat boxes and exterior lighting can be found under Appendix III information sheets.

Buildings B1 & B5

4.29. Due to the unsuitable nature of the buildings B1 & B5 and the likely absence of bat roosts in association with buildings B3 & B4 is not considered necessary or beneficial to undertake any further survey work.

4.30. Bats are transient in nature and can sometimes utilise buildings on an occasional or temporary basis. It is therefore recommended that works to the building is undertaken using a precautionary approach with all tiles and roof panels being removed cautiously by hand. In the unlikely event that a bat is found, works should stop immediately and further advice should be sought from Crossman Associates or Natural England (telephone number 0300 0603900).

Tree TR1

4.31. Tree TR1 is an overly mature short trunked crack willow. The tree is assessed to provide bats with Moderate Roosting Suitability. The tree's location within the north-west corner lends itself to retention and this is the recommended course of action. Bat roosting features are focussed on the lower bough unions, and it is suggested that the tree is subject to pollarding. This work will enable the Potential Roosting Features (PRF's) to be retained.

4.32. The work should be carried out by a suitably qualified tree surgeon and as an added precaution, it is recommended that this work is carried out under the supervision of a suitably qualified ecologist who will highlight the bat PRF's to the tree surgeons.

4.33. On completion of pruning works the tree should be fenced off with a simple post and rail fence design.

Lighting

4.34. Exterior lighting should consider the presence of bats and other nocturnal wildlife as the site is currently unlit. New exterior lighting should consist of a modern LED-type and should be directional and or cowled. Lighting should aim to avoid light spill along adjacent habitat features; particularly to the west, where farmland lays. It is also recommended that exterior lighting plans should be implemented during the construction phase to avoid the possibility of new home-owners retro fitting less desirable lighting schemes.

4.35. The new bat rooting boxes and access points must strictly remain un-lit.

4.36. The choice of lighting is important to minimising light spill and it is recommended that the following factors are considered to reduce the impact as much as possible;

- Narrow spectrum lights with no UV content
- Low pressure sodium and/or warm white LED

- Directional downlighting, illuminating downwards and below the horizontal plane to avoid light trespass.

4.37. A recommended exterior light unit is the Knightsbridge WALL 1LBK which is a wall mounted down lighter installed with a 3000K LED bulb which provides a beam angle of 50 degrees. Exterior lighting should be fitted with timers that prevent lights being on for more than 1 minute.

4.38. An information sheet on lighting can be found in Appendix III; information sheets.

Birds

4.39. All species of birds are partially protected under the Wildlife and Countryside Act (1981) as Amended, which makes it an offence to damage or destroy a nest when being built or in use. This legislation has implications on the timing of vegetation removal works, which must take place outside the nesting bird season, which runs between March and September. If this timing is not possible then an ecological clerk of works or an ecologist must oversee clearance.

4.40. Should any active bird's nests be present, works should take reasonable precautions to avoid disturbing them until all birds have fully fledged.

4.41. The above advice also includes the removal of ivy present on aspects of buildings B1, B2 & B3.

Integrally fitted nest boxes

4.42. Artificial nesting boxes are recommended and can be inexpensively incorporated within the supporting walls of the new properties; with a particular emphasis on house sparrows *Passer domesticus*. Sparrow nesting terraces should be used and each dwelling should be fitted with 1 number nestbox. Sparrow terraces are supplied by Habibat www.habibat.co.uk telephone: 01642 724 626), Wildlife Services www.wildlifeservices.co.uk telephone: 0333 900 0927.

4.43. A variety of models are available which are suitable for both integral and surface mounting.

4.44. The siting of bird boxes should be done in consultation with an ecologist.

4.45. Refer to information sheets under Appendix III.

Hedgehog

4.46. In the UK hedgehogs are listed on schedule 6 of the Wildlife and Countryside Act (1981) as Amended which makes it illegal to kill or capture wild hedgehogs. Hedgehogs are also listed as a species of 'principal importance' under the Natural Environmental and Rural Communities Act 2006, which is meant to confer a 'duty of responsibility' to public bodies.

4.47. Excavated holes and trenches on building sites have the potential to trap wildlife including hedgehogs leading to the potential suffering and death of the animal (s) particularly if they become filled with water.

4.48. If during the development excavated holes / trenches are likely to be left open, then timber builders' planks should be fitted as ramps to enable any wildlife including hedgehogs a means of escape.

<u>Vegetation removal</u>

4.49. The following methodology is recommended to avoid the possibility of accidently killing or injuring hedgehogs should they be present on the site but is also equally applicable to other mammals and wildlife.

4.50. To reduce the likelihood of killing or injuring any hedgehogs that may be present during development, the following mitigation strategy should be followed. The strategy aims to encourage any hedgehogs away from the development area through a displacement method that relies on systematic habitat manipulation.

4.51. Prior to vegetation clearance, any piles of brash should be carefully dismantled and checked for the presence of hedgehogs and other species. Vegetation would then be systematically and slowly, removed in stages. Firstly, the vegetation would be carefully and slowly cut to a height of approximately 200 mm. The remaining vegetation would then be further reduced 24 hours later using a second more sensitive and slower method of cutting. This method will reduce the potential for any impacts to hedgehogs and other species and would render the habitat unsuitable.

4.52. All cut material should be removed by the end of each working day and must not be left store on site.

4.53. During all operations careful observation should be kept for hedgehogs and other species.

Great crested newt

4.54. In the UK, great crested newts (GCN) are fully protected under the Wildlife and Countryside Act as Amended and The Conservation of Habitats and Species Regulations. Under the Legislation, it is an office to injure or kill a GCN or to disturb, damage or destroy the habitat of GCN.

Reasonable Avoidance Measures

4.55. The pond that provided a positive eDNA result for the presence of great crested newt is situated within a private garden approximately 160 m to the north. The following methodology will minimise the risk of harm to great crested newts.

- Immediately prior to the start of works, a suitably experienced ecologist (the ECoW) should provide a Toolbox Talk to the site manager and the site owner. This will cover identification of protected and amphibian species and work through safe working practices.

Safe Working Practices

4.56. The Landowner/Site Manager will be responsible for performing a thorough site check each morning to assess the condition of the working practices listed below.

- All materials will be stored on pallets far away from the ponds. This will prevent places of refuge being created within the construction zone. Any aggregates delivered to Site should be stored in bulk-bags and placed on pallets. Again, this will prevent places of refuge / hibernacula being created within the construction zone.

- Any excavations should contain an escape ramp, made from earth or wooden planks (or multiple ramps within large excavations – to be determined by the ECoW). The landowner/site manager will check the excavations each morning. Should amphibians be found, then these animals will be moved to safe habitat outside the construction zone (this habitat will be identified during the Toolbox Talk). If amphibians are found within the excavations, then a suitably licensed ecologist will be contacted and discussions for future methods/works will take place.

Landscape recommendations

4.57. It is recommended that ecological input is made into any future landscaping plan.

4.58. Any new landscape proposals should include new tree and shrub planting, including a range of native and non-native species. Where possible, plots and shared areas e.g. parking and bin areas, should be divided or screened using native hedgerows rather than close board fencing allowing the free passage of wildlife, particularly hedgehogs.

4.59. If a solid fence is necessary, then this should be combined with a hedgerow. In the case of solid fences small holes measuring approximately 150 mm x 150 mm

should be created at the bases to allow the passage of wildlife, including hedgehogs, between plots.

4.60. An information sheet is included in Appendix III which includes a range of tree, shrub, and herb species that could be incorporated; these are recommended for encouraging bats but will also attract a wide range of other species.

4.61. Retained trees should receive adequate protection during the development to protect them from accidental damage during the construction phase. It is recommended that trees are protected according to current best practice standards (BS 5837:2012).

5. Limitations

5.1. This report records wildlife found during the survey and anecdotal evidence of sightings. It does not record any plants or animals that may appear at other times of the year and were therefore not evident at the time of visit.

5.2. This report represents a preliminary assessment only. Recommendations and conclusions are subject to change should further findings significantly differ from those collected from the survey efforts to date.

5.3. The advice contained in this report relate primarily to factual survey results and general guidance only. On all legal matters you are advised to take legal advice.

6. References

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Appendix I – Site Figures



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crossman
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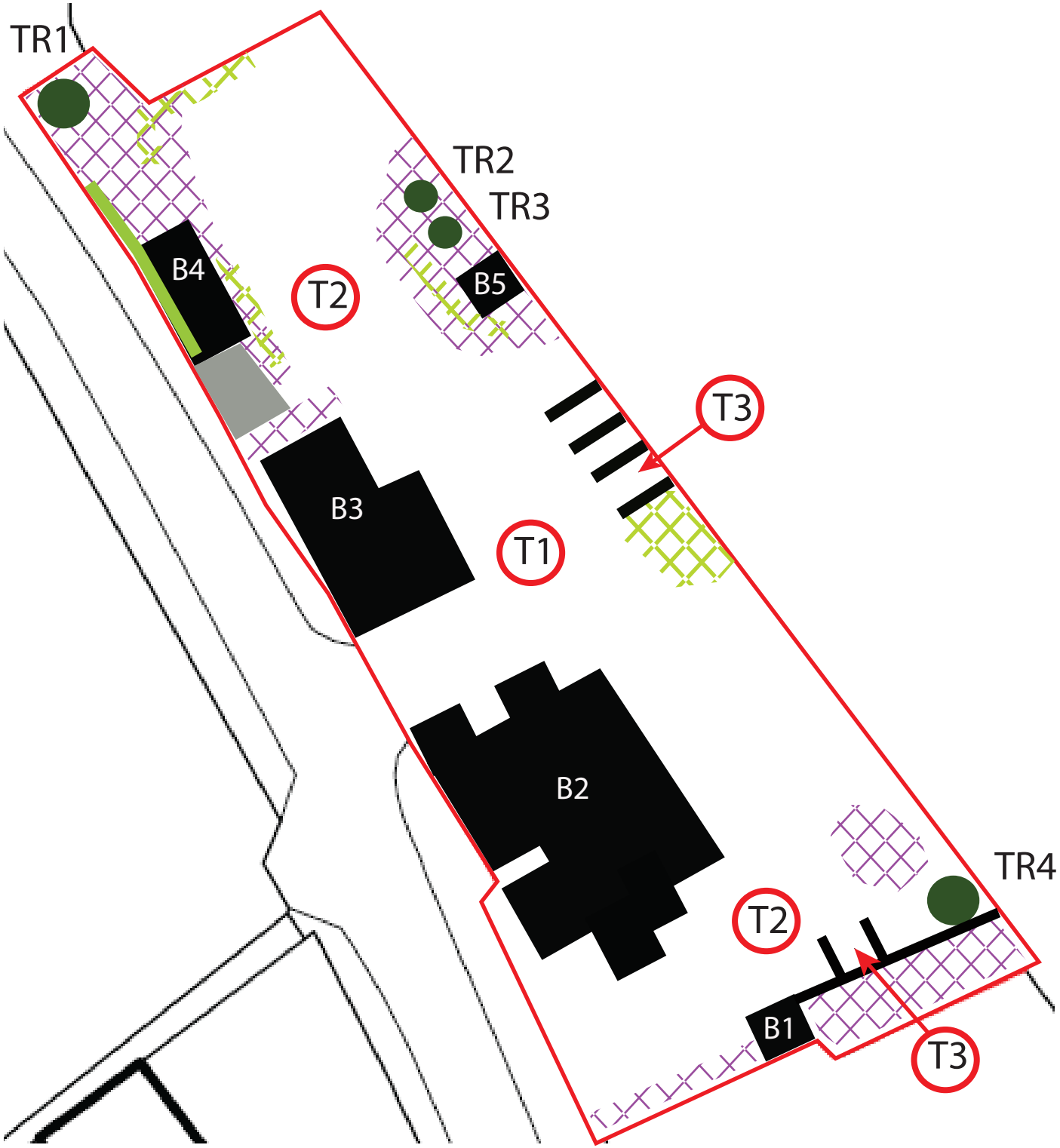
01761 233414
info@crossmanassociates.co.uk
www.crossmanassociates.co.uk

The site

Client	LPC
Title	Location plan
Site	The Old Builder's Yard
Figure	1
Date	22 September 2023
Scale	Not to scale



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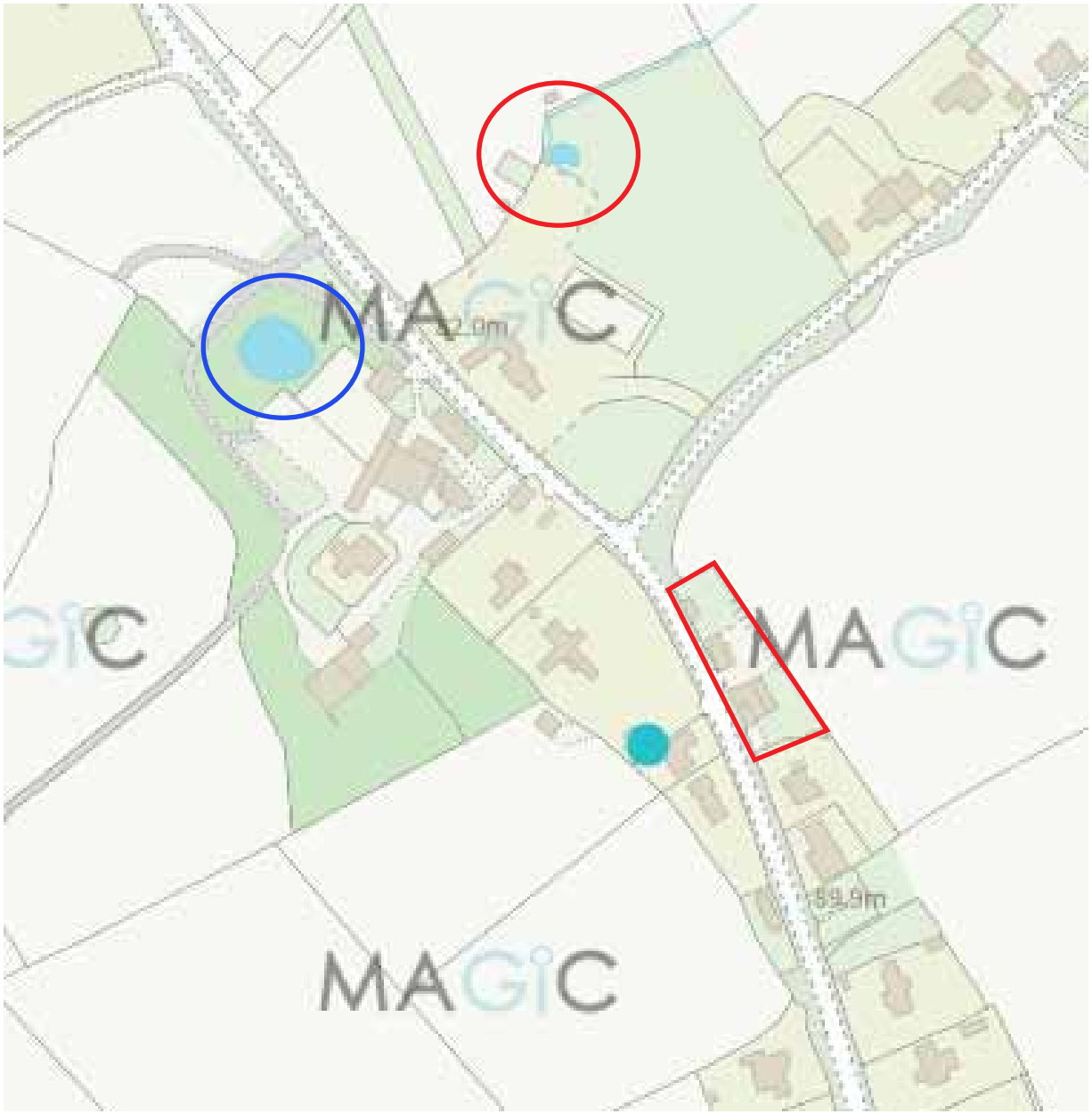
- Site boundary
- Tall herb and ruderal
- Scrub
- Un-managed grass
- Native hedgerow
- Internal walls
- Trees
- Buildings
- Target Note

Client	LPC
Title	Habitat Map
Site	Builders Yard
Figure	2
Date	22 September 2023
Scale	Indicative



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The site

Pond at Heath Farm which scored a positive result for great crested newt

Fishing pond not accessed

Client	LPC
Title	2 number ponds
Site	The Old Builder's Yard
Figure	3
Date	13 June 2023
Scale	Not to scale

Fit 4 number Kent style bat crevice boxes within the bat loft.

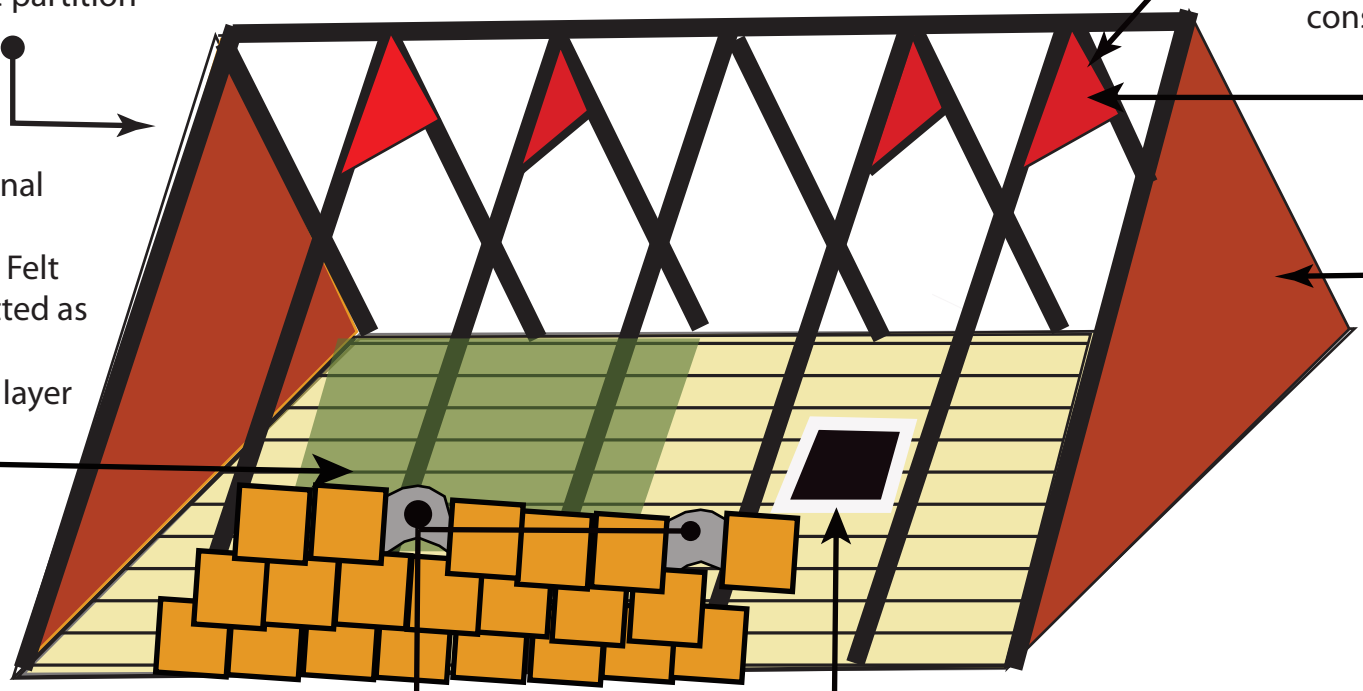


The triagular partitions should be fitted in pair,s enclosing the sides of the rafters and creating a cavity for bats to access and roost in.

Partitioned off roof apex to create warm air pockets. Approximately 0.5 m in height and constructed from OS board.

Secure partition wall

Traditional Type 1F Sarking Felt to be fitted as the tile sarking layer





Fit 1 number Habibat 001 integral bat box into each of the southern gables. Other finishes are avialable



2 number lead arches will provide access to the roof void.

Solid floor fitted with a secure lockable loft hatch to allow occasional access

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info@crossmanassociates.co.uk
www.crossmanassociates.co.uk

Client	LPC
Title	Detail showing bat loft
Site	Martin Yard, Startley
Figure	4
Date	21 September 2023
Scale	Indicative

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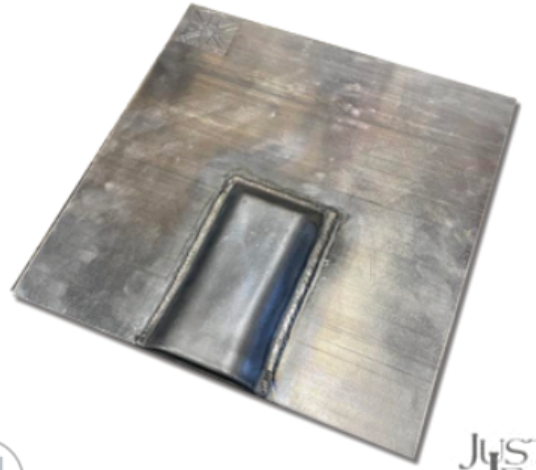
ASSOCIATES

01761 233414
info@crossmanassociates.co.uk
www.crossmanassociates.co.uk

HOME / BAT ACCESS TILES

Roost

Bat Conservation Trust
www.bats.org.uk



JUST LEAD



Bat Tubes For Slated & Tiled Pitched Roofs

£28.50

Bat access tube for slated & tiled pitched roofs

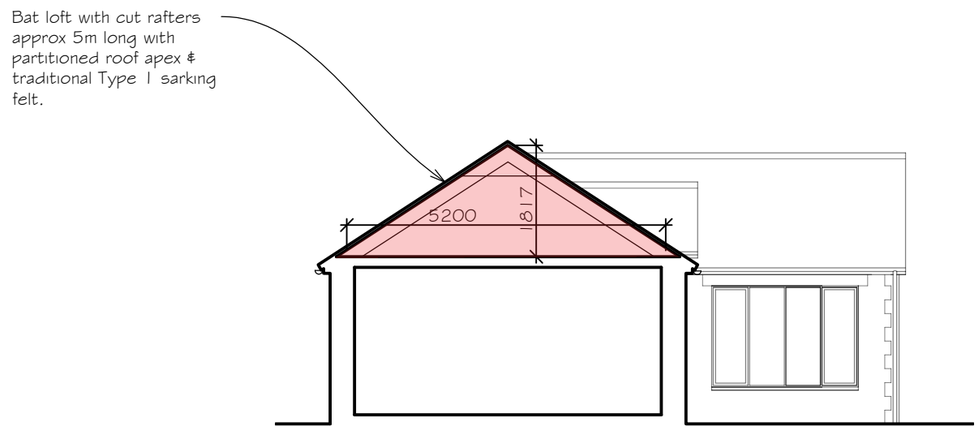
The Bat Access lead tile allows bats a pathway for roosting bats either under the tiles against the bitumen felt or through in roof spaces / lofts / attics. Made from sheet lead flashing to- BS EN 12588.

Just Lead and the Bat Conservation Trust (BCT) agree to work together within the Roost Partnership scheme which focusses on improving opportunities for bats within our built environment.

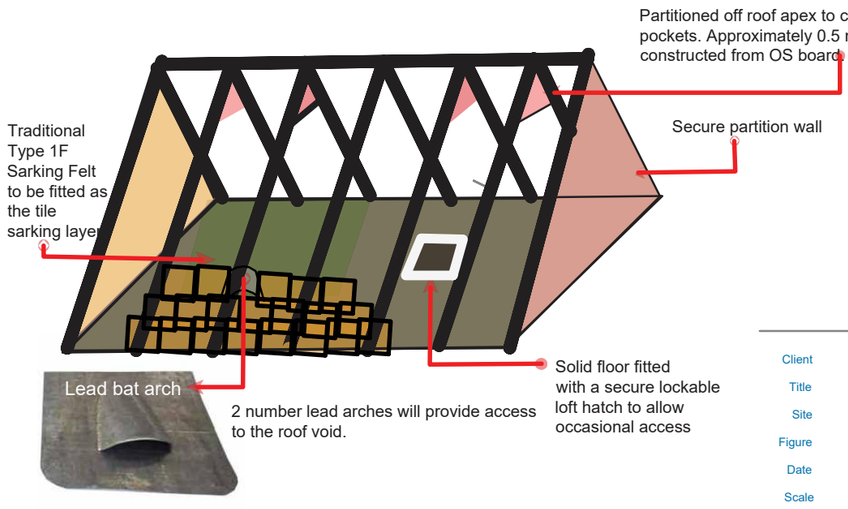
This is a direct link to the product

https://www.justlead.co.uk/product/bat-tubes-for-slated-tiled-pitched-roofs/

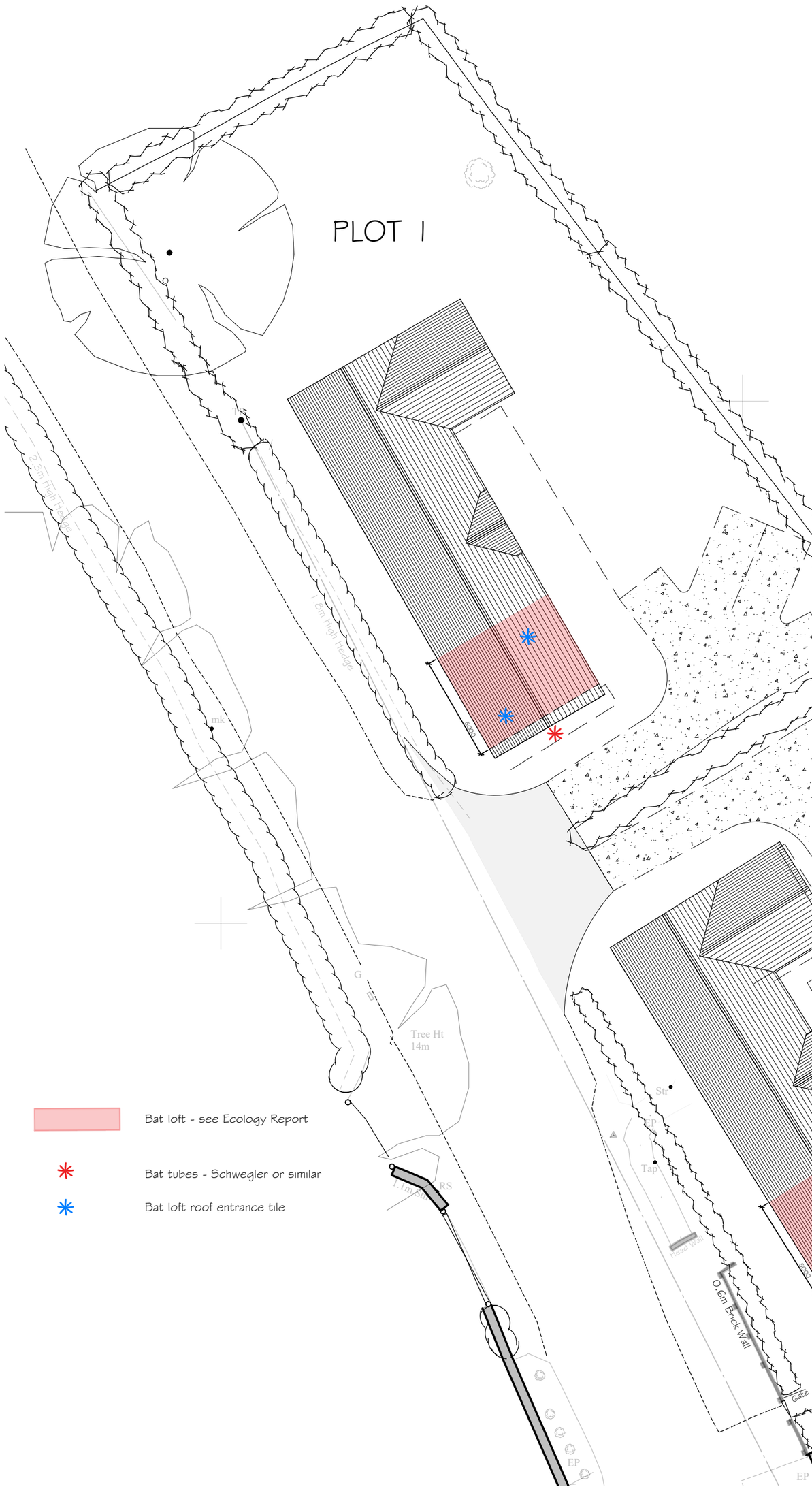
Client	LPC
Title	Bat access tube / arch
Site	Martins Yard, Startley
Figure	5
Date	20 September 2023
Scale	Not to scale



TYPICAL BAT LOFT SECTION 1:100



Client
Title
Site
Figure
Date
Scale



SITE PLAN - MITIGATION 1:200

0 10
Metres

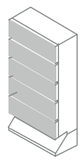
Bat Tubes

BUILT-IN HABITATS N 004O

Woodcrete Bat Tubes

We recommend the use of wood-crete-type bat tubes that are manufactured by Habibat or Schwegler. These are a well known brands so are always accepted as a compensation measure for planning applications and Natural England Licence applications. The tubes also have a low visual impact on the development because they can be built into the exterior wall and then rendered or painted, or in the case of the Habibat, faced with brick or stone.

Recommended bat tubes

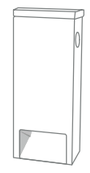


Habibat

The great advantage of the Habibat box is that it can be faced with brick, stone or render, so that it blends in and doesn't alter the aesthetic of the build.

Specifications

Height	44 cm
Width	21 cm
Depth	10 cm
Weight	7 kg



Schwegler 1FR & 2FR

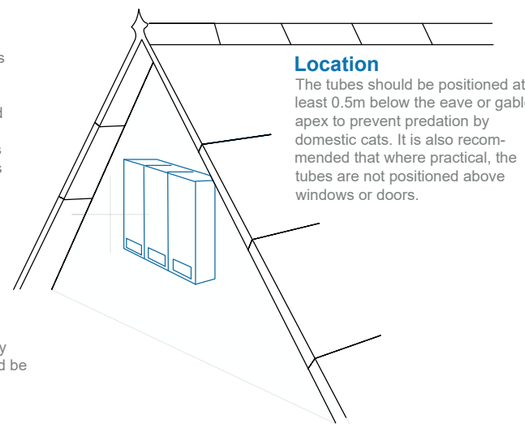
There are two similar designs that we use regularly. The 1FR is designed to be used singularly whereas the 2FR has transverse connecting holes (model shown) that allow tubes to be connected together.

Specifications

Height	47.5 cm
Width	20 cm
Depth	12.5 cm
Weight	9.8 kg

How Many to Install

The number of bat tubes to install is dependent on the level of compen-sation or mitigation that is required. Typically one tube is recommended on sites where there are low number of bats and multiple groups of tubes are recommended on sites of high ecological significance.



Location

The tubes should be positioned at least 0.5m below the eave or gable apex to prevent predation by domestic cats. It is also recom-mended that where practical, the tubes are not positioned above windows or doors.

Installation

The tubes should be built into the exterior wall of the building, typically at the gable apex. The tubes should be installed flush with the surrounding wall and can then be rendered or painted with breathable paint if required.

Bat Tubes

Bat tubes are an excellent way to provide discreet and low impact roosting opportunities for certain species of bats that tend to occupy crevices within buildings. They are relatively compact and can be installed flush or beneath a rendered surface and can be painted with an air permeable paint if required.

Rev Date Notes

lpc
TOWN AND COUNTRY PLANNING DEVELOPMENT CONSULTANTS
LPC (TRULL) LTD.,
TRULL, TETBURY, GLOUCESTERSHIRE GL8 8SQ
Tel: 01285 841433 email: admin@lpctrull.com

Client
Trustees - Fast Track Solutions Ltd
Project
Martin's Yard, Startley
Drawing
PROPOSED WILDLIFE MITIGATION

Date: September 2023 Scale: 1:200 @ A2
Drawing Number
LPC 5559 PR 03

Appendix II – Site Photographs

Photographs 1- 3



Photograph 1:

Building B1. Belived to be an old chicken shed



Photograph 2:

Building B2. Southern elevation and eastern elevation.



Photograph 3:

Detail; showing lifted feather edging

Photographs 4 - 6



Photograph 4:

Western side elevation.



Photograph 5:

Northern elevation



Photograph 6:

View looking southwards over the roof of the eastern side of the building showing the delapidated roof.

Photographs 7 - 9



Photograph 7:

The interior consists of series of rooms used as workshops and for storage.



Photograph 8:

Building B3. Northern and eastern elevation. A roof void exits in this section, refer to photogrph..



Photograph 9:

Eastern elevation and southern elevation

Photographs 10 - 12



Photograph 10:

Roof void



Photograph 11:

Building B4. Soutern gable and eastern elevation



Photograph 12:

Western elkevation

Photographs 13 - 15



Photograph 13:

Internal, provides a single bay.



Photograph 14:

Building B5.



Photograph 15:

The northern end provides an area of overgrown grass and tall ruderal / herb.

Also shown is:

- Tree TR1: An overly mature willow
- Tree TR2: A small alder buckthorn
- Tree TR3: A small apple tree

Photographs 16 - 18



Photograph 16:

Detail showing signiifcant cavities associated with Tree TR 1, the overly mature willow.



Photograph 17:

Tree TR4; a norway spruce



Photograph 18:

An area of former hard-standing that occupies the centre of the site, the area has become lifgtly vegetated. Shown as Target Note 1.

Photographs 19 - 21



Photograph 19:

Detail; showing the area of grass that occupies the central area of the site. The sward height tends to be shorter and less dense then the areas that occupy the north and south sides.



Photograph 20:

Detail; showing a dense thicket of bramble present midway along the eastern boundary.



Photograph 21:

Detail, showing a compost heap within a former blockwork aggregate store, a further compost heap is present along the southern end and also occupies a former block work aggregate store. Both compost heaps are highlighted as target Note T3 on figure 2; the habitat map.

Photographs 22 - 23



Photograph 22:

Detail; showing overgrown areas of grass and ruderal that occupy the northern 1/3 of the site.



Photograph 23:

Detail; showing the extreme north-eastern corner which is an old chicken run that has become densely overgrown with tall ruderal growth.

Photographs 22 - 23



Photograph 22:

Detail; showing overgrown areas of grass and ruderal that occupy the northern 1/3 of the site.



Photograph 23:

Detail; showing the extreme north-eastern corner which is an old chicken run that has become densely overgrown with tall ruderal growth.



Photograph 24:

Detail; showing the 24 m long managed native hedgerow that runs along the northern end of the western boundary.

Appendix III– Information Sheets

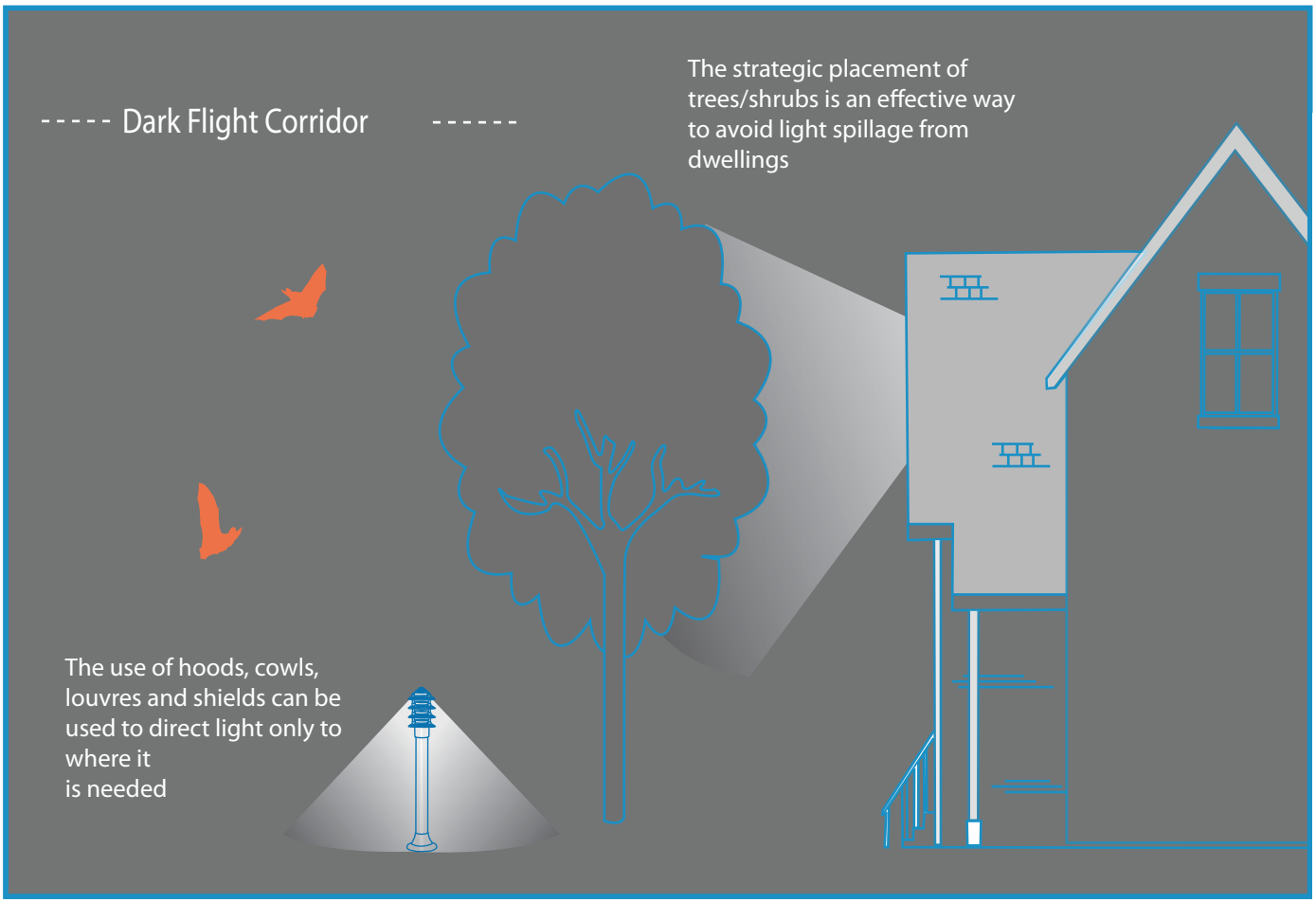
Bat Habitat Suitably Criteria

Bat Roosting Suitability	Criteria	Survey requirement to prove likely absence
Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further survey work required
Low	A building, structure or tree with one or more potential roosting sites that could be used by individual bats opportunistically; however, these possible roost sites do not provide enough space, shelter, protection and/or suitable surrounding habitat to be used by large numbers of bats and are unlikely to be suitable for maternity or hibernation roosts.	One activity survey
Medium	A building, structure or tree with one or more potential roost sites that could be used by bats due to the size, shelter, protection, conditions and surrounding habit, but is unlikely to support a roost of high conservation status.	Two activity surveys
High	A building, structure or 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.	Three activity surveys

Survey requirements are taken from Bat Surveys for Professional Ecologists: Good Practice Guidelines (2016), which is the recognised industry standard guidance used by local planning authorities and other statutory consultees.

Sensitive Lighting for Bats

MITIGATION GUIDELINE Nº 001



Lamp Type

The impact of light on bats can be minimised by the use of low/high pressure sodium lamps.

Lighting Column

The height of lighting columns should be kept as low as possible to reduce the impact of light spill. For example, when designing lighting for pedestrian walkways, use short bollard lights that produce a low level light (as low as 3 lux) directed downwards.

Light Mapping

Mapping the light spill of a lighting scheme using computer software can prove essential in designing schemes that are fit for purpose, that minimise energy costs and create dark flight corridors and foraging areas for bats.

Light Levels

Proposed light levels within landscape plans should be as low as possible. If lighting is not needed, don't light.

Timing of Lighting

The times at when lighting is left on should be limited where possible. The use of movement sensors and timers for lights is useful for saving energy and reducing the amount of time a light is left on.

Impacts of Light on Bats

As nocturnal mammals, light causes disturbance to bats and many species will actively avoid lit areas. The illumination of bat roosts can delay bats emerging and thus shorten their foraging time and may eventually lead to bats abandoning their roost. The illumination of foraging or commuting areas may also lead to an increase in the rate of predation of bats by predators.

crossman ASSOCIATES

Written by James Tristram

01761 233414

hello@crossmanassociates.co.uk

Fire Engine House, Oakhill, Bath, BA3 5BJ

Information sheet Artificial bird nesting boxes for Buildings: Swifts, house martins and house sparrows

crossman ASSOCIATES

01761 233414
iinfo@crossmanassociates.co.uk
www.crossmanassociates.co.uk



Habibat house sparrow nest box



Vivara woodstone sparrow nest box; suitable for both integral fitment or surface mounting

Ibstock Swift boxes are also suitable for house sparrows. Can be customised to suit any exterior finish.Site boxes under eaves, away from windows and direct sunlight.

Ibstock Box





Sparrow boxes should be grouped together and be at least 2 m of the ground. The boxes can be also be sited on gable walls. At least 3 per averaged size house.

Swifts boxes should be at least 5 m above the ground with an clear un-obstructed flight path.



Schwegler model 9b

Schwegler house martin box model 9 b double is a suitable box for house martins and can be used to encourage the uptakeof a building by this species. The boxes can be attached to the exterior walls in a sheltered position; ideally beneath the eaves. At least two sets should be placed on an averaged size house.