



**WILDLIFE SURVEY
MINEFIELD COTTAGES
MENHENIOT
LISKEARD
CORNWALL
PL14 3RY**

29th March 2024

1 **Summary**

A bat, barn owl and nesting bird survey of a detached two-storey garage and surrounding site was carried out on the **2nd March 2023** by Nic Butler (Butler Ecology). The survey was requested in respect of a full planning application for the proposed conversion and extension of the garage into a dwelling.

There are no overriding wildlife reasons why this application should be refused.

Observing the recommendations in this report should be made a **Condition of Planning Consent**.

Once the development has been completed, the ecologist should confirm to the planning authority in writing that all the mitigation and enhancement measures have been implemented as recommended.

1.1 Bats

- No bats or evidence of bat activity were found in the garage.
- No favourable roost locations were identified.
- The garage was assessed to have very low / no potential for bats.
- The proposed conversion and extension of the garage **would not cause disturbance to bats** (as defined), **would not result in the loss of or disturbance to any roosts** and **would not affect the distribution or abundance of local populations**.
- A **Protected Species Bat Mitigation Licence** under the Conservation (Natural Habitats, &c) (Amendments) 2012 Regulations **would not be required**.
- **No further surveys or mitigation measures** are required.
- As an **opportunity to enhance biodiversity**, the installation of **1 x bat box** on the proposed conversion is recommended in this report.

1.2 Barn owls

- No evidence of use by barns owls was found in the garage.
- No favourable nest locations were identified.
- The proposed conversion of the garage **would not cause disturbance to barn owls or result in the loss of any favourable foraging habitat**.
- **No further surveys or mitigation measures** are required.

1.3 Nesting birds

- No evidence of nesting was found in or around the outside of the garage.
- **Potential nesting habitat** was noted on site (on the south side of the garage).
- Without mitigation, there is a small risk that **works associated with the proposed development could disturb nesting birds** (*if carried out during the nesting season*).
- Birds are legally protected under the Wildlife and Countryside Act 1981 (as amended) against disturbance during the nesting period (typically March to late August).
- Potentially disturbing works should be carried out in the winter months when there is no risk of encountering nesting birds [unless a **pre-works survey has been carried out immediately before works commence to confirm there are no nesting birds /activities**.]
- As a **biodiversity enhancement measure**, the installation of **3 x swift nest boxes**, **3 x house martin nest cups** and **4 x sparrow nest boxes** is recommended in this report.

1.4 Dormice

- Dormice have been recorded within 5kms of the site, but no favourable habitat was noted on site.
- The proposed development would not harm or disturb dormice or result in the loss of any favourable habitat.
- **No further surveys or mitigation measures** are required.

1.5 Biodiversity

- The proposed development **would not result in a loss of biodiversity.**
- The recommended installation of **1 x bat box, 3 x swift nest boxes, 3 x house martin nest cups and 6 x sparrow nest boxes** will ensure the proposed development achieves the required **net-gain in biodiversity.**
- As an additional opportunity to add to the biodiversity of the site, native-species tree and / or hedge planting could be included in the development.
- If the application is approved, full details of proposed landscaping should be submitted to the LPA for approval.

2 Survey aims and methods

The aim of the survey was to assess levels of use by bats through the presence of animals and / or their signs (droppings and / or feeding remains), the potential suitability of the barn for roosting, and the impact of the proposed development (conversion of the barn to two holiday dwellings). Evidence of nesting birds was also to be noted. The **day-time survey** was carried out on the morning of 2nd March 2023 by Nic Butler of Butler Ecology (NE Bat Licence no. 2015-17505-CLS).

Survey conditions: 30% high diffuse cloud, still, dry, temp. 12°C

Survey constraints: The ground floor of the garage (used for storage) was not accessible.

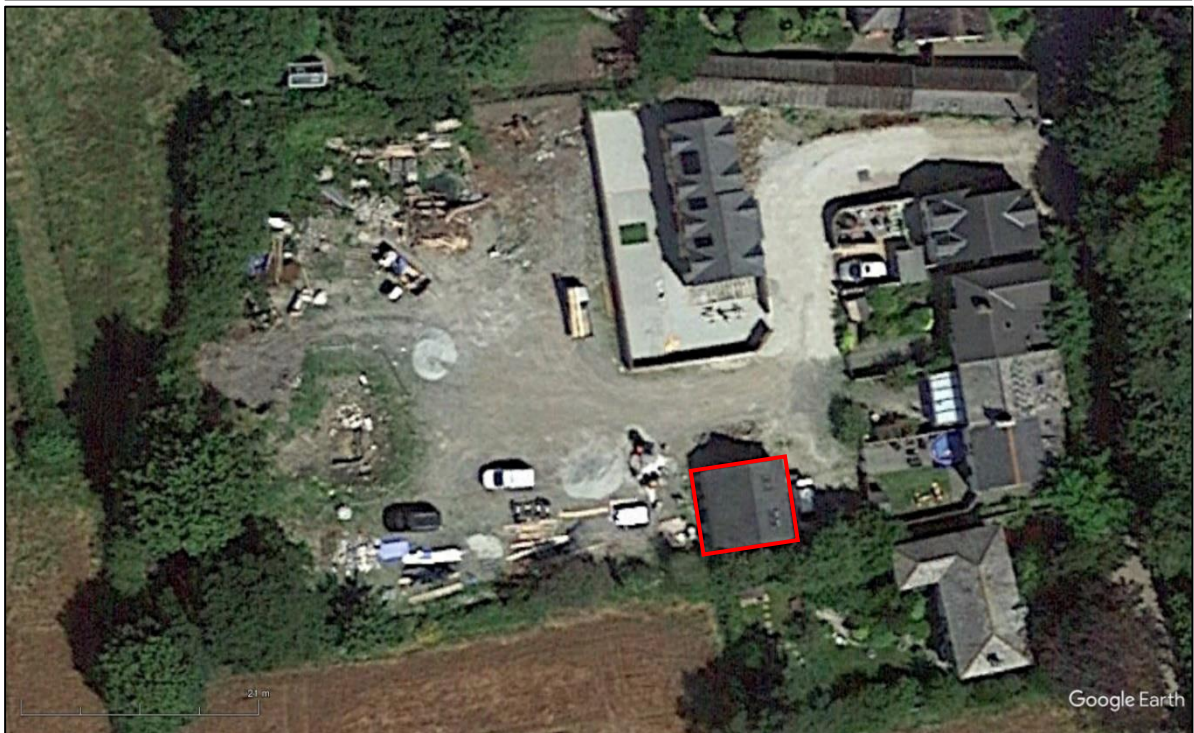
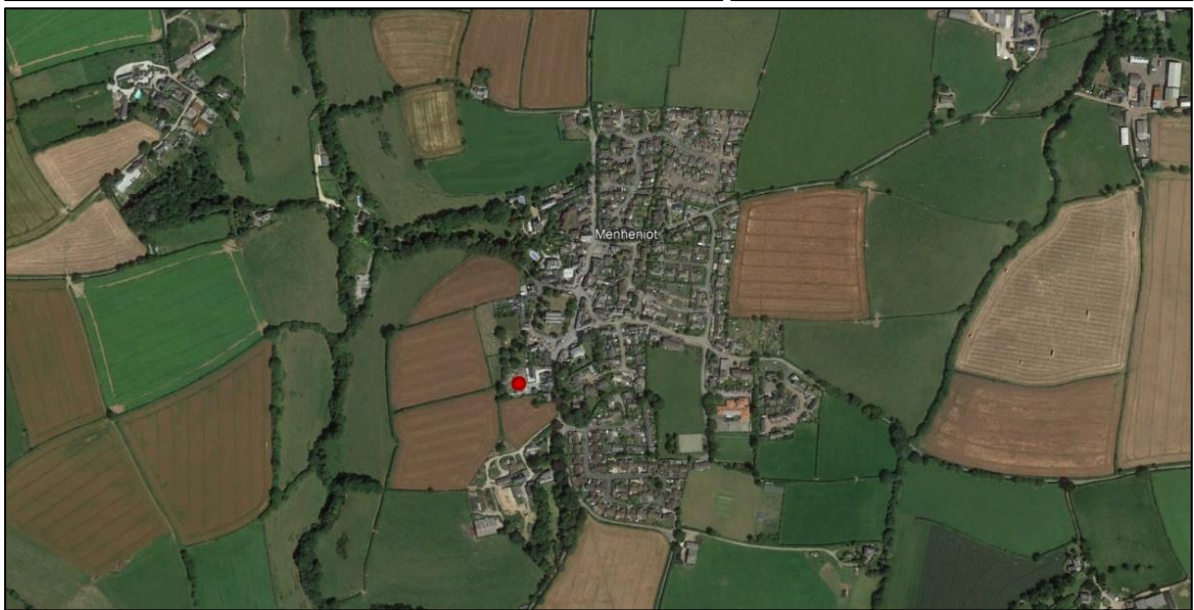
Desk survey: A desk survey was carried out using the ‘Magic’ website, which provides geographic information about the natural environment; and Devon County Council’s ‘Environment Viewer’.

Wildlife & Habitats Records Search: Due to the size and nature of the site and the scale of the proposed development, a Records Search from the Environmental Records Centre for Cornwall & Isles of Scilly was not commissioned.

3 The site

3.1 Location

The site lies in the south-west corner of the village of Menheniot approx. 3kms south-east of the edge of Liskeard OSGR SX 287 627 at a height of c.100m AMSL.



3.2 Description

The detached two-storey garage lies immediately south of a terrace of cottages, with ‘waste ground’ to the west. The site showed evidence of recent clearance and levelling at the time of the survey, with an old mine shaft fenced off with Heras fencing.

The garage is a rectangular block-built building, with a pitched slate roof, lined with breathable membrane. There are double garage doors in the east side, and a door to the upper floor in the north wall. The upper floor has been partially converted, with 4 Velux rooflights in the east pitch.

There is an overgrown hedge immediately behind the garage. This evolves into a low field boundary further west.



3.3 Photos

3.3.1 Garage (external)



3.3.2 Garage (internal)



3.3.3 Garage (external construction features)



3.3.4 Wider site

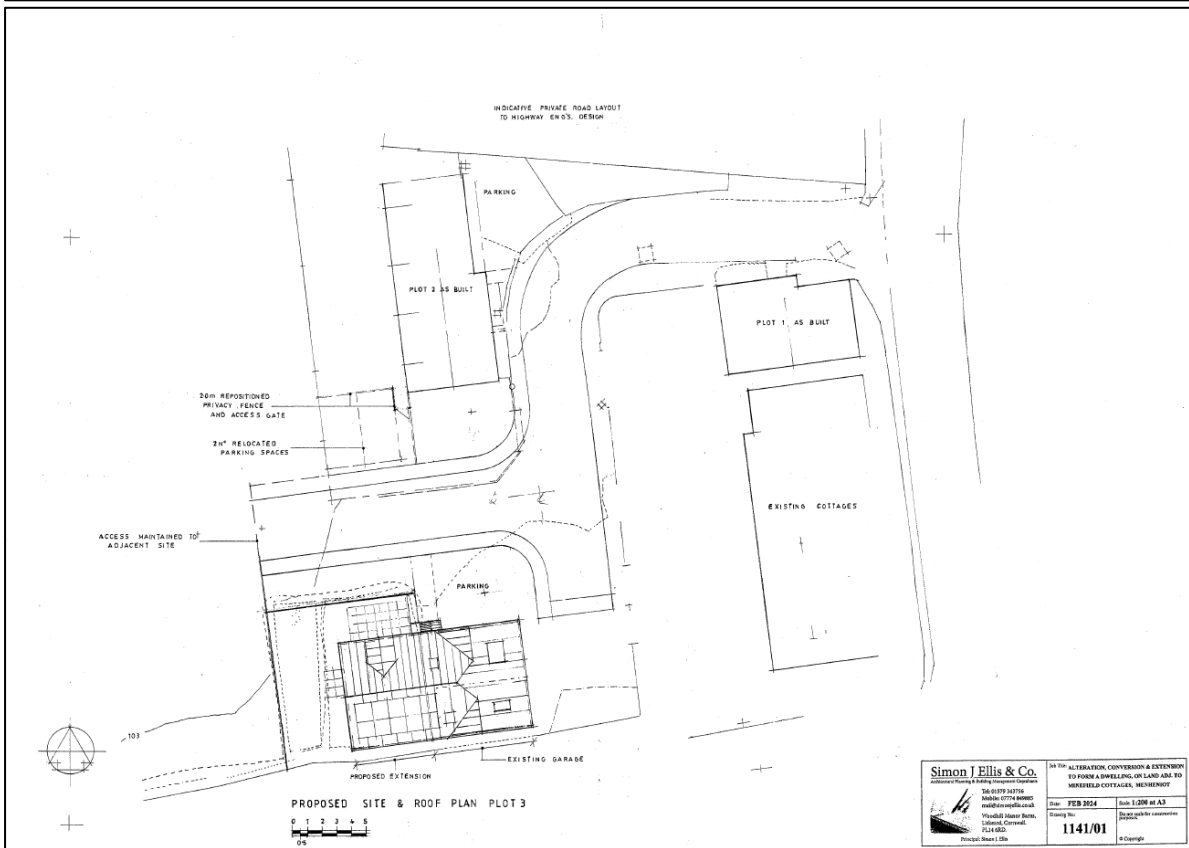
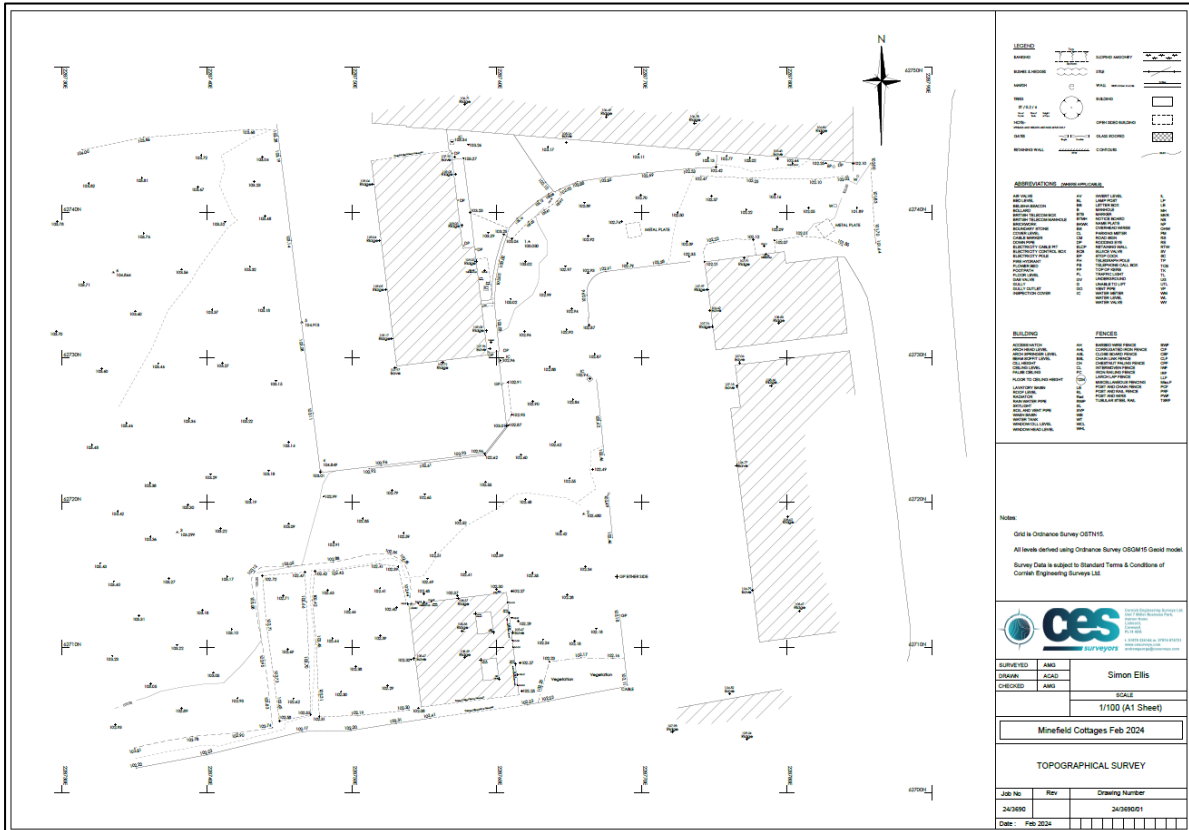


3.4 Existing and proposed plans (courtesy of Simon J. Ellis & Co.)

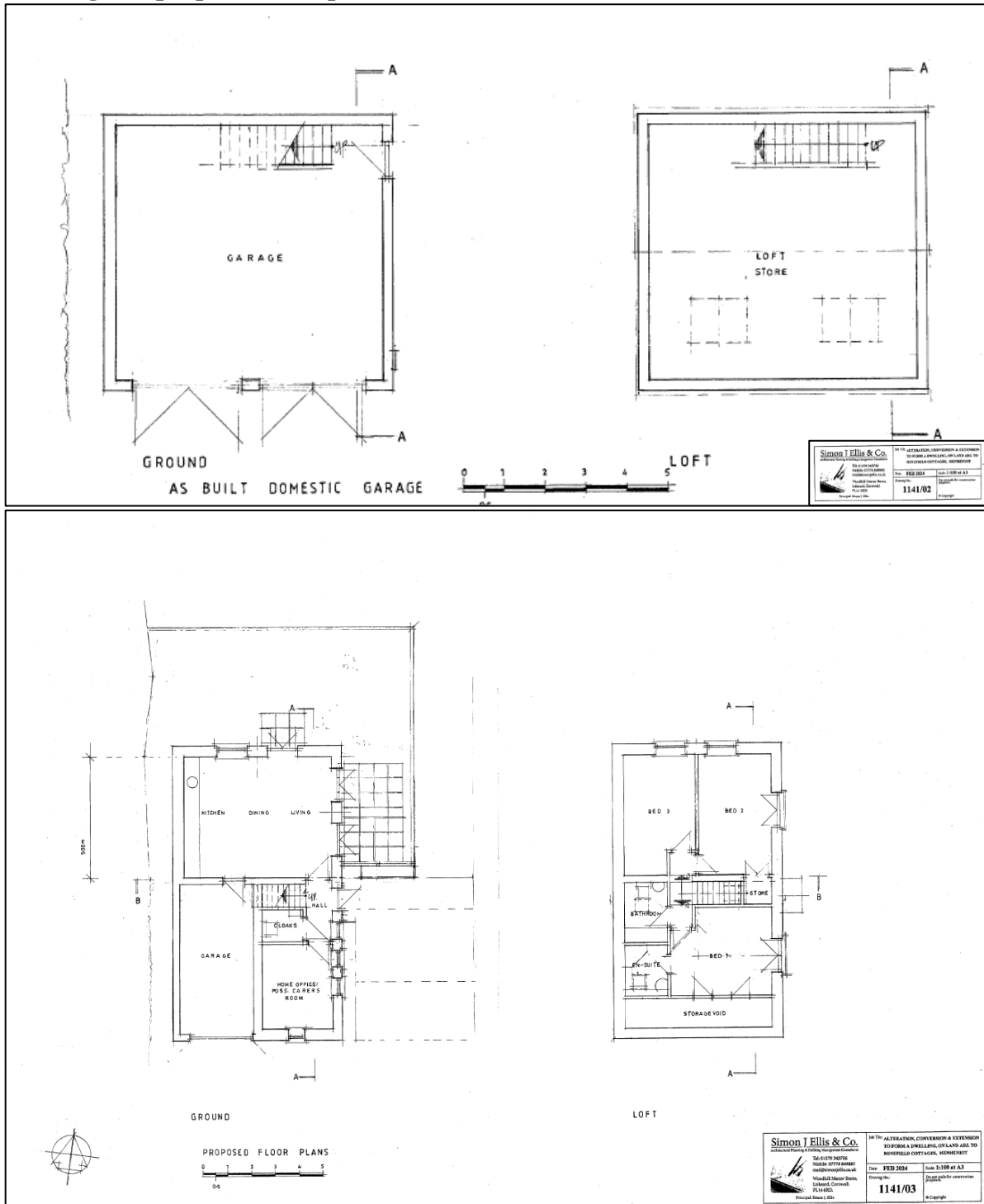
3.4.1 Application site



3.4.2 Existing and proposed site plans



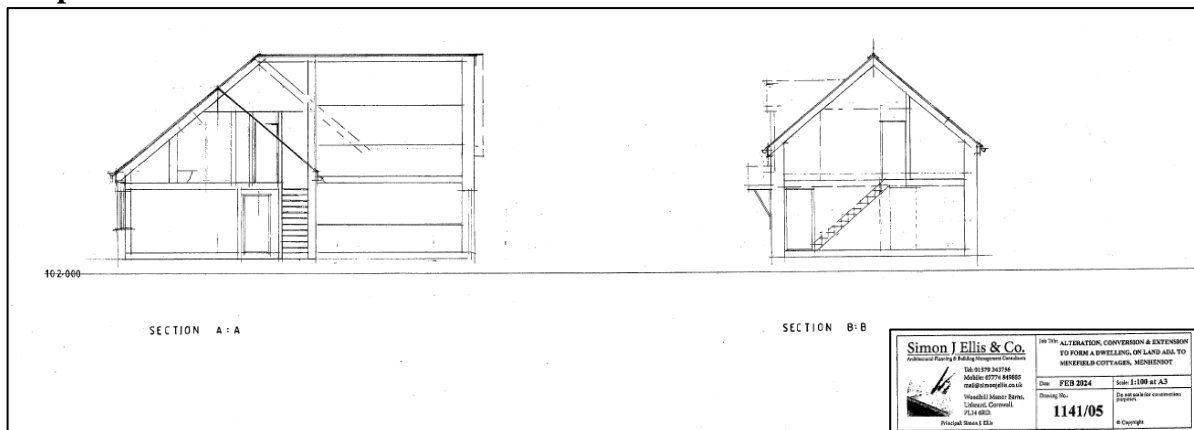
3.4.3 Existing and proposed floor plans



3.4.4 Existing and proposed elevations



3.4.5 Proposed sections



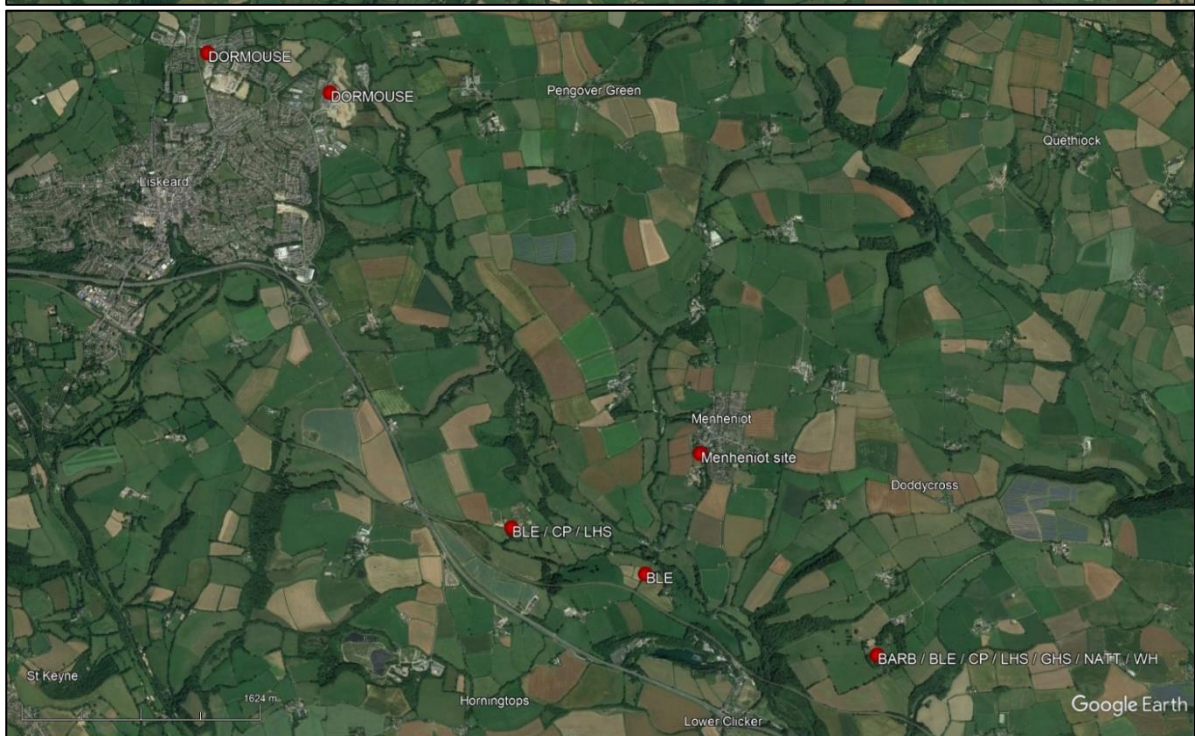
3.4.6 Summary of proposed development

- Conversion and extension of existing garage to provide residential accommodation.
- Resiting of the parking for Plot 2

N.B. Proposed plans for the further development of the remainder of the site will be the subject of a future planning application.

4 Wildlife context: bats

The annotated Google Earth satellite image shows approximate locations of sites where Natural England licences have been issued for the species shown, which include **common pipistrelle**, **brown long-eared**, **barbastelle**, **lesser** and **greater horseshoe**, **Natterer's** and **whiskered bats**.



The map also shows where **dormice** have been recorded.

5 Findings, assessment and recommendations

5.1 Bats

5.1.1 Findings

- No bats or evidence of bat activity was found in the garage.
- No potential roost entry points or roost locations were identified around the outside of the building.

5.1.2 Assessment

- The proposed conversion of the garage to a dwelling **would not cause disturbance to bats** (as defined), **would not result in the loss of / disturbance to any active / regular roosts**, and **would not affect the distribution or abundance of local populations of bats**.
- No potential commuting routes would be affected.

5.1.3 Recommendations

- **No further surveys** are required.
- A **bat licence** under the Conservation (Natural Habitats, &c) (Amendments) 2012 Regulations would **not be required** for the proposed works.
- **Enhancement:** as a **biodiversity enhancement** measure, **1 x bat box** should be installed on the proposed house in the location shown on page 16.

5.2 Barn owls

5.2.1 Findings

- No evidence of use by barns owls was found in the garage.
- The site does not represent favourable foraging habitat.

5.2.2 Assessment

The proposed conversion of the barn **would not cause disturbance to barn owls or result in the loss of foraging habitat**.

5.2.3 Recommendations

No further surveys or mitigation measures are required.

5.3 Nesting birds

5.3.1 Findings

- No nests were found in the garage.
- Potential **nesting habitat** (a tall hedge) was noted along the south side of the garage.

5.3.2 Assessment

- Without mitigation, there is a small risk that **works associated with the proposed works could disturb nesting birds** (*if carried out during the nesting season*).
- Birds are legally protected under the Wildlife and Countryside Act 1981 (as amended) against disturbance during the nesting period - defined as the period from when nest-building commences to the time that nestlings have left – i.e. March to late August.
- Conversion of the garage **would not result in the loss of any nest sites**.

5.3.3 Recommendations

- Potentially disturbing works should be carried out in the winter months (i.e. between September and the end of January) when there is no risk of encountering nesting birds.
- If potentially disturbing works have to take place during the nesting season (i.e. between February and the end of August) then a **pre-works survey must be carried out immediately before works commence**. If nesting bird activity is observed in locations within the development zone, then potentially disturbing works must be postponed until all fledglings have left the nest(s).

Pre Works Nesting Bird Survey Protocol

The following protocol should be followed if potentially disturbing works are deemed to be necessary within or close to the core bird nesting season:

- Immediately before potentially disturbing works commence (i.e. within 24 hours) a survey of the proposed working area (i.e. the barn) should be undertaken to ensure that there are no birds nesting. The site should be observed for at least 30 minutes and note taken of whether any birds are nesting or preparing to nest (e.g. carrying nesting materials and/or food for young). The observations should take place from a reasonable distance, to avoid disturbance to any possible nesting birds.
 - Birds incubating eggs can be elusive and a more detailed search may be necessary, but care must be taken not to disturb nesting birds.
 - If no signs of nesting birds are observed then works may start but the site must be constantly monitored during the working period.
 - If nesting birds are observed, potentially disturbing works must cease immediately and further advice sought. Active nests should be protected until the young have fledged.
- The proposed new dwelling will be a suitable structure for the installation of **swift nest boxes** (swifts need a minimum drop of 5m to the ground to take off successfully). RSPB's SwiftMapper shows records of sightings of swift 'screaming parties' and nest sites.

Screenshot of RSPB's SwiftMapper showing 'screaming party' and nest site records.



- **3 x swift nest boxes, 3 x house martin nest cups and 4 x sparrow nest boxes** should be installed in the locations shown on page 16.

5.4 Dormice

5.4.1 Findings

No suitable habitat was recorded on site.

5.4.2 Assessment

Although dormice have been recorded approx. 4kms away (on the north side of Liskeard to the north-west), the site itself does not represent favourable habitat and is not linked to areas of suitable habitat where breeding populations might be found.





5.4.3 Recommendations

N/A

5.5 Biodiversity enhancement

- The proposed development **would not result in a loss of biodiversity.**
- The recommended installation of **1 x bat box, 3 x swift nest boxes, 3 x house martin nest cups and 4 x sparrow nest boxes** will ensure the proposed development results in a **net gain in biodiversity.**



| | |
|------------------------------|---|
| Bat box |  |
| Swift nest box |  |
| House martin nest cup |  |
| Sparrow nest box |  |

- As an additional **biodiversity enhancement measure**, it is recommended **native species tree** and / or **hedge planting** is included in the proposed development.
- If the application is approved, details of proposed landscaping should be submitted to the LPA for approval.

Nic Butler
Butler Ecology
29th March 2024

APPENDIX 1: EXAMPLES OF WALL-MOUNTED BAT BOXES

Improved Crevice Bat Box

Available with either a double or treble crevice. Suitable for small crevice-dwelling bats such as common and soprano pipistrelles. All external panels are precision cut from 12mm Exterior Grade FSC plywood, for improved heat insulation. The exterior surfaces are stained with black water-based wood-stain for improved thermal input, whilst avoiding any possibility of deterring use by bats due to vapour from the stain. It has an overhanging roof with additional internal insulation for protection from UK weather, and to seal crevices from internal airflow. There are 2 or 3 separate crevices each with different temperature characteristics - internal ceramic heat sinks ensure improved temperature stability in crevices. Improved draught-proofing enhances temperature stability inside box. An improved "bat ladder" at base of box facilitates bats landing and climbing into box. The ladder continues inside box, while textured internal surfaces ensure bats find it easy to move around inside box and hang in crevices. The ladder also acts as "convector heater" for box - when sun shines on ladder, warm air rises into the box, but does not come out when the outside cools. The box is easy and safe to erect box on walls or trees.



Specifications: Exterior quality resin bonded ply, manufactured with surface sunk coated staples to resist rusting, external surfaces treated with water-based wood-stain, internal ceramic heat sinks.

Double Crevice Bat Box: Size: 33cm Height x 16cm Width x 10cm Depth. Weight: 1.4kg

Treble Crevice Bat Box: Batbox Size: 33cm Height x 16cm Width x 13cm Depth. Weight: 2.0kg

Low Profile WoodStone Bat Box

The Low Profile WoodStone Bat Box has been designed to complement any building and can accommodate up to 15 common pipistrelle bats which are very sociable mammals and prefer to live in colonies. They are manufactured from WoodStone, a breathable and insulating material made from concrete and FSC Certified wood fibres. WoodStone is designed to be robust and hard-wearing, providing a warm and stable temperature for summer bat roosts. There is a landing ramp and rough interior surface to enable easy movement around the box, and the front panel is removable for inspection and cleaning. The box is designed to be attached to the external wall of a building but could also be attached to a tree. The box should be sited at least 3 metres above the ground to encourage bat residence. Dimensions: (H) 440 x (W) 290 x (D) 90 mm Weight: 4.7kg



Improved Roost-Maternity Bat Box

A large 3 crevice box, suitable for larger roosts or maternity groups of small crevice-dwelling bats such as pipistrelles. All external panels precision cut from 12mm Exterior Grade FSC plywood, for improved heat insulation. Exterior surface stained with black water-based wood-stain for improved thermal input, whilst avoiding any possibility of deterring use by bats due to vapour from the stain. Overhanging roof with additional internal insulation for weather protection, and to seal crevices from internal airflow. 3 separate crevices each with different temperature characteristics. Internal ceramic heat sinks ensure improved temperature stability in crevices. Improved "Bat Ladder" at base of box facilitates bats landing and climbing into box. Ladder continues inside box, while textured internal surfaces ensure bats find it easy to move around inside box and hang in crevices. Ladder acts as "convector heater" for box - when sun shines on ladder, warm air rises into the box, but does not come out when the outside cools. Easy and safe to erect box on walls or trees. Improved draught-proofing enhances temperature stability inside box. Rectangular back plate facilitates fitting boxes side to side to increase colony size. **Specifications:** Exterior quality resin bonded ply, manufactured with surface sunk coated staples to resist rusting, external surfaces treated with water-based wood-stain, internal ceramic heat sinks. Size: 49cm Height x 26cm Width x 13cm Depth. Weight: 6.6kg



APPENDIX 2: SWIFT NEST BOXES

Swifts spend just four months in Europe over the summer and during this time they use urban areas around our homes and buildings to provide nesting sites. Renovation and rebuilding of older houses means that many of these preferred spaces, such as under roofs, attics or tiles, are often blocked so that they cannot find sufficient nest sites.

RSPB swift nest box

Hand crafted by UK joiners, this swift nesting box is made from FSC certified softwood. The nest box is a unique design for the RSPB, specially made to the specific dimensions to suit swifts. The entry hole measures 55 mm x 32 mm and is set at one end of the nest box. The easy-access panel on the front makes inspection and cleaning simple. Install at least 5 m (16 ft) above ground. Make sure there is completely unobstructed airspace in front of the nest, allowing the swifts to fly at high speed directly into the nest. Make sure the nest location is undisturbed by people or predators. Place in a well shaded position, to prevent overheating, preferably fitted in north to east facing direction. The swift nest box is designed with a wider back than the body of the box, intended so that there is a choice to fix it to a wall or an overhanging eave/soffit on a house. We have not provided pilot holes because different wall positions will have different brick/mortar joint positions. The wall holes need to be drilled to suit by the customer, followed by then matching those holes with ones made in the back board or roof ends. width 46cm / depth 18cm / height 19.5cm



Schwegler swift nest boxes

The Swift Box No. 17A is made from a special mixture of compressed plant fibres and concrete which enables it to provide good insulation and an extremely long life. This is an extended version of the No. 17 Standard Swift Box and can accommodate three pairs of swifts in parallel. This assists in the rapid formation of swift colonies. The box is supplied in a natural grey colour but can be painted to match the background using an air-permeable paint. These Schwegler Swift Boxes can help this species by providing valuable nesting locations and the installation of several units is an ideal way to support a swift colony. This box should be installed at least six to seven metres above the ground, ensuring that there is unobstructed access for birds entering and leaving. If possible, boxes should be sited under the shelter of eaves or overhanging roofs. The box can be opened by rotating the circular plate containing the entrance hole by 90° and removing it. Cleaning can then be performed although, in boxes which are occupied by swifts, this is not essential. The 17A Swift Box is supplied with L-shaped fixing brackets and screws.



Int. dimensions: 14 x 14 x 30cm / Ext. dimensions: 15 x 15 x 98cm / Weight: 7.1kg

The FSC certified **WoodStone Swift Nest Box** is constructed out of WoodStone with timber fixings meaning it is long lasting and won't rot away like a traditional wooden nest box. The nest entrance is on the underside of the box as this type of entrance is preferred by swifts. It also reduces competition house sparrows and starlings from occupying the box. This box should be installed at least five metres above the ground, ensuring that there is unobstructed access for birds entering and leaving. If possible, boxes should be sited under the shelter of eaves or overhanging roofs.



Width: 38cm / Height: 24cm / Depth: 23cm / Weight: 5.6kg

APPENDIX 3: HOUSE MARTIN & SWALLOW NEST CUPS

HOUSE MARTIN NEST CUPS

House Martins build nests constructed from mud under the eaves of buildings often in colonies averaging five nests. Changes to house construction and roof design mean that suitable nest sites have dramatically declined. Providing an artificial nest provides a great alternative and house martins will readily use artificial nests and encourage other birds to nest nearby. These nests have been specially designed to appeal to house martins and are constructed from exterior grade plywood and WoodStone, a mixture of FSC wood fibres and concrete. The backing to the nests is exterior grade plywood, making them lightweight and easy to fit, but hard-wearing. These nests should be sited underneath the eaves on exterior walls of your house, at a minimum height of 2m above the ground. The nests are available in single units, with either a right-hand or left-hand entrance or as a double unit with two nests side by side.



Specifications: Single nest: Dimensions (H) 115 x (W) 200 x (D) 160mm, weight: 900g. Material: Exterior grade plywood and WoodStone. **Double Nest:** Dimensions (H) 115 x (W) 380 x (D) 160mm, weight 1.8kg. Material: Exterior grade plywood and WoodStone

APPENDIX 5: SPARROW NEST BOXES (from NHBS catalogue)

Vivara Pro Woodstone House Sparrow Nest Box

House sparrows (*Passer domesticus*) are sociable opportunists that survive in most UK habitats, from towns and cities to farmland and countryside. Substantial declines in both urban and rural populations (estimated 71% decrease between 1977 and 2008) have led to concerns for this species.

This **House Sparrow Nest Box** is manufactured from WoodStone - a mix of concrete and FSC wood fibres. This material is strong and highly insulating which helps to provide a thermally stable environment within the box. It also protects against damage from predators such as cats, woodpeckers and squirrels. It is available with one or two breeding chambers, which can be particularly suitable for house sparrows as they prefer to nest in colonies.

The House Sparrow Nest Box can be integrated into the masonry of a new house or fixed onto an external wall using strong screws and wall plugs (not included). If possible, it should be positioned near to vegetation and at a minimum of 2m above ground.

Single Chamber: Weight: 7.25kg / Depth 16cm x Height 29cm x Width 21cm

Double Chamber: Weight: 7.5kg / Dimensions: Depth 16cm x Height 29cm x Width 21cm



1SP Schwegler Sparrow Terrace

The Sparrow Terrace has been designed to help redress the balance of falling house sparrow numbers. The current UK population of 6 million pairs is half what it was in 1980 and this is thought to be due to habitat destruction and lack of suitable nesting spaces. Sparrows are social birds and like to nest in company. This terrace provides ideal nesting opportunities for three families. Made of Schwegler's revolutionary wood-concrete mix, this terrace is durable, breathable and will last many decades. It may also occasionally attract tits, redstarts and spotted flycatchers.

The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided, or install directly into the wall (see the images tab for illustrations). Cleaning is advisable but not necessary. The front panel can be removed by turning the screw hook. The Sparrow Terrace is available in either Stone or Brown.

Brood chamber dimensions: Height: 16cm / Width: 10.5cm / Depth: 15cm

External dimensions: Height: 24.5cm / Width: 43cm / Depth: 20cm / Weight: 15kg

