David Leach Ecology Ltd.

Ecological Consultants

The Malthouse

Chirton

Devizes

Wiltshire

Preliminary Ecological Appraisal

Date: February 2024

Report compiled by D. V. Leach. M.C.I.E.E.M

Mobile: 07756 855212

E-mail: dleach718@btinternet.com

Copyright David Leach Ecology Ltd.

Registered Office: Arrowsmith Court, Station Approach, Broadstone,
Dorset, BH18 8AT
Company Reg. No. 8846666

Contents Page number

1.0 Executive Summary 2
2.0 Introduction 3
2.1 Background 3
2.2 Aims of Survey 3
2.3 Site Description 3
3.0 Methodology 4
3.1 Desk Study 4
3.2 Site Survey 4
4.0 Results 7
4.1 Desk Study 7
4.2 Site Survey 7
5.0 Conclusion 9
5.1 Assessment 9
5.2 Limitations 8
5.3 Recommendations 9
5.4 Enhancements 11
6.0 Appendices 13
A Legislation 13
B References 14
C Photographs 15
D Enhancement feature locations 19
E Enhancement Features 21

1.0 Executive summary.

- A survey was commissioned to check for the presence of protected species and habitats, or potential for protected species, that would be affected by proposals to build a replacement dwelling on the site at Chirton, Wiltshire.
- A walkover survey was undertaken in February 2024.
- No designated sites will be significantly impacted by the proposals.
- No rare or important habitats were found on the site.
- There are no trees with potential roosting features on the site.
- There is potential nesting habitat in the hedgerows and larger shrubs around the site.
- The habitat is sub optimal for reptiles.
- No signs of protected species were found on site.
- The site will be planted with native or wildlife friendly species of plants and trees.
- Features for bats, birds and insects will be installed around the site to enhance biodiversity.
- The proposals are unlikely to adversely affect any protected species on site.

2.0 Introduction.

2.1 Background.

Client: Mr. & Mrs. Foster

Property Surveyed: The Malthouse
Chirton
Devizes.
Wiltshire

Grid reference: SU 08086 58168.

Dates of Survey: 6th February 2024

Lead Surveyor: David Leach BSc. (Hon), CBiol. M.S.B., M.C I.E.E.M.
(Natural England WML CL18 & CL21 registered bat worker).

2.2 Aims of the Survey.

- A preliminary ecological survey was commissioned to check for the presence of protected species and habitats, or potential for protected species, that would be affected by proposals to for a replacement dwelling on the site.

2.3 Site Description.

- The site is found in a rural area to the north west of Chirton approximately 8km south east of Devizes.
- There are a few agricultural and residential buildings nearby.
- The surrounding area is pasture, cultivated fields and small areas of woodland. The River Avon Site of Special Scientific Interest (SSSI) runs 100 m to the north.

3.0 Methodology

3.1 Desk Study

- The Magic.gov web site and the Partnership for Biodiversity in Planning web sites were accessed to determine whether there were any nature reserves or protected areas local to the site that would be affected by the proposed works.
- If signs of, or potential for, protected species were found then a data search may be undertaken to look for records of protected species in the area around the site.

3.2 Site Survey

- This consisted of a walkover survey of the application site and land within 50m of the application site boundaries where possible.
- Any habitats identified as having potentially high botanical value will be subject to further botanical surveys, if deemed necessary. The site was inspected for non-native invasive species such as Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Himalayan Balsam (*Impatiens glandulifera*).
- The survey methodology included an assessment of the potential for habitats on, or immediately adjacent to, the site to support legally protected or conservation-notable species. The location and nature of any signs of the presence of protected species (such as droppings, footprints, burrows, etc.) were documented and mapped accordingly.
- Indicative methods for protected species are outlined below following recognised guidelines: Chartered Institute of Ecology and Environmental Management (CIEEM), Amphibian and Reptile Conservation (ARC), Bat Conservation Trust (BCT) and Joint Nature Conservation Committee (JNCC).

Bats.

The external and internal areas of any building or structure on site were inspected following guidelines set out in the BCT Bat Surveys for Professional Ecologists Good Practice Guidelines 3rd edn. Collins. J (2016) and the JNCC Bat Workers' Manual (Mitchell-Jones A. J). The presence of bats or signs of bats and possible entry points into buildings were looked for.

Extant trees were inspected for potential roosting areas that could support bats. Particular attention was paid to the following:

- Mature trees with ivy covering and/or crevices and peeling bark.

Evidence searched for to indicate usage of bats included:

- Droppings
- Urine staining
- Worn entrances or claw marks around potential access points
- Insect feeding remains
- Oil staining left from bat fur
- Live/dead bats

Birds.

Any habitat features, for example, scrub, trees and hedgerows which could potentially be used by nesting birds, were surveyed and any nesting activity was noted. The habitat was also assessed regarding its potential for bird activity.

Great Crested Newts.

Ponds within the vicinity of the site were noted and the potential of the land to act as a commuting route, shelter or foraging resource for great crested newts (*Triturus cristatus*) was assessed.

Reptiles.

Habitat features that could be suitable as hibernacula, foraging or basking areas were noted. Extant refugia were lifted and examined for evidence of reptiles, including sloughs (shed skins).

Badgers.

Any area that could be used for foraging or could potentially contain a Badger sett was surveyed and any signs noted including:

- Evidence of active or disused setts
- Evidence of potential badger diggings
- Latrines / dung pits
- Evidence of badger foraging (‘snuffle holes’)
- Footprints
- Badger hairs

Otters and Water Voles.

Any riparian habitat present on-site or immediately adjacent to the site was searched for signs of otters (*Lutra lutra*) and water voles (*Arvicola amphibious*). Signs included:

- Otter spraints or sign heaps
- Water vole latrines and feeding stations
- Evidence of potential holts or burrows
- Footprints

Dormice.

The suitability of the habitat was assessed for dormice (*Muscardinus avellanarius*). Any small mammal feeding signs were checked and assessed, including:

- Examination of hazel nuts
- Evidence of nest building

The survey was carried out by David Leach, an experienced ecological surveyor who is a Natural England WML CL18 registered bat worker, a full member of the Chartered Institute of Ecology and Environmental Management and a Chartered Biologist.

David Leach is a Registered Consultant under the Bat Mitigation Class Licence – WML-CL21 annex B, C & D.

4.0 Results.

4.1 Desk Study

- The site lies within 100m of the River Avon Site of Special Scientific Interest (SSSI).

- Granted European Protected Species Licenses.
  There were no records of granted EPSL's for bats, great crested newts, dormice etc. found within 1km of the site.

- The site lies within the green risk zone for great crested newts.

4.2 Site Survey

Weather for initial survey	Dry and sunny at 12:00 The external temperature was 9°C.

4.2.1 Habitat

- The plot is laid mainly to close mown lawn with some shrubs, small trees and flower beds.
- There are shorth lengths of hedging within the site and at the perimeters consisting mainly of beech or privet.
- No rare or uncommon plants species were found on the site.
- A small holly tree and small apple tree will be removed as part of the proposals. Neither had any potential roosting features (prf) for bats.
- There is a group of 7 silver birch at the north east corner of the site which again had no prf's.

4.2.2 Protected species.

Bats

- There are no trees on site or on the adjacent plot to the east with potential roosting features for bats.
- The small sections of hedges and trees at the perimeters of the site and on adjacent plots could be used by foraging and commuting bats.

Birds

- There is potential nesting habitat in the hedges and larger shrubs around the site.

Reptiles

- The habitat on site provided sub optimal habitat for reptiles.

Great crested newts

- There are no ponds on site or with 500m of the site.
- The habitat on site is sub-optimal for great crest newts and it is unlikely there will be any on site or nearby.

Water voles and otters

- There are no waterbodies on site or nearby that would provide suitable habitat for water voles or otters.

Badgers

- There were no badger setts on site or signs of badger activity on site.

Dormice

- The site is not linked to areas of ancient woodland and provide sub optimal habitat for dormice.

5.0 Conclusion.

5.1 Assessment.

- The proposed works will not affect any designated sites in the area.
- None of the trees on site or near the perimeter where the house will be built had any potential roosting features for bats.
- No rare or uncommon plants were found on site.
- There are bats roosting in the main house and mitigation etc. is covered in the bat report.
- It is unlikely the proposed works will adversely impact any other protected species or habitats.

5.2 Limitations of the survey.

- A survey of this type only provides a snapshot of what was found at the time of the survey and it is sometimes necessary to carry out a number of surveys to show the presence or absence of bats or other protected species.
- In the unlikely event that a protected species is found during the proposed works, work must stop and David Leach or Natural England contacted for advice on how to proceed.
- This report is valid for 12 months from the last survey and should be updated if conditions on the site change or if protected species or signs of protected species are found on the site in the future.

5.3 Recommendations.

5.3.1 Bats

- Extra care will be taken to ensure that external lights are kept to a minimum and will not illuminate bat access points or flight paths around buildings with bat features or trees and shrubs on site or nearby.
- A suitable lighting scheme and regime in accordance with Guidance Note 08/18 Bats and Artificial Lighting in the UK. Bats and the built environment series, Bat Conservation Trust (London) & Institution of Lighting Professionals (Rugby) (2018) must be approved by the LPA. This will include:
    - Any lights will be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. A shield or hood will be used to control or restrict the area to be lit and limit “light spillage” on the site.
    - Security lights will be on motion sensors and on for a maximum of 1 minute.

- Lighting units will be of low intensity - up to 15 watts, and red, amber or warm light with a maximum lighting colour temperature of 2700 K.
- White, blue and green light sources including metal halide, mercury and CDO / CPO Ceramic Outdoor Lamps bulbs have a significant effect on bats and will not be used.

5.3.2 Birds.

- Birds' nests, when occupied or being built, receive legal protection under the Wildlife and Countryside Act 1981 (as amended). It is highly advisable to undertake clearance of potential bird nesting habitat (such as hedges, scrub, trees, suitable outbuildings etc.) outside the bird nesting season, which is generally seen as extending from March to the end of August, although may extend longer depending on local conditions.
- It is recommended that any trees or large shrubs(>1m x 1m) are cut down by hand between September and the end of February to below 1m to remove potential nesting habitat.
- If there is absolutely no alternative to doing the work during the bird nesting season, then a thorough, careful and quiet examination of the affected area must be carried out by a competent person before clearance starts. If occupied nests are present, then work must stop in that area, a suitable (approximately 5m) stand-off maintained, and clearance can only recommence once the nest becomes unoccupied of its own accord.

5.3.3 Reptiles & amphibians.

- Reptiles are all protected by the Wildlife and Countryside Act 1981 (as amended) from intentional killing, injury and selling. Actions which could predictably kill or injure reptiles may result in an offence.
- The measures below are designed to avoid harm to any reptiles which may be present.
  - Vegetation on site must be maintained below 50mm to render it sub-optimal habitat for reptiles throughout the duration of works.
  - A 'buffer' area of a minimum of 2m between boundary hedgerows and scrub and the construction zone must be maintained at all times.
  - All construction and building materials must be stored on areas of hard standing or on raised pallets or sealed-based containers at least 5m away from suitable reptile habitat to prevent reptile colonisation during works.

- Any footings must be excavated and back-filled overnight; if this is not possible then earth ramps must be left in the trench to allow reptiles to easily climb out. Alternatively any foundation excavations left open at the end of a day will be covered over with plywood and the edges sealed with sand or soil.
- The site manager must check the footings at the start of each day to look for reptiles (and other wildlife) which could not get out of the footings.

5.3.4 Hedgehogs

- As a precautionary measure the following measures will be carried out.
  - Any piles of brash or more dense vegetation to be removed will be checked for hedgehogs by an ecologist immediately prior to, and during clearance which must be done using hand tools, not machinery such as a motorized flail or Allen scythe.
  - Suitable areas must be cleared between April and October to avoid disturbing hibernating hedgehogs.

5.3.5 Trees and Hedges

- To protect the roots from damage and compaction by construction vehicles Heras fencing must be erected to create a tree root protection zone around the trees at the north east corner of the site. The distance of the root protection zone must be determined following British Standard 5837: Trees in relation to design, demolition and construction – recommendations.
- Building materials must be stored away from hedging and trees to avoid root compaction.

5.4 Enhancements.

In accordance with Section 40 of the Natural Environment and Rural Communities Act 2006 and paragraph 109 and 118 of the National Planning Policy Framework a number of measures will be implemented to enhance biodiversity on site. These will include:

5.4.1 Bats

- See bat report.

5.4.2 Birds.

- Two integrated swift bricks will be installed on the west elevation of the new dwelling as high as possible bat at least 4m above ground level (see appendix D & E).

- A Vivara Pro Seville 32mm WoodStone Nest Box will be put up on the north side of a mature tree at the south of the site (see appendix D & E).

5.4.3 Insects.

- A solitary beehive (see appendix E) will be located in the wild area at the south of the plot.
- A second insect feature will be installed on a tree in a sheltered but sunny location.

5.4.4 Trees, shrubs and flowering plants.

- Native or wildlife friendly trees and plants will be used around the site.
- A mixed native species hedge will be planted along the east perimeter of the site to form a link for wildlife between the north and south of the site (see appendix H). A mixed hedge will provide a succession of flowers and fruit during the year and is more beneficial to wildlife than a single species hedge. The hedgerow species should include quickthorn, blackthorn, beech, field maple, common dogwood, hazel, guelder rose, spindle and wild rose. Honeysuckle plants will be added every 10m.
- A mix of at native trees – crab apple, wild cherry, rowan and wayfaring tree will be planted in the hedge and on the site. The trees (planted as standards) will be spaced approximately 10m apart.

6.0 Appendices

A. Legislation (a brief summary only. Please refer to full text of legislation or policy for full details).

Under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way (CroW) Act 2000, all bats have legal protection. In addition any structure which shows signs of use by bats either currently or in the past, for shelter or protection, is classed as a bat roost and both the roost and any bats using it are protected by law which makes it an offence to:

- Intentionally or recklessly kill or injure or take any bat.
- Intentionally or recklessly damage or destroy any bat roost and obstruct access to that roost.
- Intentionally or recklessly disturb any bat using a structure as a roost.

Protection is also afforded to bats under the Conservation (Natural Habitats & c.) Regulations 1994 (the Habitats Regulations) Amended 2007

Addition IV lists all bats

Regulation 39 makes it an offence to:

- Deliberately kill or capture a bat.
- Deliberately disturb a bat.
- Damage or destroy a resting place or breeding site of any bat.

If any proposed development would result in the otherwise illegal acts above, a licence must be obtained from Natural England prior to any work being carried out. A licence will only be granted if there is no satisfactory alternative and the authorised action will not be detrimental to the maintenance of the population of the species concerned.

The Wildlife and Countryside Act 1981 (as amended) also protects all reptiles from killing, injury and sale.

The Wildlife and Countryside Act 1981 (as amended) makes it an offence to damage or destroy the nests of birds of breeding birds (with the exception of certain pest species). The bird nesting season is generally defined as being between mid-February and August inclusive although nesting outside of the period is not unusual if conditions are favorable.

B. References

- **Collins, J. (Ed.) 2016. Bat Surveys for Professional Ecologists - Good Practice Guidelines: 3rd** *edition.* Bat Conservation Trust, London, United Kingdom.

- **English Nature 2004.** *Bat Mitigation Guidelines.*

- **IEEM 2006**. Guidelines for Ecological Impact Assessment in the United Kingdom (version 7 July 2006), Institute of Ecology and Environmental Management [online]. Available: http://www.ieem.org.uk/ecia/index.html [accessed February 2011]

- **JNCC 2004**. *Common Standards Monitoring Guidance for Mammals*. Joint Nature Conservation Committee, Peterborough.

- **Mitchell-Jones A. J. & McLeish, 2004**. *Bat Workers' Manual*. Joint Nature Conservation Committee, Peterborough.

- **Natural England and Countryside Council for Wales, 2007***. Disturbance and protected species: understanding and applying the law in England and Wales. – A view from Natural England and the Countryside Council for Wales.* United Kingdom

- **Stebbings R.E., 1986**. *Which bat is it?* The Mammal Society and the Vincent Wildlife Trust, London.

Appendix C. Photographs



Plate 1. View of the rear garden of the property viewed from the south east.



Plate 2. View from the south of the habitat where the new dwelling will be built.



Plate 3. View from the east corner of the site looking back to the site entrance.



Plate 4. A small tree and shrubs to be removed.



Plate 5. The group of silver birch in the north east corner of the plot.



Plate 6. View from the north west of the habitat where the new dwelling will be built.

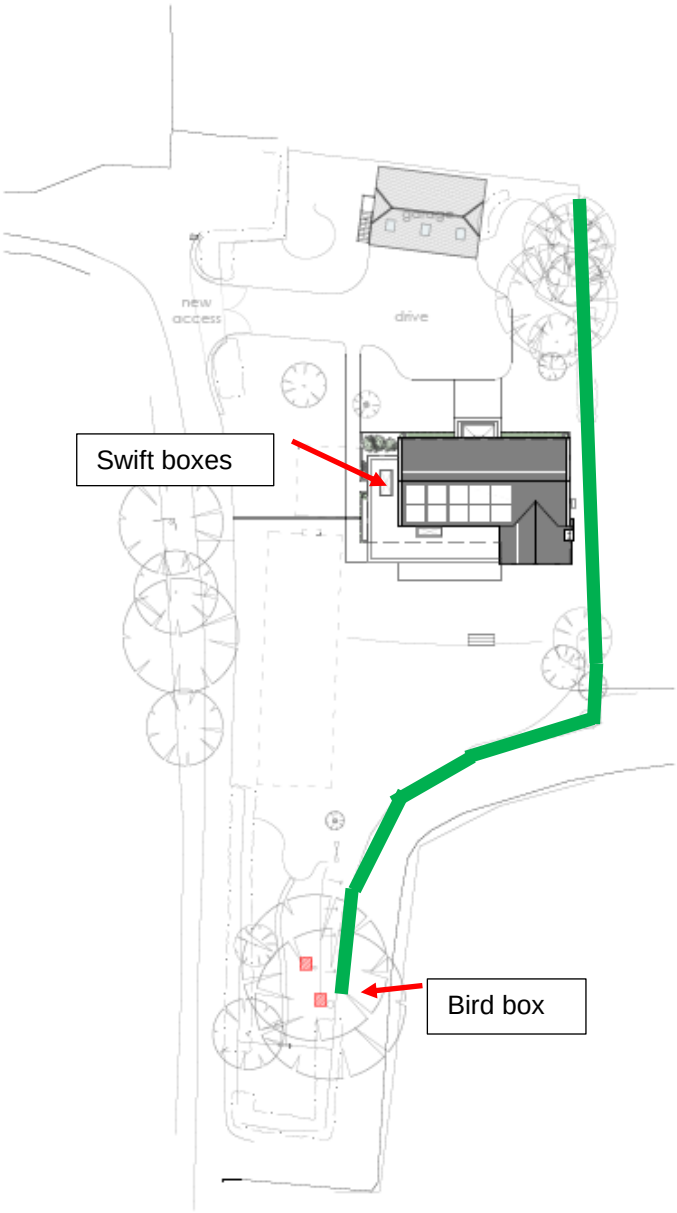


Plate 7. View across the plot from the south west.

Appendix D. Enhancement feature locations.

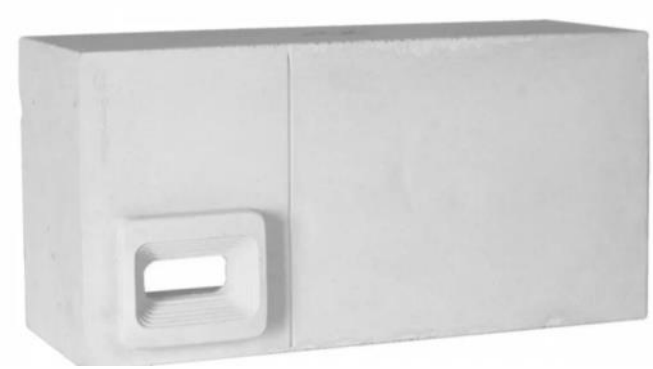


Pair of integrated swift bricks on west elevation. ★



Proposed site plan with new hedging.

Appendix E. Enhancement features.



Swift Block
Green & Blue

The Swift Block is designed to create nesting space for swifts that can be easily integrated into new builds or wall mounted on existing properties. If integrated, the front of the Swift Block is designed to sit flush with the outside bricks of a build, with the entrance slightly protruding.

The Swift Block features an internal nesting bowl, a small entrance hole to deter larger birds and predators, full instructions cast into the surface for easy fitting, a stylish entrance feature.

Made from cast concrete, meaning that it is long lasting and will not rot or deteriorate like a traditional wooden nest box. The cast concrete is made using up to 75% waste materials from the Cornish China Clay industry and is standard UK block size.

The Swift Block should be positioned at least 5m from ground level avoiding south facing walls, on the side of a building that gets shade during the day, or under an overhang or eaves. It should be mounted away from windows and vents and predator access. Swift Blocks should also be placed in a spot with clear adjacent access, allowing high speed, direct flight entry.

.



WoodStone Build-in Swift Nest Box B
CJ Wildlife

The WoodStone Build-in Swift Nest Box B is ideal for building into or mounting on a wall. It is constructed from FSC certified WoodStone meaning that it is long lasting and will not rot or deteriorate like a traditional wooden nest box. The front of the nest box is removable for cleaning or inspection.



WoodStone Build-in Swift Nest Box Deep
Vivara Pro

A lack of suitable nesting sites is thought to be one of the main reasons behind the decline in our swift populations and by installing nest boxes such as this one it will greatly help to support their numbers. This build-in nest box is designed to be integrated into the cavity of a building. It is constructed from long lasting FSC certified WoodStone with a plywood backing. This nest box should be sited at least five metres high, with a clear flight path and avoid south facing sites.

Ecosurv





The Ecosurv Swift brick can be customised to match any brickwork. The materials include slate.

URL: http://www.ecosurv.co.uk/product/bird-box-range

Ibstock





An attractive brick, designed to encroach minimally on the cavity. It is thus one of the narrowest boxes on the market. The materials are frost resistant.

URL: http://www.ibstock.com/literature/eco-products/

CJ Wildlife Woodstone



Built-in Visible Swift box
Number 90068



Built-in Visible Swift box
Number 90059



Built-in hidden Swift box
Number 90060

These nest boxes are made of WoodStone®, a robust, durable mix of cement and wood fibres which offers protection from predators and a more consistent internal temperature.

URL: http://www.vivarapro.com/brochure/#p=23 or http://www.vivarapro.co.uk/Swallows-and-Swifts



These attractive nestboxes are manufactured from WoodStone which is a mix of concrete and FSC certified wood fibres. Unlike a traditional wooden nest box, these boxes will not rot away or deteriorate and are guaranteed for 10 years. This robust material safeguards against attacks from predators such as woodpeckers, cats and squirrels, whilst also providing a well insulated interior with a more consistent internal temperature than an ordinary wooden box. This is especially important during the breeding season and ensures that young birds have a greater chance of survival. Nesting sites have become rare for cavity nesting birds due to changes in woodland management practices, so you can provide much-needed space for rearing chicks and birds that are roosting overwinter with these durable, long-lasting nest boxes.

These 28mm hole nest boxes are suitable for blue tits, tree sparrows, great tits, crested tits, coal tits and pied flycatchers and they are available in brown, green or grey to complement both natural woodland and garden settings.

The best height for your nest box is between 1.5m and 3m high, and it should be sited higher if your area has a particularly high cat population.

These nest boxes have a removable front panel for easy cleaning. Although birds will clean their own nest boxes before each breeding season, cleaning the boxes out at the end of each breeding season may encourage them to be used again in future years, as it reduces parasites. The nesting time of birds varies from species to species so we suggest you wait until October when the last of the birds will have left before cleaning. The nest may come out easily but if there are any deposits scrape them out. We recommend using hot water rather than chemicals to remove any parasites that remain. Take care when opening your nest box as other species such as bats, wasps and bumblebees may have started to use the nest.

Vivara Pro Seville 32mm WoodStone Nest Box

Insect Features for a sheltered and sunny location.

Bee and Bug Biome



Bee and Bug Biome



Solitary Beehive



Insect Tower



Schwegler Clay and Reed Insect Nest

David Leach BSc (Hons) CBiol. MSB MCIEEM. David is a professional ecologist with over forty years' research and fieldwork experience in many aspects of ecology and for the past 15 years in environmental consultancy work.

David is an experienced bat surveyor with competency in activity surveys, bat roost assessments, daytime surveys for bat field signs, assessments of trees as potential bat roosts and the production of reports providing advice on best practice, mitigation and compensation works relating to bats as may be required.

David also has experience in surveying for birds, reptiles, amphibians, Barn Owls and Badgers and also carries out extended Phase 1 habitat surveys, BREEAM and Code for Sustainable Homes assessments.

David holds a Natural England licence to disturb bats for the purposes of science and education or conservation and is a **Registered Consultant for the Bat Low Impact Class Licence**. David and has been involved in obtaining over 180 Protected Species Licenses to permit development works affecting bats and also closing down badger setts.



David Leach BSc. (Hons), C.Biol., M.S.B., M.C.I.E.E.M.

Disclaimer.
All reasonable effort has been made to provide accurate information at the time of the survey. However weather conditions and the timing of surveys can affect the results. Some species or signs of that species will only be visible at certain times of the year e.g., the nesting season for birds is usually between March and September. The absence of certain species or signs of use at the time of a survey does not mean that they are not present at other times of the year and does not imply that a species might not use the site at some time in the future.

Mobile: 07756 855212

E-mail: dleach718@btinternet.com