



22nd January 2024

Ecological Impact Assessment

Bridge House, Chichester, PO20 7PP

On behalf of Nick Cottrell

Version 01

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1. Executive Summary

Site Details
<ul style="list-style-type: none"> • Bridge House, Chichester, PO20 7PP (OS Grid Reference: SU 85464 01862)
Scope of Works
<ul style="list-style-type: none"> • Imprint Ecology was commissioned to undertake an Ecological Impact Assessment on the land at Bridge House, where there is an existing agricultural barn and metal outbuilding proposed for demolition to accommodate the construction of a single dwelling.
Key Ecological Constraints
<ul style="list-style-type: none"> • Legal protection is afforded to designated sites, habitats and species. The legislation, and the habitats and species listed, vary between the different jurisdictions.
Results
<ul style="list-style-type: none"> • The main site comprises buildings, sealed surfaces, modified grassland, vegetated garden and hedgerow. • The large agricultural barn is relatively modern and no Potential Roost Features (PRFs) for bats were identified on this building. The small metal outbuilding also contained no PRFs and both buildings were assessed as having negligible potential to support roosting bats. • There was a bird's nest identified within the barn.
Mitigation
<ul style="list-style-type: none"> • The hedgerow on the eastern boundary will be retained. The modified grassland within the construction zone will be kept short to avoid small animals sheltering within it. • The pile of soil, rocks and rubble in between the two buildings will be removed carefully outside of the winter hibernation period for reptiles. • The bird nest within the existing barn will not be removed, disturbed or displaced if it is actively in use by a bird (this includes: adult birds building the nest, adult birds sitting on the nest and/or sitting on eggs, presence of chicks in the nest). Ideally, the destructive works to demolish the barn would take place outside of bird nesting season which is 1st March to 31st August. Alternatively, if the barn is proposed to be removed within this time, a suitably qualified ecologist will inspect the nest within 24 hours of the works starting. If the nest is found to be active, it will need to be left alone and a 5m buffer given until the chicks have fledged. • Precautionary mitigation measures have been devised to protect other protected species that may occasionally cross the site in order to prevent any contravention of wildlife legislation and to avoid potential impacts that the development may have.
Recommendations for Biodiversity Net Gain

- Enhancements for wildlife across the existing gardens and within the site of the new dwelling have been recommended to help achieve a net gain in biodiversity.

2. Introduction

2.1 Background and Proposed Development

Imprint Ecology was commissioned by Mr Cottrell to undertake an Ecological Impact Assessment at Bridge House, Chichester, PO20 7PP, hereafter referred to as 'the site'. The proposals are for the demolition of a large agricultural barn and small metal outbuilding to accommodate the erection of a single dwelling.

2.2 Experience of Ecologists

Emily Sabin BSc (Hons) (Wildlife Conservation) AMRSB, Accredited Agent under Natural England WML-CL18 Level 2 Bat Licence 2018-34434. She is an ecologist with five years' experience in ecological consultancy and a background in conservation research. She is a bat rescuer and committee member of Sussex Bat Group, a regular National Dormouse Monitoring Programme volunteer, and experienced in carrying out a range of protected species surveys. She is also the Water Vole Officer at the People's Trust for Endangered Species.

2.3 Purpose of the Report

This report contains the findings of an ecological assessment of the building and surrounding habitat. It seeks to identify potential ecological constraints that the proposals may have upon bats or other protected species and provides recommendations for further survey, impact avoidance, mitigation and enhancements where required.

This report is valid for a maximum of 24 months from the date of issue. Should the proposals or site alter in any way, an ecologist should be consulted to re-inspect the site and confirm that this report is still accurate.

2.4 Site Description

The site is accessed to the east off the B2201, south of Chichester. The proposal site sits within the grounds of Bridge House and comprises buildings, hardstanding, modified grassland, vegetated garden, and hedgerow. The surrounding landscape comprises cultivated arable fields, pasture fields, watercourses including Chichester Canal 100m north, lines of trees and hedgerows. See Figures 1 and 2 and the Habitat Map in Appendix 1.

Figure 1 - Site location - ©OpenStreetMap contributors 2024

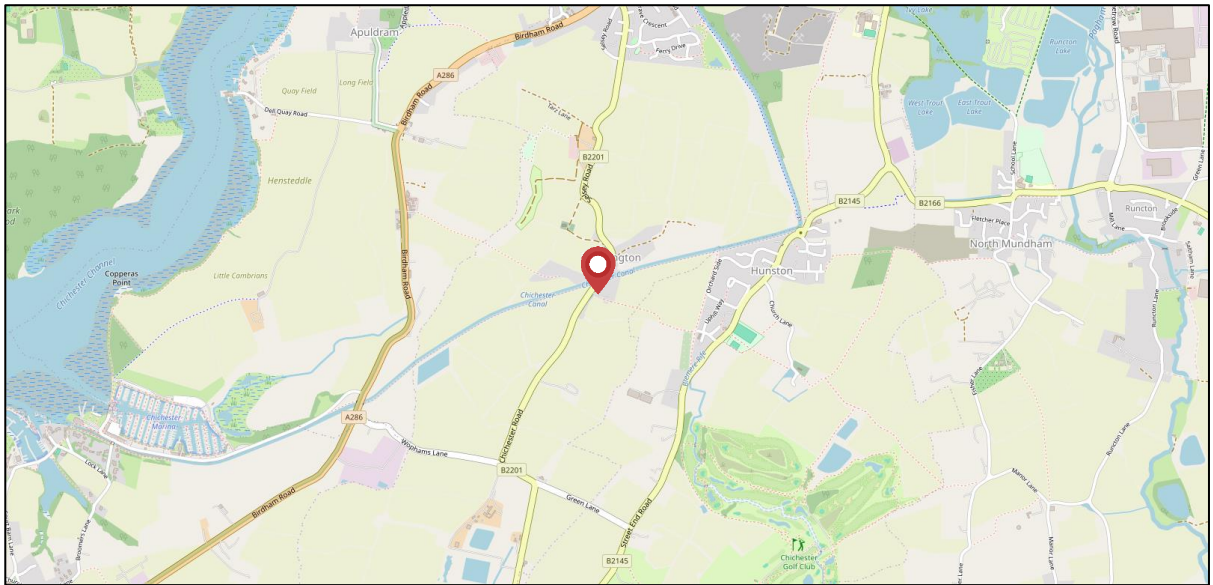


Figure 2 – Aerial view of site with red line boundary. ©Google Earth 2024



3. Methods

3.1 Desk Study

The Multi-Agency Geographic Information for the Countryside (MAGIC) website was accessed on Friday 12th January 2024 to identify local statutory designated sites, priority habitats and European Protected Species Licences (EPSLs). The Chichester District Council Interactive Map was also used to search for non-statutory designated sites. Satellite imagery from MAGIC and Ordnance Survey maps were used to understand the site's connections to surrounding countryside. A desk study was undertaken to identify ponds within 500m of the site that might support breeding great crested newts.

3.2 Preliminary Walkover Survey

A walkover survey was conducted on Friday 12th January 2024 where habitats, land management type, flora and fauna were recorded at the proposed development site. The survey followed the UK Habitat Classification (UKHab) system. This classification system integrates with the Phase 1 habitat survey classification. Extra detail on the classified habitats is provided by the inclusion of secondary codes. Secondary codes provide additional information on the environment, management and origin of mapped features. Secondary codes also replace mosaic habitats, which are now mapped by the primary habitat with a secondary code combination. In some instances, secondary codes provide important subdivisions of habitats not covered by Primary Habitat levels and are always included where relevant within a survey. The Site is mapped using the fine-scale minimum mapping unit (MMU) 25m², 5m length, as detailed survey effort is deemed necessary for the planning application.

3.3 Ecological Impact Assessment

The methodology for Ecological Impact Assessment (EclA) follows best practice guidelines set by the Chartered Institute of Ecology & Environmental Management (CIEEM): 'Guidelines for Ecological Impact Assessment' (CIEEM, 2018). This includes identifying the baseline conditions on the site and rating the potential impacts of the development based on the sensitivity and importance of the ecological resource affected, combined with the magnitude, duration and scale of the impact (or change). This is assessed initially without mitigation measures, and then assessed again after allowing for the proposed mitigation measures, providing the residual impacts. The assessment is separated into construction effects and longer-term effects. Each ecological feature within the site has been considered within a defined geographic context such as:

- International and European

- National
- Regional
- County
- District
- Local
- Site Level
- Negligible

The ecological impacts resulting from the proposals were then outlined according to a defined set of characteristics as defined within 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (CIEEM, 2018). This assessment considers the residual impacts after mitigation measures have been accounted for, highlighting any significant effects. A significant effect is "*an effect which either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general*".

4. Baseline Ecological Results

4.1 Desk Study

4.1.1 Statutory designated sites

The site is located within 2km of Chichester Harbour, which hosts a suite of national and international designations associated with the protection of coastal habitats and wildlife. More information can be found in Table 2.

Table 2 – Statutory designated sites within 2km of the site

Site Name	Designation	Proximity to site	Reason for designation
Chichester Harbour	Area of Outstanding Natural Beauty (AONB)	1.0km W	Chichester Harbour is a large estuarine basin. At low tide, extensive mud and sandflats are exposed, drained by channels which unite to make a common exit to the sea. The site is of particular significance for wintering wildfowl and waders and also breeding birds both within the harbour and in the surrounding permanent pasture fields and ancient woodlands. The harbour boasts a wide range of habitats, most of which are nationally and internationally important for supporting high numbers of migrating and breeding birds.
Chichester Harbour	SSSI	2.0km W	
Chichester and Langstone Harbours	Special Protection Area (SPA) Ramsar	2.0km W	
Solent Maritime	Special Area of Conservation (SAC)	2.0km W	

4.1.2 Non-statutory designated sites

Chichester Canal Site of Nature Conservation Importance (SNCI) is the only non-statutory designated site within 1km of the site.

4.2 Habitats

4.2.1 Desk Study

The following Priority Habitats can be found within 1km of the site:

- Coastal and floodplain grazing marsh
- Traditional orchard

These habitats of Principal Importance are listed in Section 41 of the NERC Act, 2006. Section 40 places a duty on Local Planning Authorities to have due regard to biodiversity. No priority habitats exist within or directly adjacent to the site.

Site Assessment

The habitats present on-site are portrayed on the UKHab survey plan, found in Appendix 1. The Phase 1 Habitat Plan covers the construction zone and not the entirety of the Bridge House ownership. The site is given over to the habitats discussed further below.

u1b5 – Buildings

The structures affected by the proposals consist of a detached agricultural barn house. Also present is a single outbuilding of metal construction. The buildings offer negligible ecological value in a broader sense and their value to support protected species is discussed in the species assessment below.

u1b - Developed land; sealed surface

Small pathways and a patch of hardstanding are present to the east of the barn. The habitat is of negligible ecological value.

u1d – Suburban mosaic of developed and natural surface

Within the wider gardens of Bridge House are a number of shrubs and herbaceous plants which are a mix of native and non-natives. Within the construction zone there is a small raised bed containing herbaceous plants like Lavender. These habitats offer negligible–low ecological value.

g4 – Modified grassland

The gardens immediately north of the barn are dominated by amenity grassland lawn that are frequently mown. It is apparent that the patch of grass east of the tennis court, outside of the red line boundary but within the landownership of Bridge House, is an area of grassland that has been occasionally left to grow long, allowing native wildflowers to grow up among the sward. The grassland was all largely short at the time and dominated by perennial rye grass *Lolium perenne*, with a low number of forbs identified within the red line boundary, these included white clover *Trifolium repens*, creeping buttercup *Ranunculus repens*, cock's-foot *Dactylis glomerata*, greater plantain *Plantago major*, dandelion *Taraxacum officinale* agg., broad-leaved dock *Rumex obtusifolius* and chickweed *Stellaria media*.

h2a – Hedgerows

To the east of the plot is a native hedgerow formed of beech *Fagus sylvatica* and a mix of native hedgerow trees. The hedgerow is of limited connectivity value to the south but well-connected to the canal to the north.

Overall, the habitats on-site are assessed to be no greater than site value. See photos 1 to 16.

Bridge Barn – Ecological Impact Assessment

Photo 1: South facing elevation of barn.



Photo 2: East facing elevation of barn.



Photo 3: North facing elevation of barn.



Photo 4: West facing elevation of barn.



Photo 5: North east corner of barn.



Photo 6: Brick section of barn.



Photo 7: Modified grassland and shrubs.



Photo 8: Grassland and hedgerow to the east.



Photo 9: Tennis court to the north.



Photo 10: Modified grassland (occasionally left long) to north.



Photo 11: Rubble/soil pile between buildings.



Photo 12: Bridge House gardens, mosaic of grassland, fruit trees and shrubs.



Photo 13: Interior of barn.



Photo 14: Interior roof of barn.



Photo 15: Interior of brick section off the barn.



Photo 16: Interior of brick section off the barn.



4.3 Species

4.3.1 Amphibians

The site does not contain any waterbodies suitable for amphibians including great crested newts (GCN). The site does not contain any habitats that would support GCN during their terrestrial phase. Chichester Canal to the north is unsuitable for breeding GCN due to dense populations of fish and waterfowl. There is a pond 100m southwest of the site and at the time of survey, ducks were seen on the water suggesting it is used by waterfowl making conditions less suitable for breeding GCN. Three more ponds were identified using OS mapping, these were on the northern side of the canal and not well-connected to the site. It is considered highly unlikely that amphibians would use the site. An occasional amphibian/GCN may use the site's hedgerows and shrubs for commuting across the site.

Overall, the site is absent of suitable breeding and terrestrial habitat for amphibians, including great crested newts (GCN) and based on the distribution of suitable breeding (aquatic) habitat within the local landscape it is unlikely that they would migrate across the site. Subsequently, colonisation on to site is considered unlikely.

4.3.2 Badger

No evidence of badger was recorded on site or within the proposed pond development zone such as snuffle holes, latrines, footprints. There is no ancient woodland directly linked to the site and no sett building opportunities on site. Overall, the site is assessed to be of negligible value for badgers and they are not considered further in this report.

4.3.3 Bats

Both buildings on site were assessed to be of negligible suitability to support roosting bats. The large agricultural barn was of relatively modern construction, which was in regular use for storage, experiencing drafts and lots of daylight. It was inspected for its suitability to support bats by being inspected for the presence of Potential Roost Features (PRFs). No PRFs were noted across the building. There were gaps between the fascia and the main cladding these gaps were deemed to be too large and exposed to support any crevice dwelling bats. The brick built section of the building was inspected for PRFs such as crevices between bricks where mortar may have crumbled out but no potential gaps were noted, and no evidence of bats was found. The second building was of metal construction with a corrugated sheet iron roof which appeared in moderate condition, with no PRFs found. It is anticipated that both buildings would be susceptible to rapid changes in temperature and would experience drafts and wind exposure making them unsuitable for roosting bats. Artificial lighting is already extensively present across the site with large security illuminators and external lamps.

The site is located near to the Chichester Canal which is a known foraging and commuting habitat for a diversity of bat species including common and soprano pipistrelles, serotine, long-eared, noctule, Daubenton's and other Myotis species. The site is likely to host foraging bats with the intact hedgerow to the east of the site being key linear features for them.

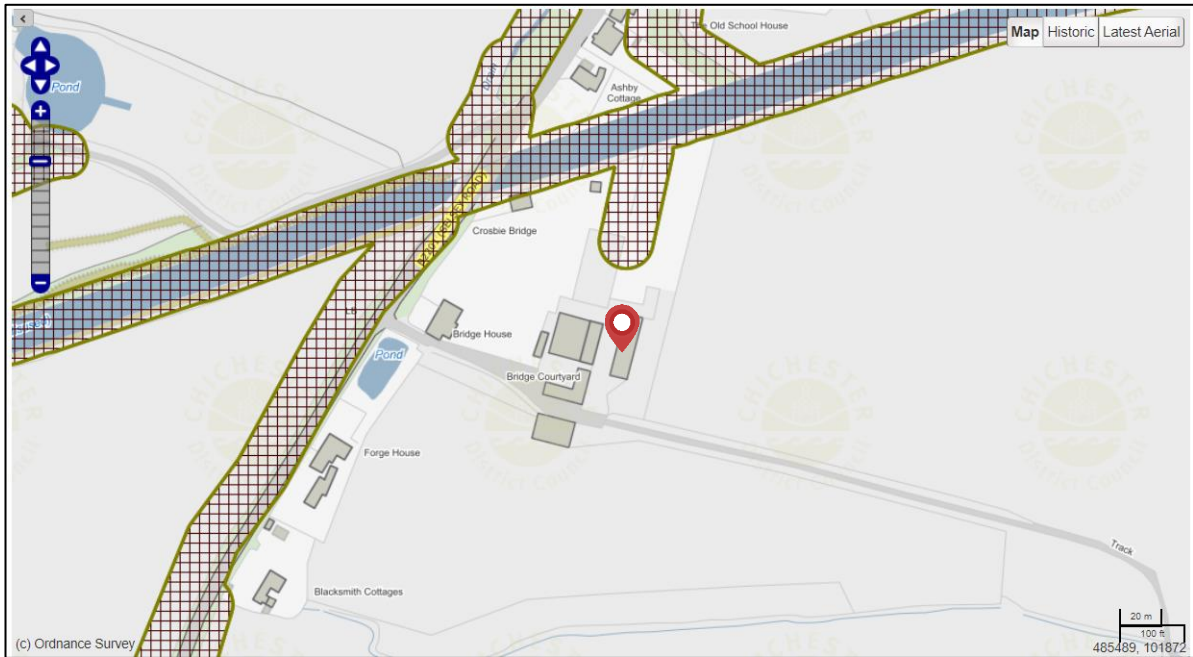
Two EPSLs has been granted within 2km of the site, as follows:

- EPSL allowing the damage of a resting place of soprano pipistrelle bats, 384m northwest of the site, granted in 2015. Licence no. 2015-15625-EPS-MIT

The Bat Movement Network is present along the canal to the north of the site (See Figure 3). Hedgerows also link the site to the south along the road. Bats use woodland, woodland edges, hedgerows, rivers, and other unlit linear features as corridors to commute from one area of

countryside to another. These features act as navigational landmarks and can also provide some protection from predators. Overall, the site is assessed to be of site value for roosting/foraging/commuting bats.

Figure 3: Bat Movement Network around the site (hatched areas)



4.3.4 Dormice

The absence of woodland, scrub, and lack of connectivity to ancient woodlands or unmanaged scrub within the site boundaries lowers the chances of dormice being present. The hedgerow on the eastern boundary would not be suitable for sustaining a dormouse population in its own right and there are no other habitats on site to consider being suitable for dormice. Overall, the site is assessed to be of negligible value for dormice.

4.3.5 Hedgehogs

Hedgehogs are locally abundant and widespread and likely to be present in the local area. Hedgehogs mainly feed on invertebrates such as earthworms, earwigs and beetles and earthworms. The field to the east of the site is expected to support commuting and foraging hedgehogs. The shrubs and hedgerow on the boundary of the construction zone have low potential to support hedgehogs. Overall, the site is assessed to be of site value for hedgehogs.

4.3.6 Invertebrates

The hedgerow and longer patches of grassland could offer foraging, sheltering and hibernating opportunities for invertebrates. There was no deadwood or decaying wood habitat within the

construction zone and no flowering plants, shrubs or hedgerows on site that would support a wide diversity of invertebrates. Overall the site is assessed to be of site value for invertebrates.

4.3.7 Nesting birds

One bird's nest was identified within the main barn, at the apex near the northern end. It is anticipated that it is the nest of a wood pigeon due to the size. The hedgerow and shrubs offer nesting and shelter for nesting birds. The habitats suitable to support birds within the site make up a very small percentage of suitable nesting habitat within the local landscape. The site has been assessed to be of site value for birds.

4.3.8 Reptiles

The site contains very limited amounts of suitable reptile habitat within the construction zone. There is a large rubble and soil pile which has become sparsely vegetated which may offer shelter and hibernation opportunities for reptiles located between the two buildings. The hedgerows and longer swards of grass offer limited commuting and foraging opportunities. The site is assessed to be of site value for common reptiles.

5. Impact Assessment

In accordance with CIEEM guidelines, where ecological features have been evaluated at “site” or “negligible” value, no further assessment is deemed necessary as the impact on these receptors is not likely to be of significance. Mitigation measures are required to ensure compliance with current wildlife legislation and best practice guidelines.

No further surveys have been recommended and enhancement measures have been provided to enhance the site for local biodiversity.

The proposed development has an opportunity to enhance habitats for a variety of wildlife. Such enhancement measures are in line with the National Planning Policy Framework (NPPF) (2021), within policies 49 of the Chichester Local Plan (2014).

5.1 Designated Sites

Potential Impacts

The proposed development will result in an increase in overnight accommodation, therefore a contribution to the Bird Aware Scheme may be required.

Given the nature of the current proposals and intervening distances, it is considered highly unlikely that designated sites will be impacted in other aspects.

Residual Impacts

The overall impact of this proposal on designated sites will be negligible.

5.2 Habitats

Potential Impacts

In the absence of mitigation, the proposed development would increase the noise, construction vehicle fumes, and light pollution on the immediate surrounding habitats for a short period of time. Given the magnitude of the proposals, these impacts would be minimal and no greater than site level.

Mitigation

- Any proposed loss of shrubs and/or grassland will be replaced with similar, native plants or the habitat further enhanced within the wider gardens of Bridge House (see Section 6).
- The modified grassland, especially areas that are left intentionally to grow long for wildlife, will be avoided by vehicles. Vehicles, diggers, other machinery and materials will be moved and kept on hard surfaces where possible.
- Construction vehicles must also give the hedgerow on the eastern boundary of the site at least a 1.5m buffer from the widest edge of the hedgerow foliage, to avoid damaging the roots.
- Any chemicals or fuel must be stored appropriately, fully-sealed and kept on existing hard surfaces.
- Silt and water run-off must be managed so that it does not pollute the site.

Residual Impact

Provided the mitigation measures are followed the development is anticipated to result in a **negligible** impact on habitats.

5.3 Species

5.3.1 Bats

Potential Impacts on Bats

It is unlikely that there will be significant impacts to bats however, as bats are known to be present foraging and commuting along the nearby canal, precautions can be taken to avoid adverse effects on bats that may forage or commute across the site.

Mitigation for Bats

- Artificial Light At Night (ALAN) adversely affects bats, invertebrates and other nocturnal animals (Bat Conservation Trust and the Institute of Lighting Professionals, 2023). If exterior lighting is to be installed on site, e.g. security lighting, this will be kept to a minimum and the following measures will be taken:
 - No exterior lighting, including during construction, will be directed at bat boxes, vegetation, hedgerows, trees, and other key habitat features.
 - Install lighting at the lowest possible height.
 - Luminaires will face downwards and mounted horizontally, with no light output above 90° and no upward tilt.
 - Security lighting will be set on motion sensors and set to a short timer. For residential purposes, a 1 or 2 minute timer is appropriate.
 - All luminaires will lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
 - LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
 - A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light component.

5.3.2 Nesting Birds

Potential Impacts on Nesting Birds

- There is potential for the loss of a bird nest from the agricultural barn while it is in use by a bird and potential for loss or damage to bird nests from shrub maintenance in the absence of mitigation.

Mitigation for Nesting Birds

- The bird nest in the barn will not be removed or destroyed while it is in use by a bird. Ideally, the works to demolish the barn will be during winter (outside of bird nesting season, which runs from 1st March to 31st August). Or, if the works to demolish the barn are scheduled to take place within bird nesting season, a suitably qualified ecologist will make a site visit within 24 hours before works are due to commence to determine whether the nest is still active and will advise how to proceed.
- Any shrub clearance, if proposed, will take place over winter and avoid being undertaken within bird nesting season. If shrub clearance is undertaken between 1st March and 31st August, it will be done by using hand tools only and by taking great care to watch for bird nesting activity by adult birds or by checking bushes/shrubs for bird nests beforehand. If a nest is found with adults building it, sitting on it/on eggs, nest with eggs present, and/or chicks present, all clearance will stop immediately and a buffer zone of 5m around the shrub will be in place until the young have fledged.

5.3.3 Reptiles

Potential Impacts on Reptiles

- There is potential for the harming or killing of reptiles by removing the rubble/soil pile in the absence of mitigation.

Mitigation for Reptiles

- The pile of soil, rocks and rubble in between the two buildings (photo 11) will be removed carefully during the spring, summer or autumn, ideally between 1st March and 31st October, avoiding the winter hibernation period for reptiles which may hibernate in this pile.

5.3.4 Other Species

Potential Impacts on Other Species

- There is no potential for significant impacts upon amphibians, dormice, or significant invertebrates. The site contains insufficient habitats to support any significant populations in isolation and works are focused on the existing building and hard surfaces. Individual hedgehogs, small mammals and common amphibians may use the site and be injured during works.

Mitigation for Other Species

- Plants that are toxic to insects must be avoided in planting plans, and avoidance of pesticides will be adopted across the site.

- The grassland within the construction zone will be kept mown short if there is a risk of vehicles trampling it, to avoid small animals from being harmed if they were to shelter in the long grass.
- Excavations will be provided with a gently sloping ramp to allow small animals to escape if they fall in, such as a roughened plank of wood. Any open pipework must be switched off and closed/covered at the end of each working day to prevent small mammals from entering and nesting within.
- Any piles of rubble, debris, paving slabs or pots shall be checked by hand prior to removal, to avoid harming any protected species like hedgehogs, slow worms, common frogs and toads, as well as ubiquitous species such as mice and voles.
- In the unlikely case that any protected species are found during works, works will stop, and the animals will be allowed to escape and must not be handled by contractors unless informed to do so by a suitably qualified ecologist.

Residual Impacts

Provided the mitigation measures are followed the development is anticipated to result in a **neutral** impact on protected species.

6. Ecological Enhancements

The proposed development has an opportunity to enhance habitats on site. Such enhancement measures are in line with the National Planning Policy Framework (NPPF) (2021) and within policies 40 and 49 of Chichester District Council Adopted Chichester Local Plan: Key Policies 2014-2029.

Paragraph 179 of the NPPF states that “*To protect and enhance biodiversity and geodiversity, plans should: /... promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*”

- Any new garden lawn can be sown with Emorsgate’s Flowering Lawn Mixture EL1. Existing lawn can also be prepared and sown with wildflower meadow seeds and undergo minimal management. Such meadow sowing can provide interest and can be aesthetically pleasing with mown meandering paths.
- Pollinator-friendly flowers grown around the site in beds, pots, or in hanging baskets will improve its ecological value. Always try to choose organic, pesticide-free plants and seeds. Plants should be chosen from the [RHS ‘Plants for Pollinators’ lists](#). Alternatively, the following list of low-maintenance flowering plants has been recommended by the ecologist for this site:
 - Borage *Borago officinalis*
 - Bugle *Ajuga reptans*
 - Catmint *Nepeta spp.*
 - Chives *Allium schoenoprasum*
 - Cranesbill geranium *Geranium spp.*
 - English lavender *Lavandula angustifolia*
 - Nasturtium *Tropaeolum majus*
 - Rosemary *Rosmarinus officinalis*
 - Sunflower *Helianthus annuus*
 - Thyme *Thymus spp.*
 - Winter-flowering heather *Erica carnea*
- Any new garden lawn could be sown with Emorsgate EL1 Flowering Lawn Mixture. Existing lawn can also be prepared and sown with wildflower meadow seeds and undergo minimal

management. Such meadow sowing can provide interest and can be aesthetically pleasing with mown meandering paths.

- An integrated bat box, external* bat box or tile with a suitable gap (or readymade ‘bat tile’) could be incorporated into the designs. Erected 3-5m above ground, facing between southwest and southeast, receiving several hours of sunlight during the day. No artificial lighting will shine on these new bat roosting opportunities. See Figures 4-7 for examples.

**WoodStone/Woodcrete boxes are recommended rather than timber boxes. They safeguard against attacks from predators and the material insulates the box which creates a more consistent internal temperature.*

Figure 4 – ‘Chillon’ Woodstone Bat Box



Figure 5 - [Beaumaris Woodstone Bat Box](#)



Figure 6 – [Tudor Bat Access Tile](#)



Figure 7a (left) and 7b (right) – [BirdBrickHouses](#)
[Integrated Bat Boxes](#)

(7b suitable to install behind timber cladding)



- One bird nest box is recommended to enhance the site for birds. An integrated bird nest box or an external WoodStone/Woodcrete bird nest box could be incorporated into the designs. Erected 3-5m above ground facing between northwest and northeast avoiding direct sunlight and prevailing winds. Alternatively, an open-fronted external bird nesting box could be installed sheltered within a shrub. See Figures 8-11 for suitable examples of bird nesting opportunities.

Figure 8 – [Vivara Pro](#) Woodstone Standard External Bird Box



Figure 9 – [Vivara Pro](#) Woodstone Open-Fronted External Bird Box



Figure 10a (left) and 10b (right) – [BirdBrickHouses Integrated Bird Boxes](#) (10b suitable to install behind timber cladding)



Figure 11 – [Vivara Pro](#) Woodstone House Sparrow Terrace External Bird Box



- A 13x13cm hole in the garden fence could be installed in one fence on site. This size gap is sufficient for hedgehogs to pass through and is too small for most dogs/cats. A small solid wooden hedgehog house (Figure 12) could also be installed in a quiet corner of the garden. Information for providing a hedgehog friendly garden can be found [online here](#).

Figure 12 – Solid Wooden Hedgehog Box



7. Conclusion

Imprint Ecology was commissioned to carry out an Ecological Impact Assessment at Bridge House to assess the impacts of the proposals to demolish an agricultural barn and outbuilding to accommodate a new dwelling.

The proposals are not considered to have an adverse impact upon locally designated sites although a contribution to the Bird Aware Scheme will be required. Once mitigation measures have been adhered to, the proposals are considered to have a neutral impact upon protected species, and no further surveys are recommended.

Once ecological enhancements are taken into account, the proposals would result in a positive residual effect resulting in a net gain in biodiversity on site. The compensation recommended within this report therefore accord with relevant legislation, the NPPF and Chichester Local Plan policy 49.

8. References

Bat Conservation Trust and Institute of Lighting Professionals (2018). Guidance Note 08/18 - *Bats and artificial lighting in the UK*. Available at: <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>.

British Standards Institute (BSI) (2011). BS 5250:2011 Code of practice for control of condensation in buildings (+A1:2016). BSI, London.

British Standards Institute (BSI) (2013). BS EN 13707:2013 Flexible sheets for waterproofing. Reinforced bitumen sheets for roof waterproofing. Definitions and characteristics. BSI, London.

British Standards Institute (BSI) (2013). BS42020 - Biodiversity Code of Practice for Planning and Change of use. BSI, London. BSI Standards Publication, Trees in relation to design, demolition and construction – Recommendations (2021)

Chichester District Council Adopted Chichester Local Plan: Key Policies 2014-2029, Policies 40, 49 – 52. Available online at: <http://www.chichester.gov.uk/CHttpHandler.ashx?id=24759&p=0>

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

HM Government (1981). *Wildlife and Countryside Act 1981 (as amended)*. Available at: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

HM Government (2000). *Countryside and Rights of Way Act, 2000*. Available at: <https://www.legislation.gov.uk/ukpga/2000/37/contents>

HM Government (2019). *National Planning Policy Framework*. Department for Communities and Local Government. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

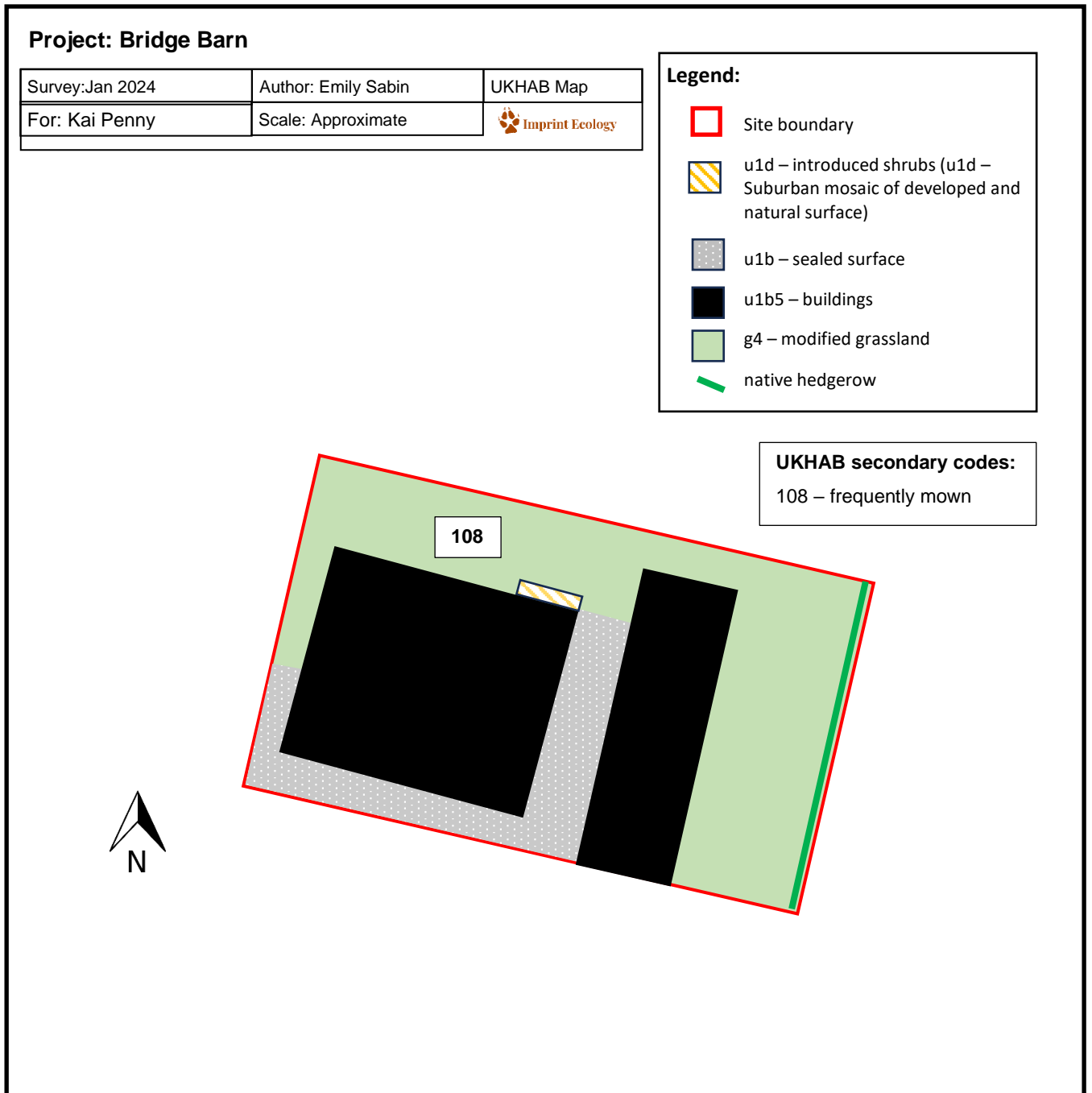
Mitchell-Jones, A.J., & McLeish, A.P. (eds). 2004., 3rd Edition *Bat Workers' Manual*, JNCC, Peterborough. Available at: <https://data.jncc.gov.uk/data/e5888ae1-3306-4f17-9441-51a5f4dc416a/Batwork-manual-3rdedn.pdf>

Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough

Office of the Deputy Prime Minister. (2005, August 16). *Biodiversity and geological conservation: circular 06/2005*

Waring, S. D., Essah, E., Gunnell, K. and Bonser, R. (2013) *Double jeopardy: the potential for problems when bats interact with breathable roofing membranes in the United Kingdom*. *Architecture & Environment*, 1 (1). Pp. 1-13. ISSN 2329-2296. Available at: http://centaur.reading.ac.uk/33044/1/ae_1361785788.pdf

Appendix 1: UKHab Site Map



Appendix 2: Planning Policy

The latest National Planning Policy Framework (NPPF) (Defra, 2022) was published in July 2021. The National Planning Policy Framework (2021) outlines the government's responsibility to minimise adverse impacts on biodiversity and bestow biodiversity net gains where possible.

Paragraphs of relevance within the NPPF include: Paragraph 174 of the NPPF states that *“Planning policies and decisions should contribute to and enhance the natural and local environment by: /... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.”*

Paragraph 179 of the NPPF states that *“To protect and enhance biodiversity and geodiversity, plans should: /... promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”*

Paragraph 180 of the NPPF states that “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 reasons¹ 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.*

The NPPF is also complemented by the Circular 06/2005: Biodiversity and Geographical Conservation – Statutory Obligations and Their Impacts Within The Planning System (Office of the

Deputy Prime Minister, 2005). Paragraph 99 states that *“It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision.”*

The site is within the Chichester District; the proposals should be assessed against the Chichester District Local Plan – Key Policies 2014-2029. Policy 49 covers Biodiversity; the following criteria must be met for planning applications to be supported:

1. *The biodiversity value of the site is safeguarded;*
2. *Demonstrable harm to habitats or species which are protected or which are of importance to biodiversity is avoided or mitigated;*
3. *The proposal has incorporated features that enhance biodiversity as part of good design and sustainable development;*
4. *The proposal protects, manages and enhances the District’s network of ecology, biodiversity and geological sites, including the international, national and local designated sites (statutory and non-statutory), priority habitats, wildlife corridors and stepping stones that connect them;*
5. *Any individual or cumulative adverse impacts on sites are avoided;*
6. *The benefits of development outweigh any adverse impact on the biodiversity on the site. Exceptions will only be made where no reasonable alternatives are available; and planning conditions and/or planning obligations may be imposed to mitigate or compensate for the harmful effects of the development.*

Appendix 3: Legislation of Relevant Species/Habitats

The following legislation is relevant to survey findings and is only a summary.

Statutory Designated Sites

Designation	Relevant legislation
SSSI (Site of Special Scientific Interest)	Wildlife and Countryside Act 1981 (as amended)
SPA (Special Protection Area)	Conservation of Habitats and Species Regulations 2017 (as amended)
SAC (Special Areas for Conservation)	Conservation of Habitats and Species Regulations 2017 (as amended)
Ancient Woodland	National Planning Policy Framework (2021)
Habitats of Principal Importance	Section 41 of the NERC Act 2006 and National Planning Policy Framework (2021)

Protected/Priority Species and Habitats of Principal Importance

Bats

All UK bats are European Protected Species. All British bat species are defined in UK law as 'Protected Species' under Schedule 2 of the Conservation of Habitats and Species Regulations, 2017 (as amended). All bat species in England are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), which confers additional protection under Section 9 of the act, and through the Countryside and Rights of Way (CRoW) Act, 2000.

All UK bats are listed in Appendix II and III of the Bern Convention. Bats and their habitats are listed in Appendix II of the Bonn Convention. Seven bat species are listed under Section 41 of the NERC Act 2006.

This combined legislation means that it is a criminal offence to:

- Deliberately kill, injure or capture bats
- Deliberately disturb bats, including in particular any disturbance which is likely to impair their ability to survive, to reproduce or to rear or nurture their young, or their ability to

hibernate or migrate, or which is likely to affect significantly their local distribution or abundance

- Damage or destroy a breeding site or resting place of a bat
- Damage or destroy, or obstruct access to, any structure or place which any bat uses for shelter or protection
- Disturb bats while occupying a structure or place used for that purpose.

If proposed development work is likely to destroy or disturb bats or their roosts a license may need to be obtained from Natural England which would be subject to appropriate measures to safeguard bats. With suitable approved mitigation, exemptions can be granted from the protection afforded to bats under regulation 39 by means of a European Protected Species Licence (EPSL).

Natural England, for the Secretary of State for the Department for Environment, Food and Rural Affairs (DEFRA) is the appropriate authority for determining license applications for works associated with developments affecting bats. In cases where licenses are required, certain conditions should be met under the Habitats Regulations 2017 (as amended) to satisfy Natural England. These are:

1. Regulation 55(2)(e) states that licenses may be granted to 'preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
2. Regulation 55(9)(a) states that a license may not be granted unless Natural England is satisfied 'that there is no satisfactory alternative'.
3. Regulation 55(9)(b) states that a license cannot be issued unless Natural England is satisfied that the action proposed 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Natural England expects the planning position to be fully resolved as this is necessary to satisfy tests 1 and 2. Full planning permission, if applicable, will need to have been granted and any conditions relating to bats fully discharged. For test 3, Natural England should be satisfied that sufficient survey effort has been carried out and that the impact assessment and proposed mitigation measures (submitted with the license application) are adequate to maintain the species concerned at a favourable conservation status.

Hedgehogs

Hedgehogs are protected under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) and it is illegal to kill/capture them using certain methods. They are also protected under the Wild Mammals Protection Act (1996), prohibiting cruelty/mistreatment and listed as a Species of Principle Importance under Section 41 of the NERC Act 2006.

Nesting birds

All wild bird species, nests and eggs, are protected under the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally kill, injure or take wild birds, damage or destroy their nest while in use or being built, possess, control or transport live/dead wild birds, parts or eggs, or sell or offer them for sale. 79 birds are fully-protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to disturb them and their dependent young while nesting or building nests. Some birds including kingfisher and house sparrow are listed under Section 41 of the NERC Act 2006.

Reptiles

All native UK reptiles are protected under Section 9 of the Wildlife and Countryside Act 1981 (as amended) making it an offence to kill or injure a reptile. All UK reptiles are Species of Principal Importance in England under Section 41 of the NERC Act 2006. Smooth snakes and sand lizards are European Protected Species protected under Conservation of Habitats and Species Regulations 2017. However, it is unlikely smooth snakes or sand lizards will be found as they are rarely found outside nature reserves.