ECOLOGICAL ASSESSMENT REPORT

6th March 2023

Woodpecker Wood, Damerham, Fordingbridge, Hampshire SP6 3HL

On behalf of: Mr and Mrs G French

Planner: Adams Planning & Project Services Ltd

ABR Ecology Ltd

REPORT ISSUE SHEET:

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Local Planning Authority:	New Forest District Council (NFDC)
Planning application number (if known):	Unknown

Survey data lifespan

Information and data provided within this report is considered accurate at the time of writing. Survey data is considered valid for 18 months from the survey date for planning purposes only. However, as protected species are highly mobile, update survey(s) will likely be required if (but not limited to):

a) The condition of the building(s) and/or general site changes; and/or
b) If the nature and/or extent of the proposed works change.

If a Natural England bat licence is required (i.e., if a bat roost is identified during further surveys and impacts on the bat roost(s) will occur), update bat survey(s) will likely be required for the bat licence application. Preliminary Roost Appraisal (PRA) (i.e., building inspections) data is considered valid for 3 months prior to a bat licence application; and bat activity survey data (emergence/re-entry surveys) is considered valid within the then 'current' bat survey season (e.g., if activity surveys are conducted in the summer survey season (May-September) 2022, emergence/re-entry data is considered valid until 30th April 2023 for the bat licence application).

Reporting and data validity

This report has been produced using all reasonable skill and care, and a Quality Assurance (QA) review process has been conducted prior to issue of this report. However, ABR Ecology Ltd cannot accept responsibility for any inaccuracies and/or discrepancies with third-party data supplied within this report.

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Executive summary

- ABR Ecology Ltd were commissioned by Mr and Mrs G French to produce an Ecological Assessment report informed by a Preliminary Ecological Appraisal (PEA), Preliminary Roost Appraisal (PRA) and further targeted surveys at Woodpecker Wood, Damerham, Fordingbridge, Hampshire SP6 3HL. These surveys were conducted to advise on ecological constraints associated with the prospective development of the site. This report was requested to support an application for the change of use of the existing barn and the conversion of the building into a dwelling.
- The PEA and PRA were conducted on the 25th February 2022 by experienced Natural England class licensed bat ecologists Becci Smith MCIEEM and Sophie Morris. A barn owl survey was undertaken by licensed barn owl worker Becci Smith MCIEEM on the 25th February 2022; eDNA sampling was conducted on 29th April 2022; and static monitoring was conducted between 22nd August and 4th September 2022.

Habitats, invasive species and statutory sites:

- The site comprises a barn surrounded by an area of poor semi-improved neutral grassland, mixed broad-leaved woodland, replanted woodland, woodland rides, and a pond.
- The site is a Site of Importance for Nature Conservation (SINC), this is due to ancient semi-natural woodland being onsite which is also designated as UK BAP priority habitat Lowland Mixed Deciduous Woodland. A woodland management plan and a Construction Environmental Management Plan (CEMP) will be required to mitigate for impacts on the woodland and associated protected species.
- The site falls within the Wessex Water Avon discharge catchment and a Natural England Solent nitrate budget calculation will need to be provided to address increases in nutrients within the River Avon in addition to phosphorous control and mitigation measures.
- Rhododendron, a species listed under Schedule 9 of The Wildlife and Countryside Act (1981) (as amended), was recorded on site. It is an offence to allow this species to spread 'in the wild'. Recommendations for its removal are provided in Section 5.

Badgers:

- A badger sett was recorded to the southwest of the site with one active hole and one disused hole present. Provided the CEMP is implemented in full, no impacts on badgers are anticipated as part of the building conversion works.

Barn owls:

- The barn owl survey revealed barn owl evidence in the form of pellets which were recorded on the mezzanine floor within the building. A barn owl mitigation and compensation strategy is provided in Section 5.

Bats:

- The PRA was conducted on the building, and the building was assessed to hold 'negligible potential' for roosting bats. A PRA was also undertaken on the trees on site, several of which had potential roosting features. However, as the works are for the change of use of the building, no planned tree works are expected, and therefore no impacts on roosting bats are anticipated. Further information is provided in Section 5 regarding the validity of this report.
- The site supports at least six species of foraging and commuting bat including myotis sp., long-eared sp., greater horseshoe bat, common pipistrelle, soprano pipistrelle and noctule bats. Due to the proximity of the woodland to the dwelling, lighting must be carefully designed to avoid light spill onto surrounding habitats. Measures for lighting reduction are detailed in Section 5.

Dormice:

- The woodland onsite is highly suitable for dormice and dormice are considered highly likely to be onsite. However, as the works are for the change of use of the building, no works on the woodland are expected and no further action is recommended in relation to dormice and the proposed works provided the approved CEMP is implemented in full.

Great crested newts and reptiles:

- The terrestrial habitats on site are highly suitable for great crested newts (GCN) and common reptiles, and a pond is also present on site. Habitat Suitability Index (HSI) assessments were undertaken on the pond onsite and on a pond within a neighbouring property; these ponds scored 0.66 ('average' suitability for GCN) and 0.8 ('excellent' suitability for GCN), respectively. eDNA sampling was conducted on the onsite pond which returned a 'negative' result for GCN; no access was possible to the neighbouring pond for eDNA. However, no impacts on GCN and/or reptiles are anticipated provided the CEMP is implemented in full.

Nesting birds:

- No evidence of nesting birds was identified on site. However, there is potential for nesting birds to be present in the woodland and building on site. A mitigation strategy is detailed in Section 5 to safeguard nesting birds.

Biodiversity enhancements:

- To ensure the proposed development is compliant with the National Planning Policy Framework (NPPF) and local planning policy, biodiversity enhancements will include the provision of a bat box, a swift box, and two solitary bee bricks within the new dwelling, a minimum of one new fruit tree and native landscaping, and hedgehog-friendly fencing as detailed in Section 5 of this report.

1. Introduction

ABR Ecology Ltd were commissioned by Mr and Mrs G French to produce an Ecological Assessment report informed by a Preliminary Ecological Appraisal (PEA), Preliminary Roost Appraisal (PRA) and further targeted surveys at Woodpecker Wood, Damerham, Fordingbridge, Hampshire SP6 3HL (central grid reference: SU 11362 15809). These surveys were conducted to advise on ecological constraints associated with the prospective development of the site. This report was requested to support an application for the change of use of the existing barn and the conversion of the building into a dwelling.

The PEA and PRA were conducted on the 25th February 2022 by experienced Natural England class licensed bat ecologists Becci Smith MCIEEM and Sophie Morris. A barn owl survey was undertaken by licensed barn owl worker Becci Smith MCIEEM on the 25th February 2022; eDNA sampling was conducted on 29th April 2022; and static monitoring was conducted between 22nd August and 4th September 2022. Existing and proposed plans are provided in Appendix 1.

Site context

The application site is located in Fordingbridge, Hampshire and is set within a rural woodland location. The site comprises a barn surrounded by an area of mixed broadleaved woodland, improved, neutral grassland, replanted woodland, two woodland rides and a pond. In the immediate surrounding landscape, housing is present with the River Avon approximately 225m south. Within the wider landscape, heathland, woodland, arable and pastures with good hedgerow networks and mature trees are present. The immediate and surrounding landscapes were considered to provide excellent opportunities for foraging and commuting bats and local wildlife.

Aims and scope of this report

This report is based on the results of the PEA and data search from the Local Records Centre (HBIC, 2022), which were principally aimed at determining the ecological value of the site and any constraints associated with the development. This report is also based on the results of the PRA which aimed to determine if a bat roost is present within any of the building(s)/trees or whether the building(s)/trees had 'potential' to support roosting bats in line with The BCT Good Practice Survey Guidelines (Collins, 2016).

This report aims to establish whether the proposed works will impact on any protected or vulnerable species and/or habitats and identifies whether there is a requirement for further detailed surveys, which may inform the need for a European Protected Species (EPS) licence(s) to allow the works to proceed lawfully.

2. Legislation and planning policy

Legislation and UK BAP priority habitats/species

Legislation

In England, all bats, dormice (*Muscardinus avellanarius*) and great crested newts (*Triturus cristatus*) are legally protected under Annex IV of the EC Habitats and Species Directive (1992), which is transposed into domestic law via the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

A number of species are also listed under Annex II of the EC Habitats and Species Directive (1992), including barbastelle (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), greater horseshoe (*Rhinolophus ferrumequinum*), lesser horseshoe (*Rhinolophus hipposideros*), great crested newt, stag beetle (*Lucanus cervus*) and otter.

The above named species and adders (*Viperaberus*), slow worms (*Anguis fragilis*), grass snakes (*Natrix natrix*), common lizards (*Zootoca vivipara*), common frog (*Rana temporaria*), palmate newt (*Lissotriton helveticus*), smooth newt (*Lissotriton vulgaris*), and several invertebrate species are also protected under Schedule 5 of The Wildlife and Countryside Act (WCA) (1981) (as amended). Schedule 9 of The WCA (1981) (as amended) also includes non-native, invasive species including (but not limited to) Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Fallopia japonica*). Badgers (*Meles meles*) are legally protected under The Protection of Badgers Act (1992).

All birds, their nests and eggs are protected under Section 1 of The WCA (1981) (as amended) and it is thus an offence, to intentionally kill, injure or take any wild bird; intentionally take, and damage or destroy the nest of any wild bird while it is in use or being built. Barn owls (*Tyto alba*) are also afforded additional protection under Part 1 of The WCA (as amended) from disturbance.

A number of sites designated for nature conservation are afforded legal protection due to being of European importance. These include Special Areas of Conservation (SACs) (protected under the EC Habitats and Species Directive (1992), Special Protection Areas (SPAs) for birds (protected under the EC Birds Directive) and Ramsar (Ramsar Convention, 1975). Other protected sites include Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) Local Nature Reserves (LNRs) and Protected Road Verges which are designated under the WCA (1981) and strengthened by The Natural Environment and Rural Communities Act (NERC) (2006).

SPAs and SACs were previously included in the Natura 2000 sites and following amendments to the legislation, are now included under the 'National Site Network'. Ramsar sites do not form part of the 'National Site Network' however, are afforded the same protection. These changes allow the Government to continue commitment to the protection of the environment along with fulfilling the international commitments under the Bern Convention, the Oslo and Paris Conventions (OSPAR), Bonn and Ramsar Conventions.

Hedgerows that qualify as 'important' under The Hedgerows Regulations (1997) are legally protected under the Regulations.

UK BAP

Several species and habitats are listed under the UK Biodiversity Action Plan (UK BAP) (JNCC, 2016) as priority habitats/species due to their vulnerability or rarity as listed under Section 41 of the Natural Environment & Rural Communities (NERC) Act (2006) and Section 40 places a duty on all public authorities to conserve biodiversity.

These include several terrestrial and freshwater habitats, including some hedgerows and streams, and several species such as hedgehogs (*Erinaceus europaeus*), barbastelle, Bechstein's bat, both species of horseshoe bat, brown long-eared bat (*Plecotus auritus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and noctule (*Nyctalus noctula*).

National and local planning policy

NPPF – The National Planning Policy Framework

The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government, 2021) sets out the Government's planning policies for England and how these should be applied. In the context of this report, Section 15 of NPPF is relevant and applicable, Section 15 states:

'*Planning policies and decisions should contribute to and enhance the natural 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*.'

New developments and projects are supported where plans promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue measurable net gains for biodiversity.

To ensure this application is compliant with Section 15 of NPPF, wildlife/habitat enhancements will be required to demonstrate a biodiversity net gain as an outcome of the project/development.

Section 15 of NPPF also gives consideration to sites with potential to impact on irreplaceable habitats, and states:

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

To ensure this application is compliant with Section 15, this application should be accompanied by a suitable arboricultural report to assess the presence of potential ancient or veteran trees.

The New Forest District Council Local Plan Part 1: Planning Strategy

The New Forest District Council Local Plan Part 1: Planning Strategy (New Forest District Council, 2020) Policy ENV1 'Mitigating the impacts of development on International Nature Conservation sites' states the overall objectives that will protect and enhance biodiversity in the region:

'*Except as provided for in the first paragraph of Saved Policy DM2: Nature Conservation, Biodiversity and Geodiversity, development will only be permitted where the Council is satisfied that any necessary mitigation, management or monitoring measures are secured in perpetuity as part of the proposal and will be implemented in a timely manner, such that, in combination with other plans and development proposals, there will not be adverse effects on the integrity of any of the following International Nature Conservation sites:*

- *The New Forest Special Area of Conservation (SAC), the New Forest Special Protection Area (SPA) and the New Forest Ramsar site;*
- *The Solent Maritime SAC, Solent and Isle of Wight Lagoons SAC, the Solent and Southampton Water SPA, and the Solent and Southampton Water Ramsar site;*
- *The River Avon SAC, Avon Valley SPA and Ramsar site; and*
- *The River Itchen SAC*'

The New Forest District Council Local Plan Part 2: Sites and Development Management

Policy DM2 'Nature conservation, biodiversity and geodiversity' set out in The New Forest District Council Local Plan Part 2: Sites and Development Management states:

'*Development proposals which would be likely to adversely affect the integrity of a designated or candidate Special Area of Conservation (SAC), classified or potential Special Protection Area (SPA), or listed Ramsar site will not be permitted unless there is no alternative solution and there are imperative reasons of overriding public interest which would justify the development.*

Development proposals within or outside a Site of Special Scientific Interest (SSSI) which would be likely to adversely affect the site will not be permitted unless the benefits of the development outweigh both the adverse impacts on the site and any adverse impacts on the wider network of SSSIs.

Development which would result in damage to or loss of a site of biodiversity or geological value of regional or local importance (including Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), Regionally Important Geological/Geomorphological Sites (RIGGS), and habitats or species of principal importance for biodiversity) will not be permitted unless the benefits of the development clearly outweigh the harm it would cause to the site, and the loss can be mitigated to achieve a net gain in biodiversity/geodiversity.

Development proposals will be expected to incorporate features to encourage biodiversity and retain and, where possible, enhance existing features of nature conservation value within the site. Existing ecological networks should be identified and maintained to avoid habitat fragmentation, and ecological corridors should form an essential component of green infrastructure provision in association with new development to ensure habitat connectivity.

Where development is permitted, the local planning authority will use conditions and/or planning obligations to minimise the damage, provide mitigation and site management measures and, where appropriate, compensatory and enhancement measures.

Development will not be permitted which would adversely affect species of fauna or flora that are protected under national or international law, or their habitats, unless their protection can be adequately secured through conditions and/or planning obligations.'

It is the applicant's/landowner's responsibility to ensure that the proposed development proceeds in full compliance with this report and/or any update version report thereafter, that works are undertaken lawfully, in compliance with national and local policy, and in accordance with all conditions of the obtained planning consent.

3. Methodology

Desktop data search

Internationally, nationally and locally protected sites including Ramsar, SPAs, SACs, SSSIs, NNRs and LNRs were identified within a 5-kilometre (km) radius of the application site using the Multi-Agency Geographical Information for the Countryside (MAGIC, 2022) website. Hampshire Biodiversity Information Centre (HBIC, 2022) were contacted to provide records of any protected, vulnerable and notable species and any locally designated sites such as Sites of Importance for Nature Conservation (SINCs) within a 1km radius of the application site.

This information was used to inform the assessment of the site and its potential to support protected/vulnerable species and habitats and to assess whether the proposed works hold potential to impact on protected sites designated for nature conservation.

Phase 1 Habitat survey

The Phase 1 Habitat survey was conducted on the 25th February 2022 by experienced ecologist Becci Smith MCIEEM and assistant ecologist Sophie Morris.

The survey was conducted in accordance with the 'Handbook for Phase 1 Habitat survey – a technique for environmental audit' (JNCC, 2010) methodology. The survey involved the mapping of broad habitat types within the application site boundary using colour codes alongside a comprehensive species list, categorising flora species in order of abundance under the DAFOR scale. 'Target notes' were made where ecological features of interest were identified.

Badgers

A direct search was conducted looking for signs of badgers and their setts. Any setts encountered were classed as main, annexe, subsidiary or outlier, dependent upon the number of holes and apparent extent of their use. A search was also conducted for any other evidence of badger including faeces or latrines, pathways, scratching posts at the base of trees, snuffle holes, day nests, hair or footprints.

Barn owls

A thorough search for evidence of barn owls was conducted on the 25th February 2022 by Becci Smith MCIEEM suitably qualified ecologist. The ecologist conducted a thorough search of the trees and hedgerows for feeding remains, feathers, splashing/droppings, pellets, nesting material and the presence of barn owls.

Bats

Preliminary Roost Appraisal (PRA)

Natural England licensed bat ecologists Becci Smith MCIEEM and Sophie Morris undertook the PRA of the building and trees on site. Timing and weather conditions are provided in the table below:

Survey date	Time of survey	Surveyor(s)	Equipment used	Weather conditions		
25/02/2022	14:00pm	Becci Smith MCIEEM and Sophie Morris	Extendable ladder, high-powered torch, binoculars	Temp:	Okta cloud cover:	Beaufort wind force:
				10°C	2/8	1-2/12

The assessment was undertaken in accordance with the Bat Conservation Trust (BCT) Good Practice Survey Guidelines (Collins, 2016). A thorough search for evidence of bats was undertaken in any internal loft spaces, voids, holes within trees through damage and on any external features of the building and trees notably any sills, walls, floors and flat surfaces. Evidence of roosting bats include:

- Presence of live/dead bats;
- Bat droppings - distinguished from rat/mouse droppings by their crumbly texture;
- Staining from fur around access points; and
- The presence of feeding remains, such as insect wings and casings.

The building/trees were identified as a 'confirmed' bat roost if evidence of roosting bats was recorded. To confirm the species of bat present, a sample of any bat droppings recorded was made and sent to Swift Ecology Ltd for DNA analysis.

Most native bats in the UK are crevice-dwelling species, with bats roosting in remote areas such as between tiles and membrane, behind cladding, at wall tops, in cavities, soffits, behind lead flashing, lifted bark, knot holes, tear outs, and frost frees to name a few examples within buildings and trees. Evidence of these species is often concealed and/or inaccessible due to the remote nature of the roost. Therefore, where no evidence of roosting bats was recorded, an assessment on the availability of potential roosting areas and bat access points around the building, as well as the quality/availability of surrounding bat habitat, was conducted. The building was then assigned a category based on a sliding scale of negligible to high, in accordance with the BCT Guidelines (Collins, 2016):

Bat roosting potential	Description
'High potential'	A building/tree with one or more potential roosting sites that are highly suitable for use by many bats on a regular basis and for a longer period of time.
'Moderate potential'	A building/tree with one or more potential roosting features that could be used by bats due to appropriate conditions but are unlikely to support a bat roost of important conservation status (roost type only, not species).
'Low potential'	The building/tree features one or more potential roosting features that could be used by bats opportunistically. These features do not provide the appropriate conditions to be used on a regular basis by large numbers of roosting bats.
'Negligible potential'	The features of the building/tree are of negligible value to bats and highly unlikely to be used by roosting bats.

Habitat suitability assessment: Commuting and foraging bats

An assessment of the site was undertaken on the 25th February 2022 by ecologists Becci Smith MCIEEM and Sophie Morris to evaluate the suitability and quality of the habitats on site for the local bat population. General habitats of suitability for bats include sheltered areas such as woodland rides, treelines/hedgerows, watercourses, valleys and species-rich/tussocky grassland that generally support good assemblages of invertebrates and thus offer ample bat foraging opportunities. Linear features such as treelines/hedgerows and woodland edges also provide good commuting corridors for bats navigating the landscape. The site was assessed on a sliding scale of 'negligible' to 'high' potential for commuting and foraging bats in accordance with the BCT Guidelines (Collins, 2016).

Static monitoring

One 'Wildlife Acoustics SongMeter (SM4) static monitoring device was deployed in the west of the site (see Appendix 4 for locations of device), adjacent to the woodland edge. Static monitoring was conducted for a period of seven days in the peak season.

Bat activity data was analysed using Kaleidoscope Pro V. 4 Analysis Software (Wildlife Acoustics, 2021). The total number of bat passes for each species on each night in each month were tallied to provide a representation of the use of the site.

Dormice

Dormice are small, nocturnal mammals which occupy habitats such as hedgerows, woodland and scrub. The dormouse requires good arboreal connectivity with a good range of food sources such as fruit, nuts, flowers or insects. Plant species such as hazel, oak, bramble and honeysuckle are favoured in particular, as well as hornbeam, blackthorn, sweet chestnut and sycamore supporting dormice within woody connective habitat. The habitats on site and immediately adjacent to the site was assessed for the potential to support dormice.

Great crested newts

Habitat suitability assessments

Great crested newts occupy both aquatic and terrestrial habitats throughout their life cycle, spending a short period of the year breeding and egg-laying in waterbodies such as ponds, standing water and ditches. Throughout the remainder of the year, newts will spend their time foraging and commuting within terrestrial habitats such as longer grassland, woodland, hedgerow bases and scrub. Newts will hibernate within features such as log piles, tree roots and rubble piles. Great crested newts are known to forage up to 500 metres (m) from their breeding sites.

An aerial assessment was made prior to the site visit to determine if any waterbodies such as ponds were present within 500m of the site. Any accessible waterbodies were assessed under the Habitat Suitability Index (HSI) (Oldham et al, 2000, 2008) to determine the suitability of the waterbody to support great crested newts.

eDNA sampling

eDNA sampling was conducted on any accessible waterbodies within 500m of the site that received a HSI score of 0.5 or above to determine if great crested newts were present/absent in the waterbodies. The technique involved taking 20 water samples from around the pond margins and these were then transferred into sterilised sample tubes. The samples were then collected on 29th April 2022 and sent to SureScreen Scientifics Ltd to determine if great crested newt DNA was present in the waterbodies.

Nesting birds

A search for evidence of nesting birds was conducted on the 25th February 2022. Birds will nest in buildings, hedgerows, scattered trees, scrub and planting and forage amongst these habitats.

Reptiles

An assessment was undertaken on the suitability of the habitats on site for supporting reptiles. Reptiles are found in habitats with a varied vegetative structure, offering opportunities for foraging and basking, such as areas of unmanaged grassland with shorter vegetation margins, heathland and woodland. An assessment was also made of potential sites suitable for hibernation such as log, spoil and brash piles, rubble, rockery or tree roots.

Survey limitations

PEA and PRA

Potential evidence of crevice-dwelling bats may have been missed due to the nature and remote location of potential roosting areas. However, binoculars were used to identify any potential bat droppings on the exterior features of the buildings/trees, where possible.

A ground-based tree survey looking for evidence of bats can be constrained by canopy cover and by the angle of the viewer. Where a tree meets a certain age and size this is considered to increase the probability of bat roosts in trees due to declining tree health and the likelihood of disease/rot offering cavities for bats.

An aerial search for waterbodies is constrained by the accuracy of online mapping resources. Several maps were accessed to minimize the changes of missing waterbodies which may support great crested newts however, garden ponds and waterbodies within residential properties are often unmapped and it is possible that waterbodies have been missed as part of this assessment. An additional seven ponds were noted within the Estates to the east; land ownership was not identified and therefore access was not possible, therefore no survey was possible on these ponds. However, as the works will be confined to conversion of the building with limited impacts on surrounding habitats, this is not considered to be a material consideration.

The site visit provides a ‘snapshot’ of the site and does not take into account seasonal variation. Species may have been overlooked due to the constraints of the season and time in which the survey was undertaken. A lack of evidence of a species does not confirm its absence from site, rather there was no indication of its presence at the time of survey.

Bat static monitoring

Horseshoe bats (*Rhinolophus sp.*) have high frequency echolocation calls, and long-eared bats echolocate quietly; it is possible that a larger number of passes from

these species may have been missed during the static monitoring periods due to attenuation of their calls.

Long-eared (*Plecotus sp*.) bats echolocate very quietly and are a later-emerging bat species,; this makes it difficult to identify/observe long-eared bat activity during the transect.

Bats of the myotis (*Myotis sp*.) genus are difficult to distinguish due to their variable, and often similar, echolocation calls. Therefore, myotis bats were grouped into one category as myotis sp. for analysis purposes.

Data validity and survey data lifespan

The data within this report should not be seen as comprehensive. Data obtained from the DERC (DERC, 2023) data search is unlikely to provide a complete record of species within the search area. It is therefore possible that a bat species may occur within the vicinity that has not previously been identified within the data search.

This report is considered valid for 18 months from the survey date for planning purposes only; and is only intended for the proposed plans outlined within this report. If any material changes to the building(s)/site occur or if the nature and/or extent of the proposed development changes, an update visit to reassess the buildings will be required, as any conclusions provided herein may not be valid.

4. Results

Desktop data search

Internationally, nationally and regionally protected (statutory) sites

MAGIC (MAGIC, 2022) was used to identify any statutory designated sites within 5km of the application site, and these have been identified below.

Site name	Distance from site	Designation	Size (ha)	Site description
Cranborne Chase & West Wiltshire Downs	Site within Area of Outstanding Natural Beauty (AONB)	AONB	985.94	A mix of chalkland, downs and valleys make up much of the southern landscape. In the north, is a mix of knolls and ridges, adjoining to clay vales. Cranborne Chase is of great importance for both ecological and historical purposes. Habitats include ancient downland, river meadow and deciduous woodland.
Boulsbury Wood	3km west	SSSI	119.76	Boulsbury Wood sensu lato (consisting of Boulsbury Wood, High Wood, Stone Hill Wood, Martin Wood and Blagdon Hill Wood) is a large varied wood lying astride the high county boundary ridge where Dorset and Hampshire meet. The wood lies across the transition between the acidic deposits of the Reading Beds and the Chalk, which give rise to a complex series of soils ranging from thin chalk, through a deep, rich, calcareous loam, to podsolised soils and dense cappings of flints. The wood is known to support ten different identifiable stand-types (i.e. natural groupings of tree species according to environmental conditions), some of which are known to be rare in Hampshire.
Dorset Heathlands	3.4km south	Ramsar	6674.82	Ramsar criterion include good examples of northern Atlantic wet heaths, 1 nationally rare and 13 nationally scarce wetland plants and 28 nationally rare wetland invertebrate species and a high richness and high ecological diversity of wetland habitat types and transactions.
Dorset Heaths	3.4km south	SAC	5711.25	Primary Annex I habitats including Northern Atlantic wet heaths, European dry heaths, depressions on peat substrates of the Rhynchosporion

				and primary Annex II species southern damselfly.
Cranborne Common	3.4km south	SSSI	133.99	The site comprises complex heathland and grassland with notable species being dwarf gorse, bell and Dorset heather, brown beak sedge, sand lizard and smooth snake.
Dorset Heathlands	3.5km south	SPA	8166.97	During the breeding season the SPA regularly supports at least 12.8% of the nightjar population, at least 6.8% of the woodlark breeding population, at least 26.1% of the Dartford warbler breeding population, over winter the area regularly supports 2.7% of the hen harrier population and 1.2% of the Merlin population count.
River Avon	3.8km southeast	SAC	467.58	The site has qualified for SAC status due to the presence of Annex 1 habitat being a water course that support aquatic wild flora. Species present include stream water-crowfoot, river water-crowfoot. Fish species of Annex 2 present include brook lamprey, sea lamprey, Desmoulins's whorl snail, Atlantic salmon and bullhead.
River Avon System	3.8km southeast	SSSI	475.94	A river of both chalk and acid nature which supports densities of Desmoulin's whorl snail, sea lamprey, brook lamprey, Atlantic salmon and bullhead. Has excellent water vegetation diversity.
Breamore Marsh	4.4km northeast	SSSI	14.77	Breamore Marsh comprises a cattle and goose-grazed green; the grassland flora, whilst limited, is of interest in the extent to which its species composition has been derived from its grazing history. The marsh includes shallow pools and connecting waterways which support an exceptionally rich aquatic flora, including the national rarity brown cyperus, common mudwort and pennyroyal.
Toyd Down and Quarry	4.5km northwest	SSSI	6.68	Toyd Down lies at the extreme east of the Dorset Downs on the Hampshire-Wiltshire border. The Site of Special Scientific interest falls into two distinct parts:-(1) A steep west-facing downland slope, grazed by sheep, and an abandoned chalk quarry believed to have been last worked around 1970.
Martin and Tidpit Downs	4.6km northwest	SSSI	367.53	Martin and Tidpit Downs form an extensive tract of chalk downland, chalk heath and scrub at the extreme east of the Dorset Downs on the Hampshire-Wiltshire border. They

				include a gently undulating plain rising to a high east-west ridge, the crest of which is marked by the Bokerley Ditch, a massive linear prehistoric earthwork. The whole area is rich in archaeological features of Bronze Age and subsequent dates, and these, together with the varied topography, soils, and differences in past management, contribute to great habitat variation.
Avon Valley	4.7km southeast	Ramsar	1390.37	Ramsar criterion 1 includes the designation for showing a greater range of habitats than any other chalk river in Britain, including fen, mire, lowland wet grassland and small areas of woodland; Ramsar criterion 2 incorporates the sites ability to support a diverse assemblage of wetland flora and fauna including several nationally-rare species. Qualifying species include Gadwall, northern pintail and black tailed-godwit is all present on site.
Avon Valley	4.7km southeast	SPA	1351.05	The site supports 1.9% of the British over wintering Bewick's swan population and the site supports 2.2% of the British winter migratory population of Gadwall.
Avon Valley (Bickton to Christchurch)	4.7km southeast	SSSI	1403.77	The river Avon runs through this site creating dykes and rivulets. Notable species include brown trout, cross leaved heath, wintering gadwall, godwit, Bewick's swan. Cetti's warbler, kingfisher, yellow wagtail, sedge warbler, reed warbler, shelduck, and little ringed plover. Barn owl, buzzard and hobby are also known to breed in the valley.
Moors River System	5km southwest	SSSI	291.85	Lowland chalk river, improved grassland, swamp, tall-herb fen, fen woodland, wet pastures, neutral grassland and heathland the site supports 32 species of dragonfly fauna.

The site falls within the Wessex Water Avon discharge catchment and a Natural England Solent nitrate budget calculation will need to be provided to address increases in nutrients within the River Avon in addition to phosphate control and mitigation measures. Further details are provided in Section 5.

The site falls within 5km of the Dorset Heathlands sites, however, as the property is situated outside of the Dorset Council Authority boundary, mitigation for these sites is not believed to be required for this application. No impacts on the other

above designated sites are anticipated due to the localised nature of the proposed works and no further action is recommended in relation to these sites.

Locally designated (non-statutory) sites

HBIC (HBIC, 2022) was consulted to identify any non-statutory designated sites within 1km of the application site and are shown below.

Site name	Distance from site	Designation	Size (ha/m)	Site description
Higher Court Wood	Site is within SINC	SINC	0.12	Ancient Semi-natural Woodlands.
West Park Woods	130m northeast	SINC	0.26	Ancient Semi-natural Woodlands and the site supports great wood-rush.
Lower Breach Copse	240m southeast	SINC	0.17	Ancient semi-natural woodlands.
Lower Court Wood	400m southeast	SINC	0.29	Ancient semi-natural woodlands.
C148 Court Hill, Damerham	440m northwest	Road Verges of Ecological Importance (RVEI)	100m	Site includes daffodils, moschatel, and goldilocks buttercup.
Damerham Water Meadows	500m west	SINC	0.09	Semi-improved grasslands which retain a significant element of unimproved grassland. Fens, flushes, seepages, springs and inundation grasslands of floodplains that support a flora and fauna of less-improved wet conditions (seasonal or permanent).
Hill Farm Meadow	625m southwest	SINC	0.10	Agriculturally unimproved grasslands which are not of recent origin.
Lady's Wood	655m north	SINC	0.23	Ancient semi-natural woodlands.
U117 The Common, Damerham	850m southwest	RVEI	200m	Steep sided hedge-topped bank with woodland flora, including bluebells and ferns.

The site and immediate surrounding land are designated as the Higher Court Wood SINC and qualifies as a SINC due to the presence of ancient woodland. The presence of both these features, notes the sites ecological importance for wildlife. The SINC site is protected under Policy SP6 of The New Forest District Council Local Plan Part 1: Planning Strategy (New Forest District Council, 2020), which states that '*development proposals which adversely affect locally designated sites, priority habitats and species populations, protected species or those identified of*

importance by national or local biodiversity plans will be refused unless the Authority is satisfied that:

a) *It has been demonstrated that suitable measures for mitigating adverse effects will be provided and maintained in order to achieve a net gain in biodiversity value;*
b) *There are no alternative solutions;*
c) *There are overriding reasons which outweigh the harm '.*

In addition, under Section 15 of NPPF, '*Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists*'

The ensure there are no negative impacts upon the irreplaceable habitat on site and to secure the long-term management of the woodland in the SINC site, a woodland management plan will need to be provided to secure the long-term management of the woodland as part of the planning application. In addition, a Construction Environment Management Plan (CEMP) to prevent short-term impacts during the conversion works will also be required. Details are provided in Section 5 of this report.

Protected and vulnerable species of interest

HBIC (HBIC, 2022) was consulted to provide records of any protected, rare and/or vulnerable species within 1km of the application site. These are presented below.

Species	Number of records	Most recent record	Closest record to site
Birds			
Barn owl	4	2019	Within 1km of the site
Common reed bunting	3	2016	965m northwest
Curlew	1	2018	Within 1km of the site
Fieldfare	3	2011	Within 1km of the site
Hawfinch	1	2010	Within 1km of the site
Hen harrier	1	1997	Within 1km of the site
Honey buzzard	1	1996	Within 1km of the site
House sparrow	3	2019	Within 1km of the site
Kingfisher	5	2017	735m west
Lapwing	1	1998	Within 1km of the site
Lesser redpoll	1	2003	Within 1km of the site
Little egret	3	2004	Within 1km of the site
Peregrine	2	2004	Within 1km of the site
Osprey	1	1995	Within 1km of the site
Red kite	2	2017	Within 1km of the site
Redwing	4	2016	965m northwest
Skylark	2	2018	Within 1km of the site
Song thrush	4	2019	625m west
Spotted flycatcher	3	2011	Within 1km of the site

Starling	3	2019	965m northwest
Tree Pipit	1	2005	Within 1km of the site
White stork	1	2003	Within 1km of the site
Woodlark	1	1999	635m southeast
Mammals (including bats)			
Brown long-eared bat	1	2005	760m west
Common pipistrelle bat	3	2017	500m southeast
European water vole	2	2002	695m west
Long-eared sp. bat	1	2009	810m northwest
Myotis sp. bat	1	2017	500m southeast
Pipistrelle sp. bat	5	2013	390m northwest
Polecat	1	2009	85m east (at neighbouring property)
Serotine bat	1	2005	760m west
Soprano pipistrelle bat	1	2017	500m southeast
Rare and notable invertebrates			
August thorn	5	2018	395m southeast
Autumnal rustic	4	2002	395m southeast
Beaded chestnut	7	2015	300m north
Blood-vein	8	2018	300m north
Brindled beauty	5	2018	395m southeast
Broom moth	1	2003	395m southeast
Brown-spot pinion	1	2002	620m southeast
Buff ermine	9	2018	300m north
Centre-barred sallow	4	2017	395m southeast
Cinnabar	9	2018	300m north
Crescent	2	2000	Within 1km of the site
Dark-barred twin-spot carpet	5	2018	395m southeast
Dark brocade	2	2000	Within 1km of the site
Dark spinach	2	2002	300m north
Dot moth	6	2018	300m north
Dusky brocade	2	2010	395m southeast
Dusky thorn	5	2018	300m north
Ear moth	3	2003	300m north
Feathered gothic	1	2000	Within 1km of the site
Galium carpet	1	2001	395m southeast
Garden tiger	3	2018	620m southeast
Ghost moth	6	2018	395m southeast
Green-brindled chestnut	4	2017	300m north
Grey dagger	5	2001	395m southeast
Hedge rustic	2	2000	Within 1km of the site
Hornet robberfly	2	2001	Within 1km of the site
Knot grass	5	2018	395m southeast
Lackey	2	2000	Within 1km of the site
Large nutmeg	1	2002	395m southeast
Large wainscot	1	2002	395m southeast
Light crimson underwing	1	2012	960m southeast

Minor shoulder-knot	4	2003	300m north
Mottled rustic	6	2018	300m north
Mouse moth	5	2017	300m north
Oak hook-tip	4	2018	395m southeast
Oak lutestring	1	2001	395m southeast
Pale eggar	1	2000	Within 1km of the site
Powdered quaker	4	2003	300m north
Pretty chalk carpet	2	2003	395m southeast
Rosy rustic	6	2018	395m southeast
Rustic	6	2018	300m north
Sallow	3	2002	300m north
September thorn	4	2017	395m southeast
Shaded broad-bar	4	2002	395m southeast
Shoulder-striped wainscot	7	2018	300m north
Small emerald	4	2010	890m southeast
Small phoenix	5	2018	300m north
Small square-spot	7	2018	300m north
Spinach	3	2003	300m north
Sprawler	2	2003	395m southeast
White admiral	4	2011	395m southeast
White ermine	10	2018	300m north
Rare and notable plants			
Butcher's-broom	5	2008	On site
Corn spurrey	1	1998	Within 1km of the site
Lesser spearwort	7	1999	625m west
Whorl-grass	2	2004	625m west

The above records will be used to inform the assessment of the site in supporting protected and vulnerable species.

Phase 1 Habitat survey

Habitats within the boundary included mixed broad-leaved woodland with woodland rides, replanted woodland, improved grassland, a pond, and log and brash piles. A Phase 1 Habitat map is provided in Appendix 2 and photographs of the site in Appendix 3, and habitat descriptions are provided below:

Mixed broad-leaved woodland

The site is pre-dominantly woodland, which is designated as UK BAP Priority habitat 'Lowland Mixed Deciduous Woodland'. The site is also designated as a SINC due to ancient semi-natural woodland being present. Woodland rides are present within the southern area of the woodland and to the northern area of the woodland. A list of species that were encountered within the woodland are provided in the table below:

Species	Abundance
Alder	Locally occasional
Ash	Frequent

Bamboo	Locally abundant
Blackthorn	Occasional
Box	Locally abundant
Bracken	Locally occasional
Bramble	Occasional to locally abundant
Butcher's broom	Locally frequent
Cherry sp.	Locally occasional
Cleavers	Locally occasional
Cock's-foot	Locally occasional
Common nettle	Occasional
Creeping bent	Locally dominant to locally frequent
Early hair-grass	Occasional
False brome	Locally occasional
Field maple	Rare
Greater woodrush	Locally frequent
Ground ivy	Locally occasional
Hart's-tongue fern	Rare
Hazel	Frequent to locally abundant
Herb-Robert	Locally frequent
Holley sapling	Occasional
Honeysuckle	Locally frequent
Laurestine	Locally abundant
Leylandii	Rare
Lesser celandine	Locally frequent
Lords-and-ladies	Occasional
Male-fern	Occasional
Oak	Frequent
Pendulous sedge	Occasional
Pignut	Locally frequent to locally abundant
Polypody sp.	Rare
Primrose	Occasional
Privet	Rare
Remote sedge	Occasional to locally abundant
Rhododendron (Schedule 9 invasive species)	Locally frequent
Silver birch	Rare
Snowdrop	Locally frequent
Soft brome	Frequent to locally abundant
Sycamore	Rare
Vetch sp.	
Violet sp.	Locally occasional
Wood avens	Locally frequent
Wood dock	Occasional
Wood meadow-grass	Frequent to locally abundant
Wood speedwell	Locally frequent
Wood spurge	Locally occasional
Woodruff	Frequent
Wood-sedge	Locally frequent
Yorkshire-fog	Locally dominant

Rhododendron (Appendix 2 - Target note 1), a highly invasive species listed under Schedule 9 of The Wildlife and Countryside Act (1981) (as amended), was recorded within the woodland. It is highly recommended that this species be removed to

prevent an offence occurring; it is an offence to allow this species to spread 'in the wild'. Recommendations for its removal are made in Section 5 as part of the woodland management plan.

Replanted woodland

An area of replanted woodland is present to the south of the improved grassland on site and within the existing mixed broad-leaved woodland. A list of species was recorded within the replanted woodland is listed below:

Species	Abundance
Ash	Dominant
Bracken	Occasional
Bramble	Locally abundant
Common nettle	Occasional
Creeping bent	Locally occasional
Creeping buttercup	Locally abundant
Ground-ivy	Occasional
Hairy sedge	Locally occasional
Hazel	Occasional
Herb-Robert	Occasional
Ivy	Abundant
Lords-and-ladies	Locally occasional
Male-fern	Occasional
Mistle thrush	Rare
Perennial rye-grass	Locally abundant
Primrose	Locally occasional
Remote sedge	Frequent
Soft brome	Frequent
Soft rush	Occasional
Sycamore	Occasional
Wood speedwell	Occasional
Wood meadow-grass	Locally abundant

Poor semi-improved grassland

An area of poor semi-improved neutral grassland is present in the centre of the site. The grassland is well managed and mown regularly, with longer areas at the margins near the woodland. A list of species encountered within the grassland are provided in a list below:

Species	Abundance
Bramble	Locally occasional
Cock's-foot	Locally frequent
Common nettle	Locally occasional
Common sorrel	Locally occasional
Creeping bent	Locally abundant
Creeping buttercup	Locally frequent to occasional
Dandelion sp.	Locally occasional
Greater plantain	Rare
Hairy brome	Locally occasional

Ivy	Locally occasional
Lesser celandine	Locally occasional
Lesser trefoil	Rare
Lords-and-ladies	Locally occasional
Marsh thistle	Occasional
Pendulous sedge	Locally occasional
Perennial rye-grass	Occasional
Red fescue	Locally occasional
Soft rush	Locally abundant
Star sedge	Locally frequent
Wood dock	Frequent
Yorkshire-fog	Dominant

Pond

A pond that measures approximately 9m by 7m is located in the woodland to the south of the site.

Brash piles

Brash piles (Appendix 2- Target note 2) are present within the grassland and woodland on site. The piles are newly formed from recent gardening works.

Log piles

Log piles (Appendix 2 -Target note 3) are present within the grassland and woodland on site. The piles are newly formed from recent gardening works due to the recent storms.

Badgers

An active outlier sett is present in the west of the site, facing into a bank of the arable field to the northwest, evidence of fresh excavations were noted and a second disused outlier sett was noted approximately 10m south of the active sett. The disused sett also led into a bank within the woodland however this had collapsed and was partially filled with soil. In addition to the sett, a latrine was noted in the woodland near the northern boundary line and 'snuffle marks' (badger foraging signs) were recorded across the site within the woodland. Mammal tracks were also noted across the site, and as there is a badger sett on site, these are considered to belong to badger. A map showing the badger evidence is provided in Appendix 2. No works will be undertaken within 30m of the badger sett and the sett will be retained, therefore no further recommendations are made in relation to badgers provided the CEMP is implemented in full.

Barn owl

Evidence of barn owls was identified within the barn in the form of pellets scattered across the mezzanine floor. There was no clear access into the building and so it has been assumed, through historical repair works this species has subsequently been excluded from using the building and as such the pellets were noted to be aged and disintegrating. Photographs of the evidence recorded is provided in Appendix 3 and a map is provided in Appendix 5, while a summary is presented below:

- More than 100 pellets were recorded scattered down the middle of the mezzanine floor.
- 50 pellets were recorded in a pile to the north section of the floor.

As evidence of barn owls was recorded within the barn a suitable mitigation and compensation strategy is detailed in Section 5 of this report to allow for the conversion of the barn to living accommodation.

Bats – Preliminary Roost Appraisal (PRA)

Building description

An assessment of the building was undertaken to firstly identify if any evidence of bats was present, and secondly, to identify the building's 'potential' to support roosting bats. The building location is indicated in Appendix 2 and photographs of the building is provided in Appendix 3, whilst building descriptions are provided in the table below:

Building name	Description
Barn	▪ The barn is of cinderblock construction. ▪ The roof is pitched and constructed of cement fibre corrugated sheeting. ▪ Wooden window and door frames are present. ▪ Wooden fascia is present. ▪ Internally, no enclosed roof voids are present. - The roof structure is formed with wood rafters and a double ridge beam. - A mezzanine floor is present to the southeast area of the barn.

Preliminary Roost Appraisal (PRA) results

A thorough search was undertaken of the internal area and external elevations of the barn. Despite a thorough inspection, no evidence of bats was recorded during the survey in the building on site.

Assessment of bat roosting potential and potential bat access points

An inspection of the building revealed the building features were negligible for bats; the building was deemed to hold 'negligible potential' for roosting bats due to a lack of suitable roosting provisions (Collins, 2016). Therefore, roosting bats are not considered to be impacted by the proposed development. Further information is provided in Section 5 regarding the validity of this report.

Roosting bats and trees

Many trees within the woodland on site may have Potential Roosting Features (PRFs) for roosting bats. However, no tree works are planned for the proposed plans of the conversion of the barn to living accommodation. General advice for ongoing woodland management is provided in Section 5 of this report.

Commuting and foraging bats

The site as a whole supports a variety of habitats including grassland, woodland and a pond. The variety of habitats provides excellent habitats for invertebrates, which in turn provides ample foraging opportunities for bats, and the presence of linear features are suitable as commuting corridors for bats navigating the landscape. As the site is completely rural and unlit this increases the likelihood of bats utilising the site. Bat static monitoring was undertaken during August and September 2022 and the results are discussed further below.

Static monitoring

One static monitoring device was deployed on site in August and September 2022. To summarise, at least six species of bat were recorded using the site, including common pipistrelle (PIPPIP), soprano pipistrelle (PIPPYG), noctule (NYCNOC), myotis (MYO), greater horseshoe bat (RHIFER) and long-eared bats (PLECOTUS). Raw counts presenting the species and total number of bat passes are presented in Appendix 7.

Greater horseshoe bat is of significance and is a very rare species listed under Annex II of The EC Species and Habitats Directive 1992. This species, and long-eared and myotis bats, are particularly sensitive to artificial lighting and light spill. The converted barn may adversely impact on local bats, through illumination of the tree canopies and surrounding habitats which could be used from foraging and commuting. Bats are highly light-sensitive and will actively avoid lit areas, and an increase in lighting levels upon the trees and surrounding habitats will actively deter bats from using the site. Measures for lighting reduction are provided in Section 5 of this report which must be strictly adhered to.

Dormice

The woodland on site features native species such as oak, hazel and honeysuckle which are considered to be highly suitable habitat for dormice. The woodland connects to hedgerows and treelines leading to more woodland offsite, making the landscape as a whole very desirable to dormice.

Although the data search did not reveal any records of dormice within the local area, this is likely due to the species being under recorded rather than being absent. An additional search was undertaken for any dormouse European Protected Species (EPS) licences within the area; the nearest EPS licence is located approximately 5km southeast of the site and at least eight licence applications are present within a 15km radius (MAGIC, 2022). The presence of these licences within the wider landscape suggests that dormouse are likely present within the woodland onsite, however, as the plans are just for conversion of the barn to living accommodation, no impacts on the woodland are anticipated provided the CEMP is implemented in full. Therefore, no impacts upon dormice are anticipated as part of this application.

Great crested newts

Habitat suitability assessment

The terrestrial habitats on site were considered to provide good habitats for great crested newt (GCN), including the woodland, the woodland rides and the margins of the improved grassland. The site also supports many brash and log piles which provide suitable refugia and places of shelter for potential GCN.

One pond is located within the woodland to the south of site and is surrounded by woodland, and another pond is located within the neighbouring property of Yafflewood. A Habitat Suitability Index (HSI) assessment was undertaken on the ponds and the results are provided in the table below:

Waterbody ref:	Woodpecker Wood (P1)	Yafflewood (P2)
SI1 – Location	1	1
SI2 – Pond area	0.1	0.8
SI3 – Pond drying	1	0.9
SI4 – Water quality	1	0.67
SI4 – Shade	0.3	1
SI6 – Fowl	1	0.67
SI7 – Fish	1	0.67
SI8 – Ponds	1	1
SI9 – Terrestrial habitat	1	1

SI10 – Macrophytes	0.5	0.5
HSI SCORE =	**0.66**	**0.8**

P1 scored 'average' and P2 scored 'excellent' suitability for GCN. There are no known GCN records within the area (HBIC, 2022), however, a pond 2.5km east of the site was surveyed in 2017 by a GCN class licence holder and GCN were present (MAGIC, 2022). A total of seven other ponds were identified within the locale (within 500m of the site boundary), however, these are within an Estate to the east, with the landowner's details unknown. This includes ponds located approximately 272m and 470m north, 335m, 480 and 470m northeast and 215m east, and one pond identified 441m south of the site. No access was possible to these ponds for survey.

eDNA sampling

Further eDNA sampling was conducted on P2 (Yafflewood pond) and the result for GCN was 'negative', the pond on site was dry at the time of survey and could not be sampled. No access was granted to the neighbouring Estate's pond and therefore eDNA was not possible on the other waterbodies. As there are no records for GCN and as the pond returned a 'negative' result, it is considered unlikely that GCN are present on site. The works are confined to the building conversion only and terrestrial habitats will be retained and protected through the approved CEMP, therefore, impacts on GCN are not anticipated and no further action is recommended.

Nesting birds

The woodland and building on site hold potential for nesting birds. A mitigation strategy for nesting birds is detailed in Section 5 of this report for building works; the woodland will be retained and protected through the approved CEMP therefore impacts on nesting birds in the woodland are not anticipated provided this is implemented in full.

Reptiles

The terrestrial habitats on site were considered to provide good habitats for reptiles, such as slow worms and grass snake. Habitats of suitability for reptiles include the woodland, woodland rides, and the grassland margins. The site also features brash and log piles which create suitable refugia and places to shelter and the pond nearby is likely to be utilised by grass snake. Common reptiles are likely present within the site, however, provided the CEMP is implemented in full and as works are confined to the building, no impacts on reptiles are anticipated.

5. Ecological mitigation and enhancement strategy

River Avon Catchment nutrient increases

The site falls within the Wessex Water Avon discharge catchment and a Natural England Solent nitrate budget calculation will need to be provided to address increases in nutrients within the River Avon in addition to phosphate control and mitigation measures. These can be presented as a package elsewhere or once a calculation has been undertaken, and a solution determined these can be present within this Ecological Assessment.

Higher Court Wood SINC and ancient woodland

The site is designated as a SINC, due to the presence of known ancient woodland, ancient woodland is identified as an irreplaceable habitat under NPPF and the SINC site is protected under Policy SP6 of The New Forest District Council Local Plan Part 1: Planning Strategy (New Forest District Council, 2020), which states that '*development proposals which adversely affect locally designated sites, priority habitats and species populations, protected species or those identified of importance by national or local biodiversity plans will be refused unless the Authority is satisfied that:*

a) *It has been demonstrated that suitable measures for mitigating adverse effects will be provided and maintained in order to achieve a net gain in biodiversity value;*
b) *There are no alternative solutions;*
c) *There are overriding reasons which outweigh the harm.'*

To ensure the ancient woodland on site, and the SINC site, are protected throughout the conversion of the barn to living accommodation, a Construction Environment Management Plan (CEMP) will be required prior to start of development. The CEMP would cover potential impacts upon the woodland such as:

- Noise disturbance, a normal working day will be implemented which will ensure no nocturnal animals are disturbed.
- Light spill, the use of artificial lighting will not be allowed within the site which could result in the exclusion of nocturnal animals from the site.
- Pollution spillage, avoidance measures to ensure no runoff/spillages enter the broad-leaved woodland habitat will include details regarding the storage of the machinery/chemicals, the installation of a buffer which the machinery cannot enter and provisions to detail the refuelling and use of fuels on site.

- Potential impacts on roosting bats in trees; a consultant ecologist will be contacted where tree management may affect trees with Potential Roosting Features (PRFs) for bats.
- Dust suppression will be implemented to ensure the dust does not result in a lack of photosynthesis and result in diseased/dying trees.

To ensure the long-term health of the woodland is secured as part of the planning application, a woodland management plan would be required to secure the woodland retention and health. The woodland is designated as Hampshire Ecological Network (Core Non-Statutory) and the Network must be retained and protected in the long-term. The condition of the woodland is generally considered to be good, however, due to the presence of rhododendron (Schedule 9 invasive) in the southeast of the site, the removal of this species would greatly benefit the woodland.

The southwestern area of the site comprises replanted woodland which is dominated by the same age ash growth. The trees are planted closely together, all appear to be the same size/age and has very little structure. This area in particular could benefit from the thinning of the overplanted ash trees and the creation of species diversity and structure, which would have ecological benefit.

The primary aim of the woodland management plan would be to seek no loss of woodland on site to comply with NPPF, whereby ancient woodland (an irreplaceable habitat) would not be lost and secondary aims would be to retain the current quality, improving where possible the quality of the woodland.

The vision would be of a well-structured and biodiverse woodland to sustain its long-term future, these aims should be discussed with the landowner, the Wildlife Trust who designated the SINC and the New Forest District Council to ensure the correct management objectives are achieved. A proposed list of management practices and aims has been provided below:

- To ensure so far as is reasonably practicable that rhododendron in the woodland is removed by a licensed contractor and managed in the long-term to prevent re-establishment.
- To increase structural diversity of the woodland, with a wider age-range of trees and coppice, a well-developed shrub layer and ground flora.
- To ensure a diversity of habitats throughout the woodland by retaining standing and fallen dead wood (where practically safe and possible).
- To increase the number and diversity of native deciduous species (where soil conditions allow) within the woodland through planting of a range of native specimens sourced from British-grown stock.

- To prevent an increase in light spill onto the woodland habitats through a combination of careful design and placement of luminaires and vegetation screening (if needed).
- To support the local bat and bird populations through provision of a range of bat and bird boxes within the woodland.

A management plan for the woodland must be conditioned as part of the planning consent and production of a management plan must be produced prior to occupation to secure the retention/protection of the woodland.

The woodland management and enhancement works will be implemented over a 30 year period from the date the site is operational and these works will be undertaken by a suitably experienced and qualified person.

Invasive species

Rhododendron was recorded on site and is listed under Schedule 9 of The Wildlife and Countryside Act (1981) (as amended). It is an offence under the Act to allow this species to spread 'in the wild'; this species is an aggressive colonizer that can outcompete local biodiversity if left unmanaged. It is recommended that this species is removed from site by one of the following methods:

- **Herbicides:** The upper foliage of the plants should be cut back to stump level and holes drilled into the stems. A suitable herbicide may then be applied to the 'drilled wells' in the cut stumps (may require multiple applications) with all arisings being cut, burned, chipped or mulched.
- **Manual cutting and digging:** Top woody growth is manually removed, and the root system dug out. The resulting cut woody material and stumps can be removed to a safe area for burning or chipped on site.

From either of the above methods, all foliage should be burnt on site as soon as possible to reduce the likelihood of germination. Freshly cut material is difficult to ignite and benefits from being allowed to dry first.

Barn owls

Barn owls are known to have historically roosted within the barn. Barn owl pellets were noted within the building predominantly on the mezzanine floor in the southwest of the barn. Due to the presence of this protected species, the following mitigation will be required to ensure no harm comes to barn owls using the site:

- Works to the barn should be undertaken outside of the nesting period which is noted to run between 1st March and 31st August.

- Building works should preferably be conducted outside of the nesting season to avoid potential impacts on barn owls within the building (the nesting season is considered to run between 1st March and 31st August).

- Works undertaken within the nesting season (i.e. within the above period) will be conducted under the supervision of a suitably experienced ecologist. If an active nest is encountered all works must cease until the fledglings have left the nest, and the nest will be left undisturbed. Once the nest is no longer occupied; in this case a secondary check by the barn owl ecologist will be required to determine the nest is no longer active before works continue.
- Should barn owls not be nesting within the barn, then works can commence to make the building unsuitable for barn owls.
- One replacement barn owl box will be erected within the roof space of the newly converted dwelling and a second barn owl box will be installed on a mature tree within the grounds at the site as a temporary roosting space.
- An illustrative plan showing the location of these boxes is provided within Appendix 6. The barn owl box placed within the roof void requires an area of approximately 1m cubed plus an access point at least 12cm in width by 25cm in height. The access point should face away from glazed elevations and face into open fields, this maximises the return occupation rate and minimises disturbance from humans.
- No lighting will be allowed within 3m of either of the barn owl boxes.
- Further nesting advice can be sought from either https://www.barnowltrust.org.uk/barn-owl-nestbox/barn-owl-nestboxes-building-projects/ or https://www.barnowltrust.org.uk/barn-owl-nestbox/barn-owl-nestboxes/.

Roosting bats

The PRA of the building and trees were undertaken, and the building was identified to hold 'negligible potential' for roosting bats due to a lack of suitable bat roosting provisions. Many trees within the woodland are likely suitable for roosting bats due to the presence of PRFs, however, no works are expected on the trees as part of the planning application. As discussed above under the woodland management plan, it is advised that a consultant ecologist is contacted prior to any ongoing tree works where cavities and/or crevices are present within trees to provide advice. Therefore, roosting bats are not considered to be impacted as part of the proposed works and therefore no further action is recommended in relation to the proposed conversion of the building.

It should be noted that the PRA provides a 'snapshot' of conditions at the time of survey and does not account for seasonal changes. It is considered possible for bat

species to ingress at any point in the future, therefore it is recommended that if in three years works have not begun a further PRA is undertaken to assess whether the conditions have altered.

In the unlikely event bat(s) are encountered at any stage, work will cease and Natural England or a suitably qualified bat ecologist will be sought for advice. The nature of the advice will concern allowing the bat(s) to leave on their own accord or waiting for a licensed person to remove the bat(s). **All building contractors/roofers are explicitly forbidden from handling bats or interfering with bats in any way.**

Commuting and foraging bats

The site supports at least six species of bat were recorded using the site, including common pipistrelle, soprano pipistrelle, noctule, myotis, greater horseshoe bat and long-eared bats. The site therefore supports an excellent assemblage of bats, including a very rare bat, greater horseshoe, a species listed under Annex II of The EC Habitats & Species Directive 1992.

In line with the current national guidance (BCT & ILP, 2018), no external lighting will be installed around the converted building due to the site being in a rural location and ancient woodland being present on site. This is in line with NPPF which does not allow for the loss of irreplaceable habitats, where impacts are identified upon this irreplaceable habitats, suitable avoidance measures should be undertaken in the first instance. Lighting will be monitored throughout construction which will be detailed in the approved CEMP (see below for site lighting and night-time working) and upon completion, through the use of the following lighting reduction measures:

Site lighting and night-time working:

- No night-time working will be permitted and this is due to the disturbance of temporary site lighting on commuting and foraging bats; any light spill will have a detrimental impact on bats, in particular light-sensitive species, which may deter bats from foraging on site and utilizing the corridor as a commuting route. Therefore, **working hours will only be permitted between 08:00am and 18:00pm**, to ensure site lighting does not prevent bats from accessing their foraging grounds.
- In addition, no overnight lighting will be permitted (e.g. security lighting) for the above reasons.

<u>Permanent site lighting restrictions –amenity and personal security lighting:</u>

Permanent internal lighting:

As the building is set within the woodland, **no external lighting will be installed as part of the development.** A final lighting design will need to be illustrated through the use of a contour lux lighting plan to illustrate the light spill will not encroach into the woodland and the following strategy for amenity lighting will be followed:

1. Any new lighting within each new unit will comprise LED halogen lighting only; all new lighting will be recessed down lights installed into the ceilings, of a low wattage and installed at the furthest point away from the windows internally where practically possible (no pendant lighting will be used).
2. The windows and doors of new units will feature a 20% factory tint to reduce internal light spill onto the surrounding bat foraging habitats at either end of the site.

Biodiversity enhancements

To ensure the proposed development is compliant with the National Planning Policy Framework (NPPF) and local planning policy, the following biodiversity enhancements will be included as part of the development (see Appendix 8 for locations, specifications and designs, nest boxes and bat boxes may be purchased from websites such as www.nhbs.com or www.wildcare.co.uk):

- A total of two bee bricks for solitary bees (https://www.nhbs.com/bee-brick) will be installed within the building. The bricks are designed to accommodate solitary bees (non-aggressive/non-swarming types).
- One 'Schwegler Type 25 Nest Box' (https://www.nhbs.com/schwegler-brick-nest-boxes) (or similar, integrated nest box) will be installed at eaves level on the western elevation of the building. The box will benefit species such as swifts (and other non-target species such as sparrows) and will be installed as close to the eaves level as possible. The box is designed to be integrated into the masonry of the building and can be faced with a bespoke render (provided the entrance holes are left unobstructed), leaving a more inconspicuous finish whilst also being built in and secure to ensure health and safety.
- Two 'wooden cladding access gaps' for crevice dwelling bats will be built into the southern gable end which will be clad in wood. Each gap will measure approximately 40mm x 25mm and will be achieved by cutting a notch out of a board. The bat access gaps are integrated and provide an inconspicuous finish, once installed the access gap is completely self-contained and maintenance free. **Any lining used behind the cladding must be bituminous 1F felt as breathable membranes kill bats.**

- One new fruit tree will be planted on site which will support local birds and foraging for bats. The tree will comprise a fruit such as an apple, pear, cherry or plum.
- Any new landscaping will comprise a healthy mixture of native British-grown species such as hawthorn; blackthorn; field maple; privet; dogwood; rowan; and spindle. This will encourage species diversity and long-term resilience, providing good foraging opportunities for bats, birds and hedgehogs.
- Any new fencing proposed as part of the scheme will be 'hedgehog-friendly'. Gravel boards/holes will be installed every 10m of any new fencing and will measure a minimum of 13cm x 13cm.

6. References

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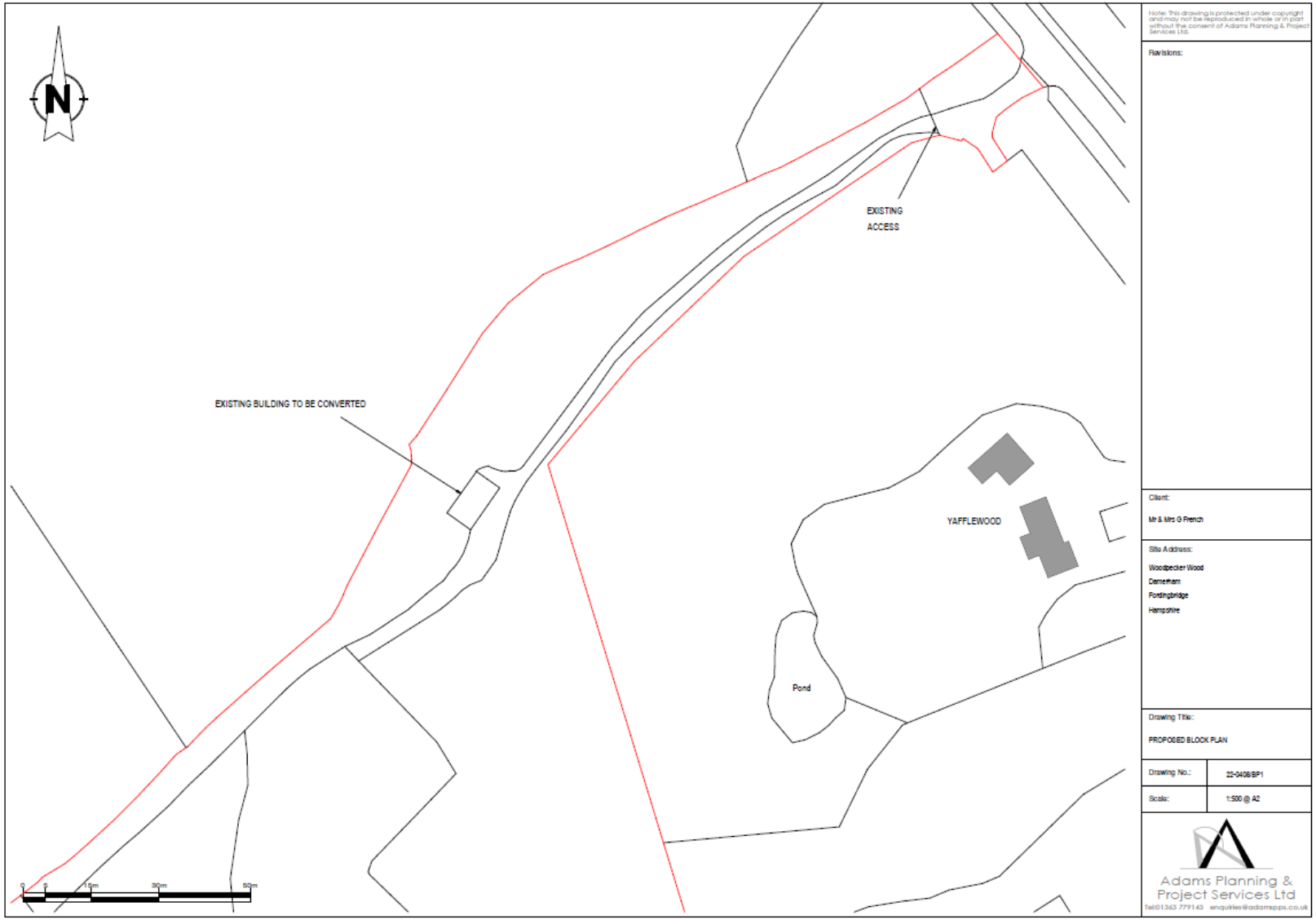
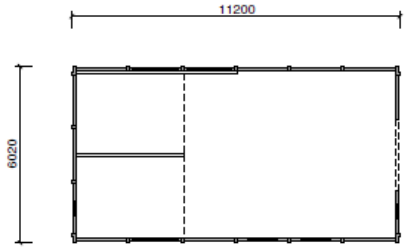
Oldham, RS, Brady, LD, Sewell, DL & Baker JMR (2008) *ARG UK Advice Note 4: Great Crested Newt Habitat Suitability Index* Amphibian and Reptile Groups of the United Kingdom.

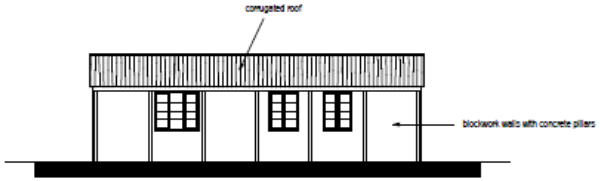
Oldham, RS, Keeble, J, Swan, MJS & Jeffcote, M (2000) *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus) Herpetological Journal 10 (4), 143-155.*

Appendix 1: Proposed site plan

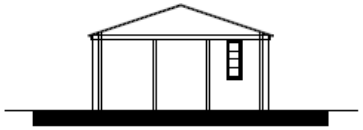




PLAN



NORTH-WEST ELEVATION



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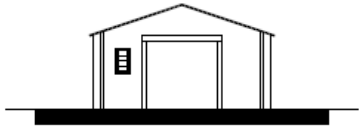
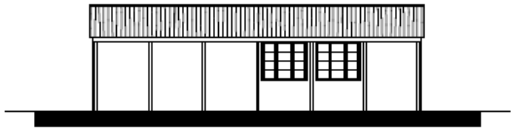


SOUTH-WEST ELEVATION



SOUTH-EAST ELEVATION

Revisions:

Client:

Mr & Mrs G French

Site Address:

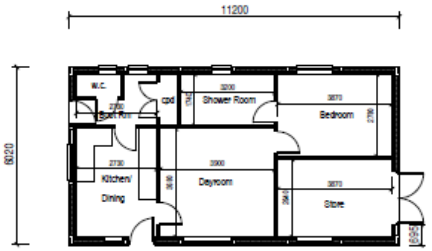
Woodpecker Wood
Dame Ham
Fordingbridge
Hampshire

Drawing Title:

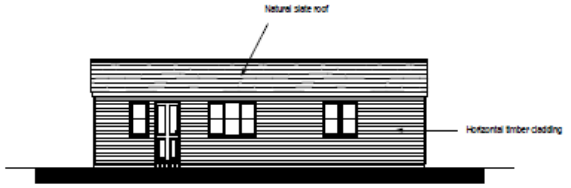
EXISTING PLANS AND ELEVATIONS

Drawing No.:	22-0408/E1
Scale:	1:500 @ A2

Adams Planning & Project Services Ltd
Tel:01363 779143 enquiries@adamspps.co.uk



PLAN - 60m²



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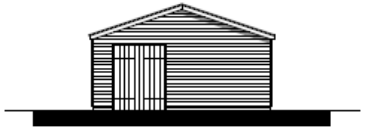
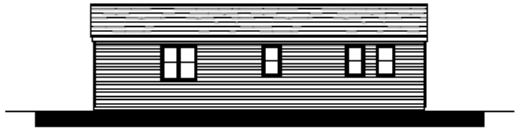


NORTH-EAST ELEVATION

SOUTH-WEST ELEVATION



SOUTH-EAST ELEVATION

Revisions:

Client:

Mr & Mrs G French

Site Address:

Woodpecker Wood
Damerham
Fordingbridge
Hampshire

Drawing Title:

PROPOSED PLANS AND ELEVATIONS

Drawing No.:	22-0408/P1
Scale:	1:500 @ A2

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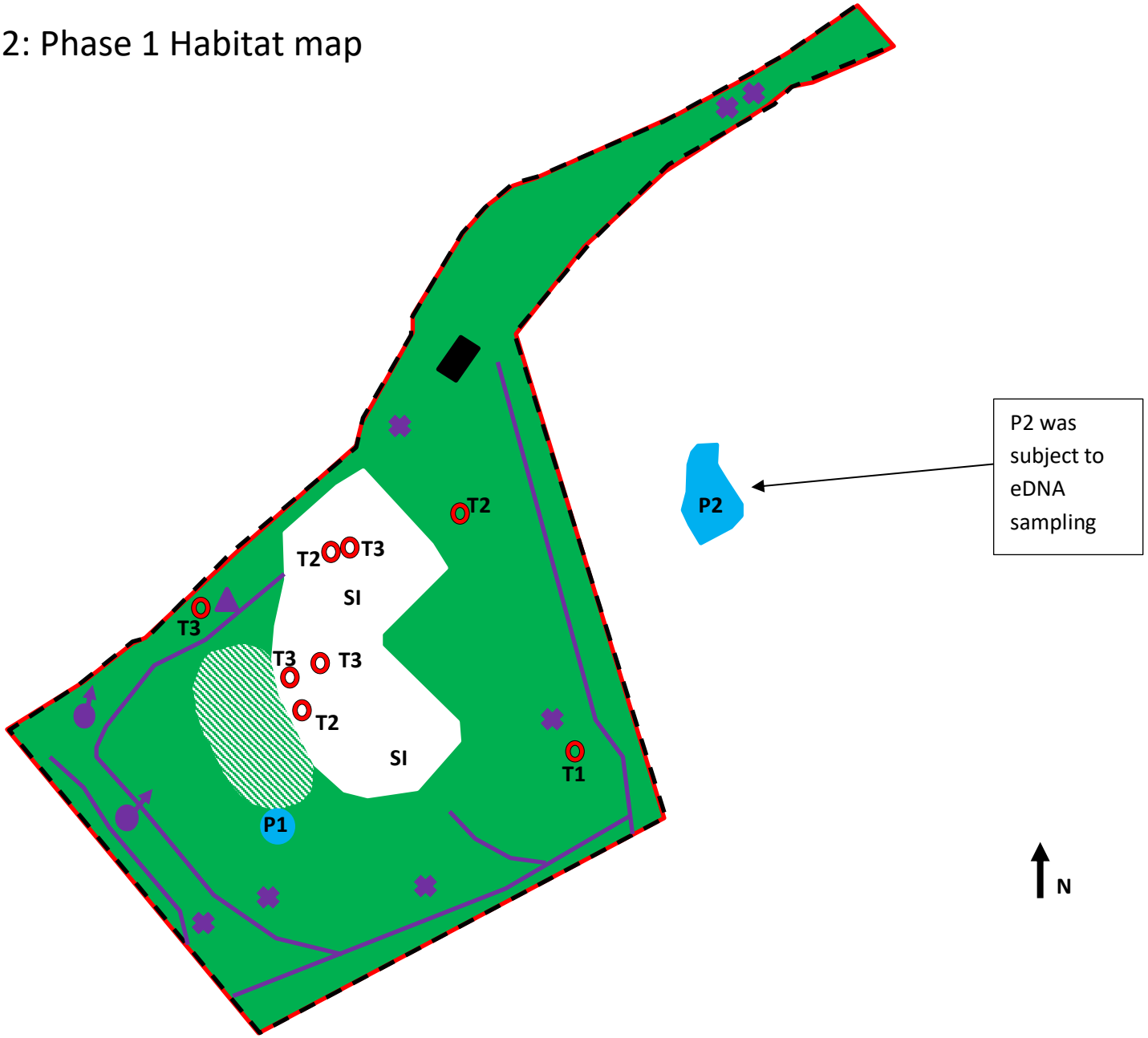
Tel:01363 777143 enquiries@adamspps.co.uk

Appendix 2: Phase 1 Habitat map



Phase 1 Habitat map key

Habitat code	Description
SI	Poor semi-improved grassland
	Mixed broadleaved woodland
	Replanted woodland
	Barn
	Pond
	Badger sett
	Snuffle hole
	Latrine
	Mammal track
T1	Target note
	Fencing/gate
	Application site boundary

Target Note References

Target Note Reference	Description
T1	Rhododendron (Schedule 9 invasive species)
T2	Brash pile
T3	Log pile

Appendix 3: Photographs

Photo 1: Woodland ride to the north (driveway).

Photo 2: North elevation of barn.

Photo 3: East and south elevations of barn.

Photo 4: Barn owl pellets in the barn.

Photo 5: Poor semi-improved grassland.

Photo 6: Brash and log piles.

Photo 7: Mixed broad-leaved woodland.

Photo 8: Replanted woodland.

Photo 9: Under storey of woodland.

Photo 10: Pond 1.

Photo 11: Rhododendron.

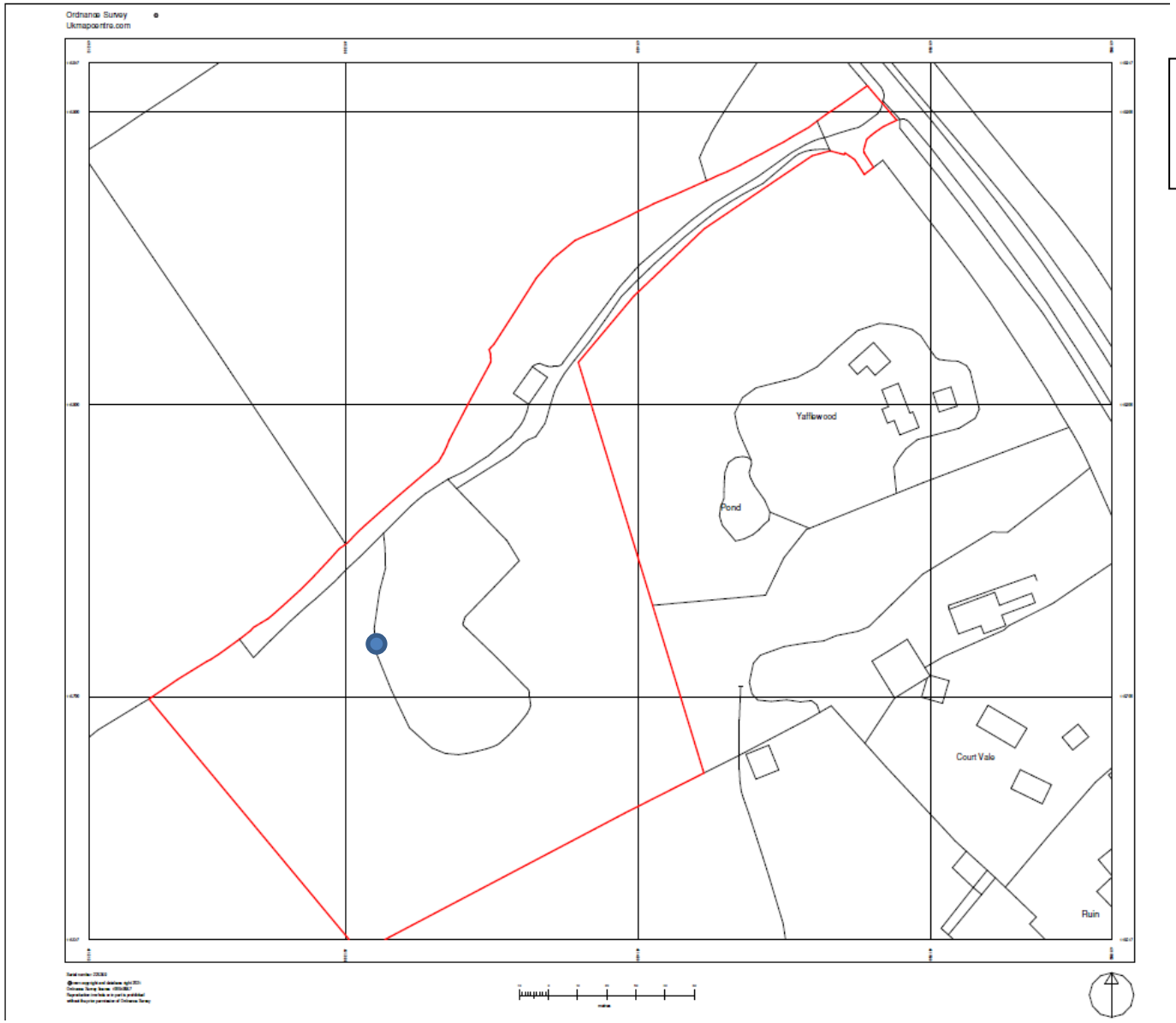
Photo 12: Active badger sett at the northwest of site.

Photo 13: Badger latrine.

Photo 14: Woodland ride to the south within the replanted woodland.

Photo 15: Pond 2 within neighboring property ‘Yafflewood’.

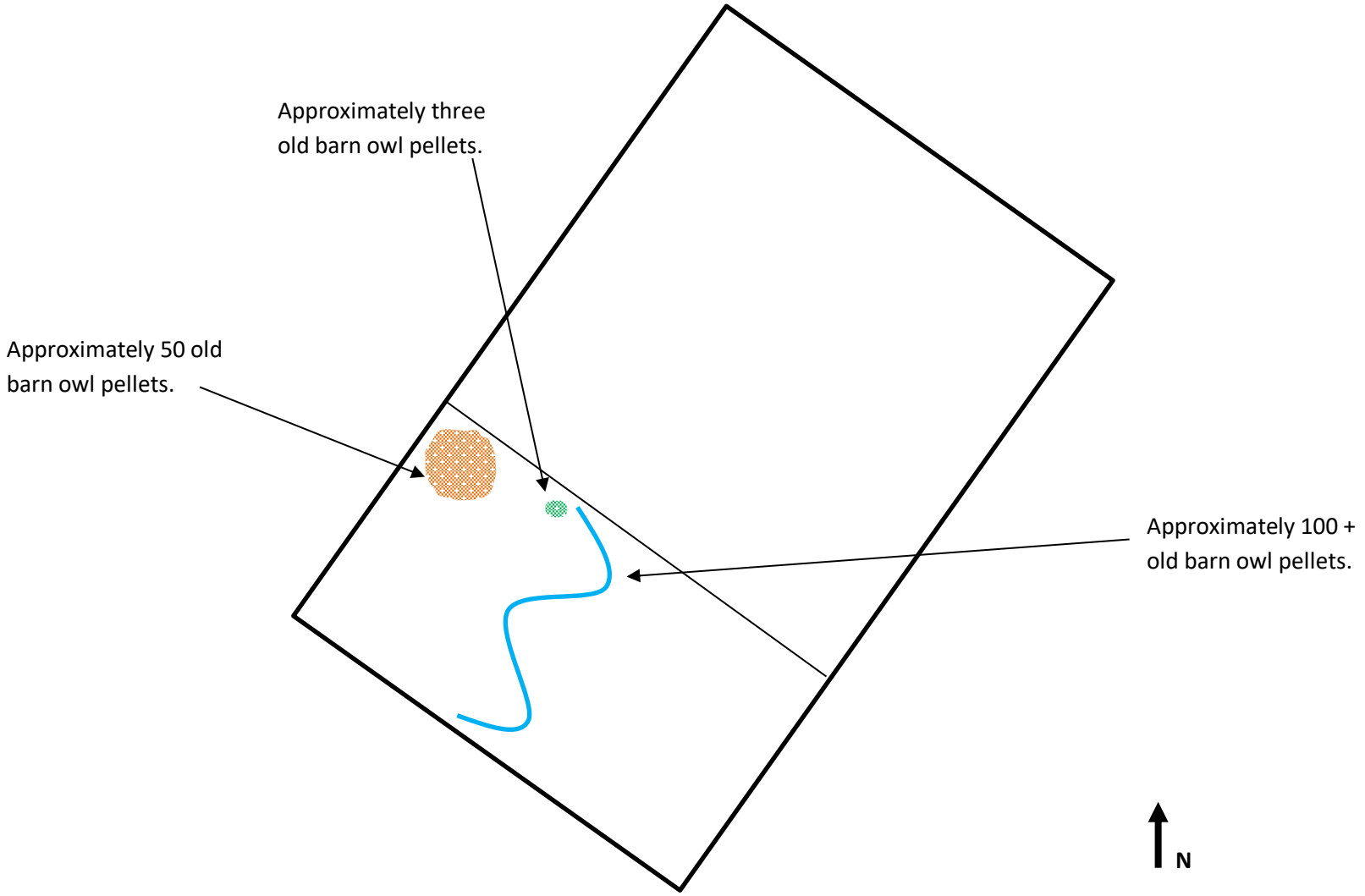
Appendix 4: Bat static monitoring device location



KEY

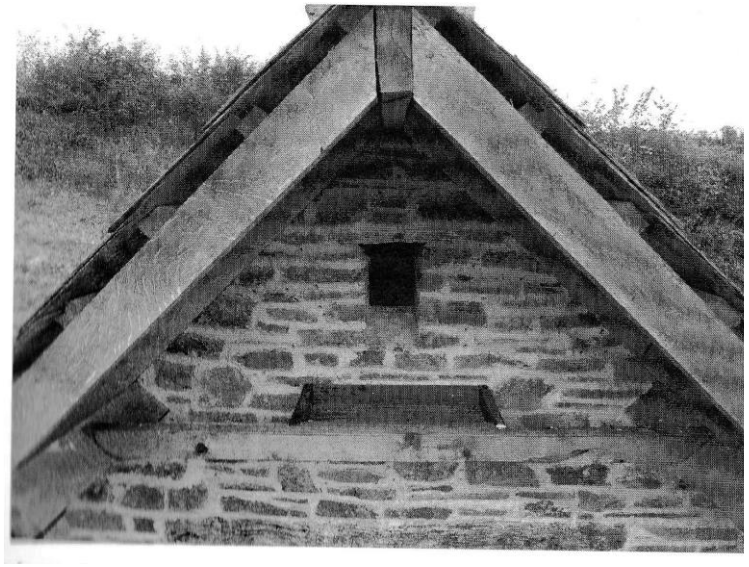
Bat static monitoring device location

Appendix 5: Barn owl evidence

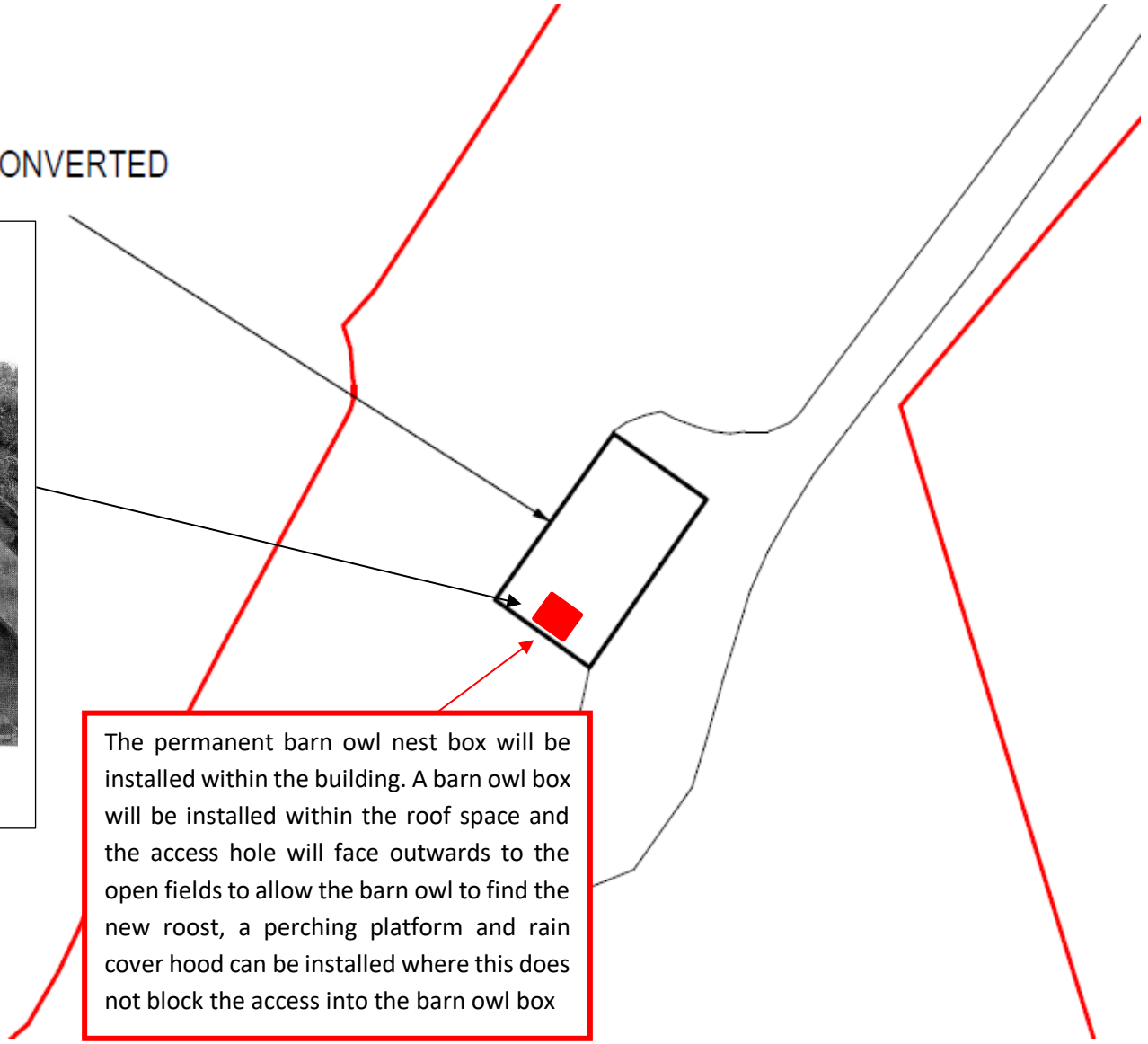


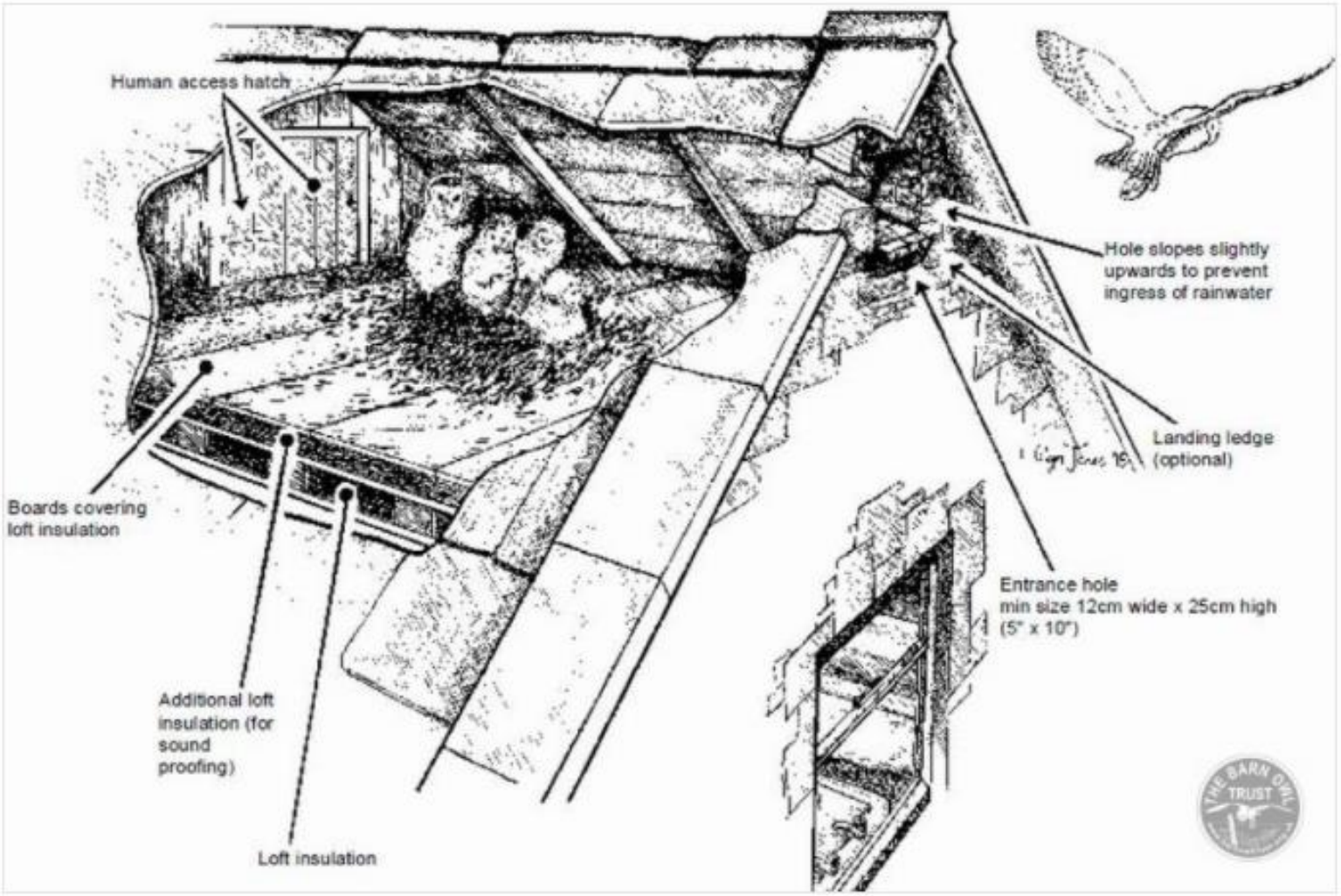
Appendix 6: Barn owl mitigation and compensation

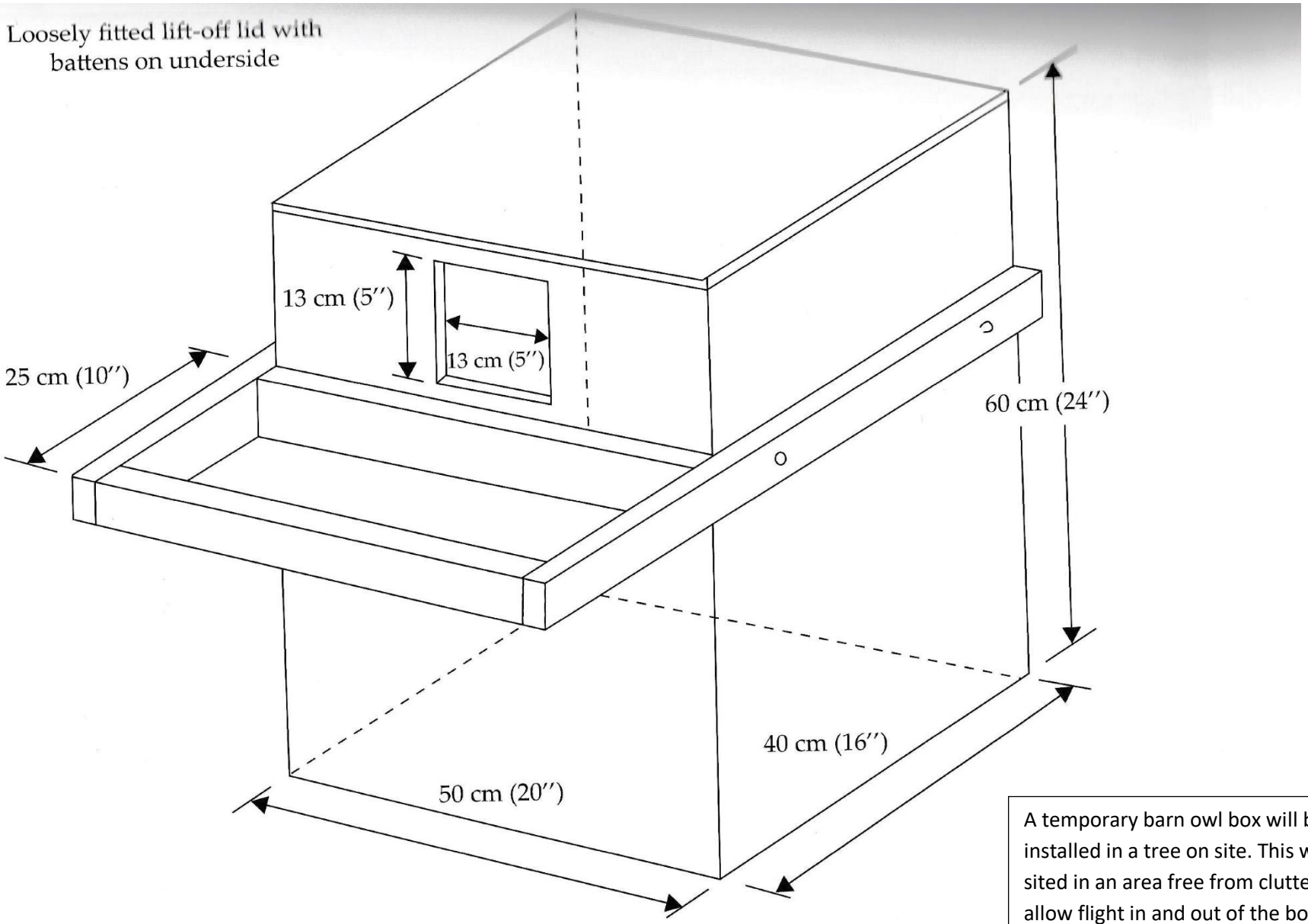
EXISTING BUILDING TO BE CONVERTED



Taken from the Barn Owl Conservation Handbook




Human access hatch
Hole slopes slightly upwards to prevent ingress of rainwater
Landing ledge (optional)
Boards covering loft insulation
Entrance hole
min size 12cm wide x 25cm high
(5" x 10")
Additional loft insulation (for sound proofing)
Loft insulation



A temporary barn owl box will be installed in a tree on site. This will be sited in an area free from clutter to allow flight in and out of the box and where possible resting upon a horizontal branch to support the base and strapped to the trunk.

Appendix 7: Bat static monitoring raw counts

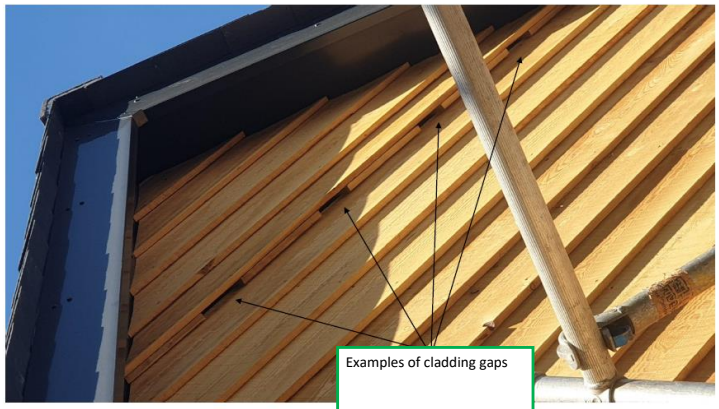
	MYO	NYCNOC	PIPPIP	PIPPYG	PLECOTUS	RHIFER
*	1	146	194	54	4	1
20220822	0	0	0	0	0	0
20220823	0	14	0	0	0	0
20220824	1	34	36	16	1	0
20220825	0	7	5	7	0	0
20220826	0	24	3	13	3	1
20220827	0	1	13	1	0	0
20220828	0	4	10	1	1	0
20220829	0	1	19	3	0	0
20220830	0	2	21	1	0	0
20220831	0	6	17	3	0	0
20220901	0	6	13	3	0	0
20220902	0	14	1	4	1	0
20220903	0	7	31	0	1	0
20220904	0	26	25	1	2	0

Appendix 8: Biodiversity enhancement plan

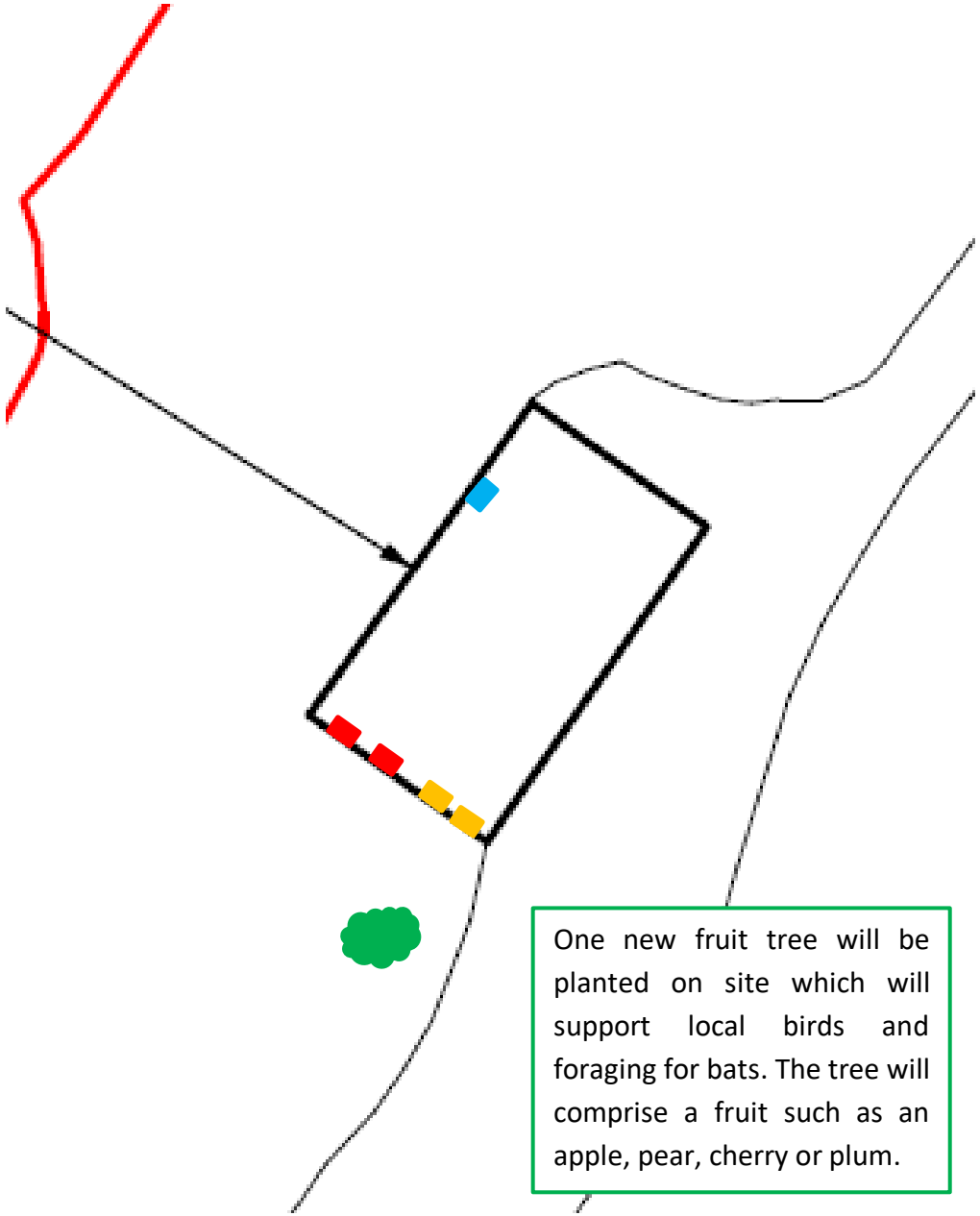
A total of two bee bricks for solitary bees will be built into the southern facing wall between 0.25-0.5m from ground level.

One 'Schwegler Type 25 Nest Box' (or similar, integrated nest box) will be installed at eaves level on the western elevation of the barn.

Two access gaps will be made in the horizontal wooden cladding to allow bats to roost in the crevice between the wooden cladding and the wall behind.



Examples of cladding gaps



One new fruit tree will be planted on site which will support local birds and foraging for bats. The tree will comprise a fruit such as an apple, pear, cherry or plum.