ECOLOGICAL ASSESSMENT REPORT

14th April 2022

Woodpecker Wood, Damerham, Fordingbridge, Hampshire SP6 3HL

On behalf of: Mr and Mrs G French

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Report version: Final version 1.0



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SURVEY DATA VALIDITY

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, although update survey data may be required for a planning application dependent on conditions and impacts.

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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) and Preliminary Roost Appraisal (PRA) 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 Class bat licensed ecologists Becci Smith and Sophie Morris.

Habitats, invasive species and statutory sites mitigation:

- The site comprises a barn surrounded by an area of poor semi-improved neutral grassland, mixed broadleaved woodland, replanted woodland, woodland rides, and a pond.
- The site is a Site of Importance for Nature Conservation, this is due to ancient seminatural woodland being onsite which is also designated as Lowland Mixed deciduous woodland and is a UK Priority habitat. A 'woodland management plan' and a 'Construction Environmental Management Plan' will be required to ensure no impacts to the woodland and the protected species that are likely present on site, occur as part of the development.
- 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. Further recommendations have been outlined in Section 5 to ensure the sett is not affected during the works and to ensure badgers can continue using the site.

Barn owls

A barn owl survey was undertaken by licensed barn owl worker Becci Smith on the 25th February 2022. Evidence in the form of pellets were recorded on the mezzanine within the building. An appropriate mitigation and compensation strategy have been provided in Section 5.

Bats:

- The PRA was conducted on the building, and it 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 no further action has been recommended in relation to roosting bats and the proposed works.
- The general site and area is considered suitable for foraging and commuting bats and a lighting strategy is detailed in Section 5 to minimize lighting disturbance.

Dormice:

 The woodland onsite is highly suitable for dormice and 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 has been recommended in relation to dormice and the proposed works.

Great crested newts and reptiles:

The pond, log piles, brash piles, and grassland margins onsite are highly suitable for great crested newts (GCN) and common reptiles. Habitat Suitability Index assessments were undertaken on the pond onsite and within the neighbouring property. These ponds scored 0.66 and 0.8 respectively, noting average and excellent scores in relation to great crested newts and their likelihood of utilising the ponds and the surrounding terrestrial habitats. However, as the works are for the change of use of the building, no works on the suitable habitats are expected and no further action has been recommended in relation to GCN and reptiles and the proposed works.

Nesting birds:

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

Ecological enhancements:

 To ensure the proposed development is compliant with the National Planning Policy Framework (NPPF) and local planning policy, ecological enhancements will include the provision of a bat box, a swift box, a minimum of one new fruit tree and native landscaping, solitary bee bricks 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) and Preliminary Roost Appraisal (PRA) 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 outbuilding and the conversion of the building into a dwelling.

The PEA and PRA were conducted on the 25th February 2022 by experienced Natural England bat licensed ecologists Becci Smith and assistant ecologist Sophie Morris. The proposed site and building 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, 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 policy

Legislation and UK BAP priority habitats/species

Legislation

In England, bats, dormice (*Muscardinus avellanarius*), otters (*Lutra lutra*), great crested newts (*Triturus cristatus*), smooth snakes (*Coronella austriaca*) and sand lizards (*Lacerta agilis*) 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. Nightjars (*Caprimulgus europaeus*) are protected under the above Regulations under Annex I (as originated from the EC Birds Directive).

Some 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 (*Vipera berus*), slow worms (*Anguis fragilis*), grass snakes (*Natrix natrix*), common lizards (*Zootoca vivipara*), common frog (*Rana temporaria*), palmate newt (*Lissotriton helveticus*), smooth newt (*Lissotriton vulgaris*), water voles (*Arvicola amphibius*) and several invertebrate species are also protected under Schedule 5 of the Wildlife and Countryside Act (WCA) (1981) (as amended). Barn owls (*Tyto alba*) are protected under Schedule 1 of the WCA (1981). Schedule 9 of the WCA (1981) includes non-native, invasive species including (but not limited to) Japanese knotweed (*Fallopia japonica*), giant hogweed (*Heracleum mantegazzianum*) and Himalayan balsam (*Impatiens glandulifera*).

Some sites that have been designated for nature conservation are legally protected 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).

Following the exit of the European Union, several changes have occurred to the above legislation under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This has adopted these European laws into UK legislation, referring to the previous Natura 2000 sites as the 'national site network' which includes existing and newly designated SACs and SPAs. Ramsar sites do not form part of the national site

network however, these are still protected in the same way and many overlap with SACs and SPAs. 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 and badgers (Meles meles) are protected under The Protection of Badgers (1992).

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 NERC Act (2006) and Section 40 places a duty to conserve biodiversity on all public authorities.

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*), noctule (*Nyctalus noctula*) and otter.

National and local policy

NPPF – The National Planning Policy Framework

The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government, 2019) sets out the Government's planning policies for England and how these should be applied. Section 15 concerns the natural environment and 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 a post-development outcome.

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, where appropriate.

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.'

Policy SP6 - the natural environment, notes that proposals should protect, maintain and enhance nationally, regionally and locally important sites and features of the natural environment, including habitats and species of biodiversity importance, geological features and the water environment. Development which is likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) will not be permitted. Only where the benefits of the development clearly outweigh both the impacts on the special interest features of the SSSI and on the broader national network of SSSIs will an exception be considered.

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 cases where it is not possible to fully avoid or mitigate for the loss of biodiversity interests resulting from a development, appropriate compensation will be secured for any residual losses via on or off-site compensation measures. The latter may include the provision of compensatory habitats elsewhere. In addition, opportunities to enhance ecological or geological assets and the water environment should be maximised, particularly in line with the Authority's 'Action for Biodiversity'12 . Applicants will be required to demonstrate the impacts of their proposal on biodiversity, and for certain types of development13 by submission of an Ecological Appraisal, which should outline the mitigation and enhancement measures needed to achieve a net gain in biodiversity.

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 Adopted April 2014 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, 2021) website. Hampshire Biodiversity Information Centre (HBIC, 2021) 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 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 owl was conducted on the 25th February 2022 by Becci Smith a 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 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	We	eather condi	tions
25/02/2022	14:00pm	Becci Smith and Sophie	Extendable ladder, high- powered torch,	Temp:	Okta cloud cover:	Beaufort wind force:
		Morris	binoculars	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 of February 2022 by ecologists Becci Smith 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 speciesrich/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).

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

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 250m 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.

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

The site visit provides a 'snapshot' of the site and does not take into account seasonal variation. Species and habitats 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, with botanical species likely to be restricted to the time of year.

The data within this report should not be seen as comprehensive. Data obtained from the HBIC (HBIC, 2022) data search is unlikely to provide a complete record of habitats and species within the search area. It is therefore possible that a protected species may occur within the vicinity that has not previously been identified within the data search.

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

Survey data within this report is considered valid for 18 months for planning purposes. If 18 months pass and no works have been undertaken and/or if conditions on-site change such as the condition of the buildings and vegetation, an update site visit with appropriate surveys must be conducted to re-evaluate the potential of the site to support protected/vulnerable species and habitats. Aerial maps were used to identify ponds within 500m of the site, an additional seven ponds were noted within the estates to the east. Landownership was not identified and as such access was not possible to the seven ponds within 500m of the site due to the ponds being on private property, and HSI's were unable to be conducted on these ponds. As the conversion of the building will not see any impacts upon terrestrial or aquatic habitats this is not considered to be a material consideration.

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 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	3.4km 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

Dorset Heathlands3.5km southSPARes southDuring the breeding season the SPA regularly supports at least 6.8% of the woodlark breeding population, at least 6.8% of the harrier population and 1.2% of the hen harrier population and 1.2% of the hen harrier population and 1.2% of the hen harrier population courts woodlark breeding population courts a water crowfoot, river water crowfoot, the species of Annex 1 habitst being a water crowfoot, river water crowfoot, the species of Annex 2 present include brook lamprey, sea lamprey, Desmoulin's whord snail, Atlantic salion and builhead.River Avon System3.8km southeastSSSI475.94A river of both chalk and acid nature whord snail, sea lamprey, brook lamprey, to both halk and acid nature whord snail, atlantic salion and builhead.Breamore Marsh Quarry4.4.km northwestSSSI475.94A river of both chalk and acid nature whord snail, sea lamprey, brook lamprey, to both halk and acid nature sease composition has excellent water vegetation diversity.Toyd Down and Quarry4.5.km northwestSSSI6.688France 2 present includes stream southeast parts. (1) A steep west-facing downland slope, grazed ty sheep, and an abandoned chalk quarty believed to have been last worked around 1970.Martin and Tidpit Downs4.6.km northwestSSSI367.53Artin and Tidpit Downs form an extensive three dat of the Dorset Downs on the Hampshrie- Wiltshire border. The yinclude a gently <th></th> <th></th> <th></th> <th></th> <th></th>					
Dorset Heathlands3.5km southSPA8166.97During the breeding season the SPA regularly supports at least 12.8% of the 					
Dorset Heathlands3.5km southSPA8166.97During the breeding season the SPA regularly supports at least 12.8% of the nightjar population, at least 6.8% of the usodlark breeding population, at least 6.8% of the usodlark breeding population, at least 6.8% of the nightjar population, over winter the area regularly supports 2.7% of the hen harrier population and 1.2% of the entrom and 1.2% of the bertor sAC status due to the presence of Annex 1 habitat being a water course that support aquit wild flora. Species present include stream water.crowfoot, river water-crowfoot Fis species of Annex 2 present include brook lamprey, sea lamprey, Desmoulins's whord snail, Atlantic salmon and builhead.River Avon System3.8km southeastSSSI475.94A river of both chalk and acid nature whord snail, sea lamprey, brook lamprey, bersoulins's whord snail, Atlantic salmon and builhead.Breamore Marsh Quarry4.5km northeastSSSI14.77Breamore Marsh comprises a cattle and goose-grazed green, the grassland flora, whord single salmprey, brook lamprey, to which its species composition has been derived from its grazing history. The marsh includes shallow pols and to which its species composition has been derived from its grazing history. The marsh includes shallow pols and to which at the extreme east of the Dorset Downs on the Hampshre- Wittshire border. They linclude a genty with support Downs form an extensive tract of chalk downland, chalk heat downland dispe, grazed by sheep, and an abandoned chak duary believed to have been last worked around 1970.Martin and Tidpit Downs4.6km northwestSSSI367.53Martin and Tidpit Downs for the Hampshire- Wittshir					
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Age and subsequent dates, and these,					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	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.
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.
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 phosphorous control and mitigation measures. Further details are provided in Section 5.

No impacts on the other above designated sites are anticipated due to the localised nature of the proposed works and no further action has been 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. Site supports great wood-rush (Luzula sylvatica).
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 is designated as a SINC site 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 site and secured as part of the planning application along with a Construction Environment Management Plan (CEMP) to prevent short term impacts during the conversion works. Details regarding these prescribed documents have been 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 (in	cluding 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			
Polecal	L	2009	neighbouring property)			
Serotine bat	1	2005	760m west			
Soprano pipistrelle bat	1	2017	500m southeast			
	Rare and notab	le invertebrates				
August thorn	5	2018	395m southeast			
Autumnal rustic	4	2002	395m southeast			

Sprawler White admiral White ermine Butcher's-broom Corn spurrey	2 4 10	2003 2011 2018 otable plants 2008 1998	395m southeast 395m southeast 300m north On site Within 1km of the site
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Spinach		2003	300m north
Small square-spot	7	2018	300m north
Small phoenix	5	2018	300m north
Small emerald	4	2010	890m southeast
Shoulder-striped wainscot	7	2018	300m north
Shaded broad-bar	4	2002	395m southeast
September thorn	4	2017	395m southeast
Sallow	3	2002	300m north
Rustic	6	2018	300m north
Rosy rustic	6	2018	395m southeast
Pretty chalk carpet	2	2003	395m southeast
Powdered quaker	4	2003	300m north
Pale eggar	1	2000	Within 1km of the site
Oak lutestring	1	2001	395m southeast
Oak hook-tip	4	2018	395m southeast
Mouse moth	5	2017	300m north
Mottled rustic	6	2018	300m north
Minor shoulder-knot	4	2003	300m north
Light crimson underwing	1	2012	960m southeast
Large wainscot	1	2002	395m southeast
Large nutmeg			
,	1	2000	395m southeast
Lackey	2	2018	Within 1km of the site
Knot grass	5	2001	395m southeast
Hornet robberfly	2	2000	Within 1km of the site
Hedge rustic	2	2001	Within 1km of the site
Grey dagger	5	2001	395m southeast
Green-brindled chestnut	4	2018	300m north
Ghost moth	6	2018	395m southeast
Garden tiger	3	2018	620m southeast
Galium carpet	1	2000	395m southeast
Feathered gothic	1	2000	Within 1km of the site
Ear moth	3	2018	300m north
Dusky thorn	5	2018	300m north
Dusky brocade	2	2018	395m southeast
Dot moth	6	2002	300m north
Dark spinach	2	2000	300m north
carpet Dark brocade	2	2000	Within 1km of the site
Dark-barred twin-spot	5	2018	395m southeast
Crescent	2	2000	Within 1km of the site
Cinnabar	9	2018	300m north
Centre-barred sallow	4	2017	395m southeast
Buff ermine	9	2018	300m north
Brown-spot pinion	1	2002	620m southeast
Broom moth	1	2003	395m southeast
Brindled beauty	5	2018	395m southeast
Blood-vein	8	2013	300m north
Beaded chestnut	7	2015	300m north

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 broadleaved 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 broadleaved woodland

The site is pre-dominantly woodland, which is designated at the UK 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 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.

Replanted woodland

An area of replanted woodland is present to the south of the improved grassland on site and within the existing mixed broadleaved 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	
lvy	Abundant	
Lords-and-ladies	Locally occasional	
Male-fern	Occasional	
Mistle thrush	Rare	
Perennial ryegrass	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	Locally occasional	
Greater plantain	Rare	
Hairy brome	Locally occasional	
lvy	Locally occasional	
Lesser celandine	Locally occasional	
Lesser trefoil	Rare	
Lords-and-ladies	Locally occasional	
Marsh thistle	Occasional	
Pendulous sedge	Locally occasional	
Perennial ryegrass	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. Along with the sett, a latrine was noted in the woodland near the northern boundary line and snuffle marks 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 were assessed as likely 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 therefore no further recommendations have been made in regard to badgers.

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 is provided in Appendix 3 and a map has been provided in Appendix 4 while a summary has been 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 will be required to allow for the conversion of the barn to living accommodation.

Bats – Preliminary Roost Appraisal (PRA)

Building description

Assessments 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

Several trees within the woodland on site have Potential Roosting Features (PRFs) and hold 'high potential' for roosting bats. However, no tree works are planned for the proposed plans of the conversion of the barn to living accommodation. No further action is recommended in relation to roosting bats and trees.

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.

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. As the building currently has electricity and lighting can occur within the building at all times, as the current owners access the site when they wish, it is assumed that the site is already lit and currently lighting levels from within the building would remain the same/similar. As part of the development, no new external lighting will be installed as part of the conversion and information regarding internal lighting has been provided in Section 5.

Dormice

The woodland on site was assessed for it's potential to support dormice. This features native species such as oak, hazel and honeysuckle which are considered to be 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 vicinity this is likely to be due to a lack of survey effort rather than absence. 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. The presence of these licenses within the wider landscape illustrates that dormouse are likely present within the site woodland however where plans include change of use of the barn and conversion of the barn to living accommodation, no direct or indirect impacts are anticipated upon dormice.

Great crested newts

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

One pond is located within the woodland to the south of the site and is surrounded by woodland vegetation, and another was located within the neighbouring property of Yafflewood. A Habitat Suitability Index (HSI) assessment was undertaken on the ponds and the results have been provided 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' for GCN. There are no known records of great crested newts within the area. 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 mostly noted to be in an estate to the east, with the landowners details unknown. This includes, ponds 272m and 470m north, 335m, 480 and 470m northeast and 215m east, with one pond identified 441m south of the site.

As a pond is present in the south of the site and within the neighbouring property, there is the potential for this species to be present within the terrestrial habitats on site however where the impacts are restricted to the building, it is unlikely impacts upon this species will occur.

Nesting birds

The woodland on site hold potential for nesting birds. However, as the works are restricted to the building, it is unlikely impacts upon this species will occur.

Reptiles

The terrestrial habitats on site were considered to provide good habitats for reptiles such as slow worms and grass snake. Habitats which were noted to be suitable for reptiles include the woodland, woodland rides, and the grassland margins. The site also supports 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 where the impacts are restricted to the building conversion, it is unlikely reptiles will be impacted upon during the works.

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 phosphorous 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.
- 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 was 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 Networks (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 as there is the presence of rhododendron (Schedule 9 invasive) on site, in the southeast of the site, the removal of this plant would benefit the woodland greatly.

The south western section comprises predominantly 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 some diversity in species, structure and ecological benefit.

The primary aim of the woodland management plan would be to seek no loss of woodland on site so as 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 land owner, the Wildlife Trust who designated the SINC and also the 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 reestablishment.
- 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 historical roosted within the barn. Barn owl pellets were noted within the building predominantly on the mezzanine floor to 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 should be undertaken outside of the nesting period which is noted to run between 1st March and 31st August. Where works are undertaken between 1st September and 28th February.
- Prior to works a suitable experienced and licensed ecologist will undertake a preworks check for the presence of barn owls. Should barn owls be nesting then no works can take place until the chicks have fledged.

- 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 while a second barn owl box will be installed within a mature tree within the grounds at the site as a temporary measure.
- An illustrative plan showing the location of these has been provided within Appendix 5. 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 three metres of either of the barn owl boxes.
- Further nesting advice can be sought from either <u>https://www.barnowltrust.org.uk/barn-owl-nestbox/barn-owl-nestboxes-</u> <u>building-projects/</u> or <u>https://www.barnowltrust.org.uk/barn-owl-nestbox/barn-owl-nestbox/barn-owl-nestboxes/</u>.

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. Several trees were noted to be suitable for roosting bats due to the presence of PRFs, however no works are expected on the trees. 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 barn.

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 holds potential for commuting and foraging bats to be present due to the presence of ancient woodland on site. In line with the current national guidance (BCT & ILP, 2018) no external lighting will be installed 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 the construction in the CEMP above and upon completion, through the use of a lighting strategy.

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.

Permanent site lighting restrictions – amenity and personal security lighting:

Permanent internal lighting:

As the building is set within the woodland, there will not be any external lighting 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 bat corridor and bat foraging habitats at either end of the site.

Ecological enhancements

To ensure the proposed development is compliant with the National Planning Policy Framework (NPPF) and local planning policy, the following ecological enhancements will be included as part of the development (see Appendix 6 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 will be installed within the barn. The bricks are designed to accommodate solitary bees (non-aggressive/non-swarming types).
- One 'Schwegler Type 25 Nest Box' (or similar, integrated nest box) will be installed at eaves level on the western elevation of the barn. 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 buildings 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 5m of any new fencing and will measure a minimum of 13cm x 13cm.

6. References

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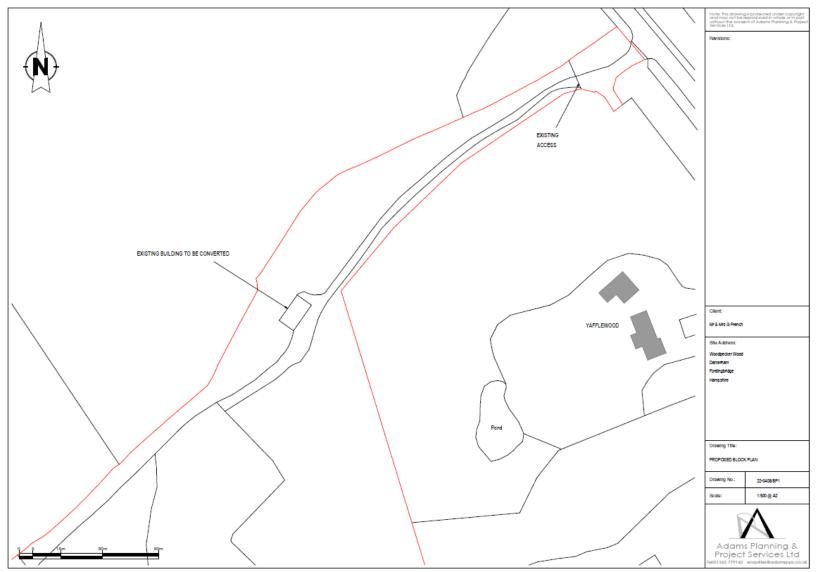
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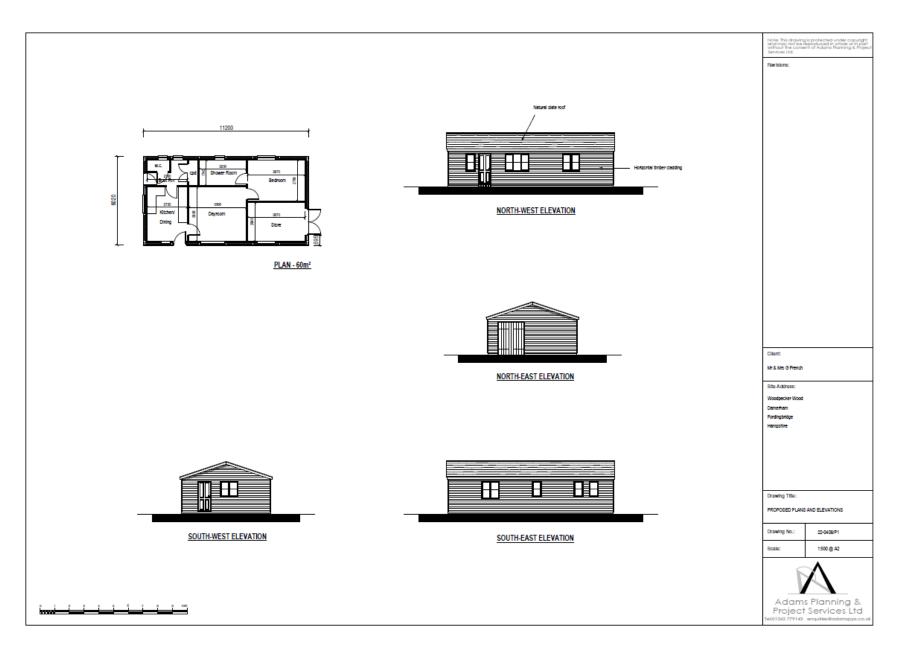
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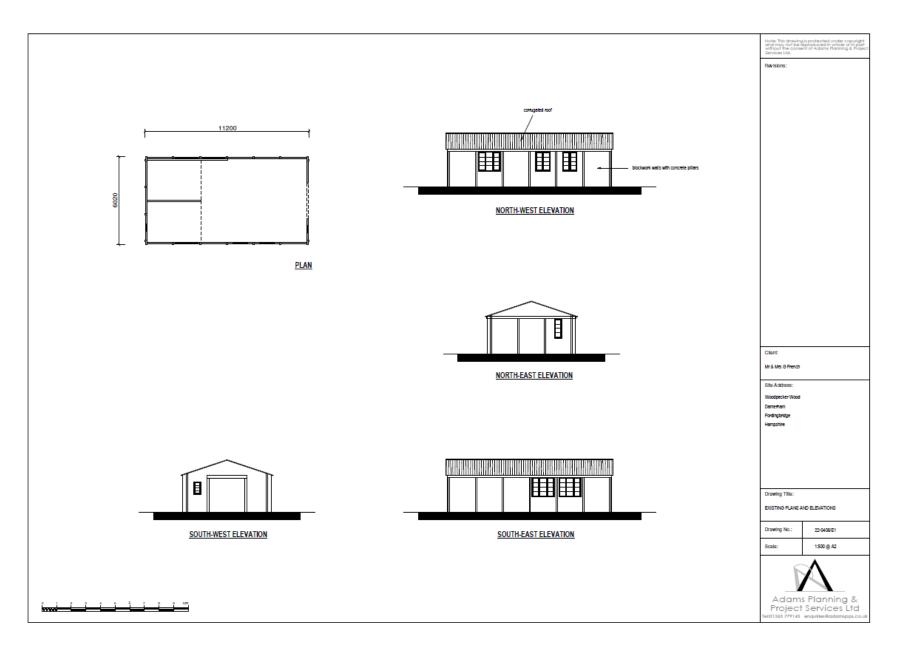
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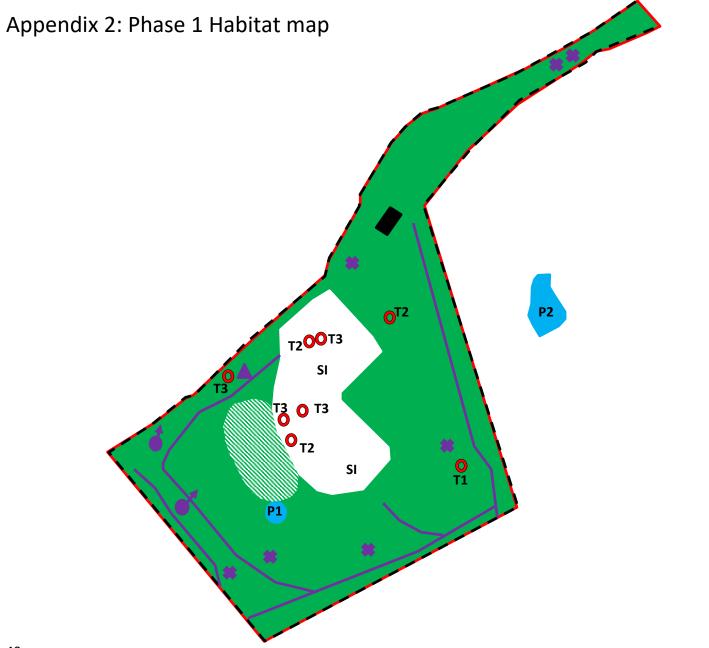
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Phase 1 Habitat map key

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

Target Note References

Target Note Reference	Description
T1	Rhododendron (Schedule 9 invasive species)
T2	Brash pile
Т3	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.



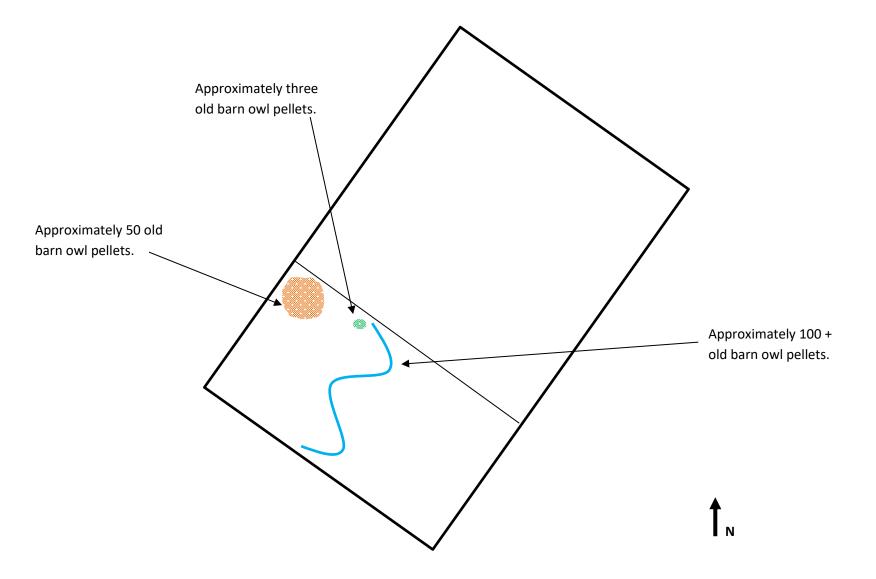


Photo 14: Woodland ride to the south within the replanted woodland.



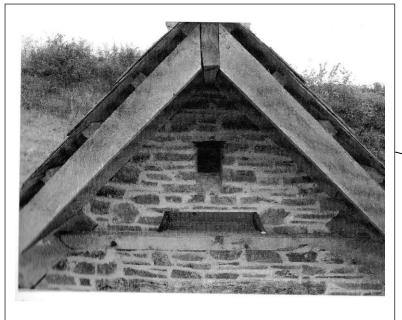
Photo 15: Pond 2 within neighboring property 'Yafflewood'.

Appendix 4: Barn owl evidence



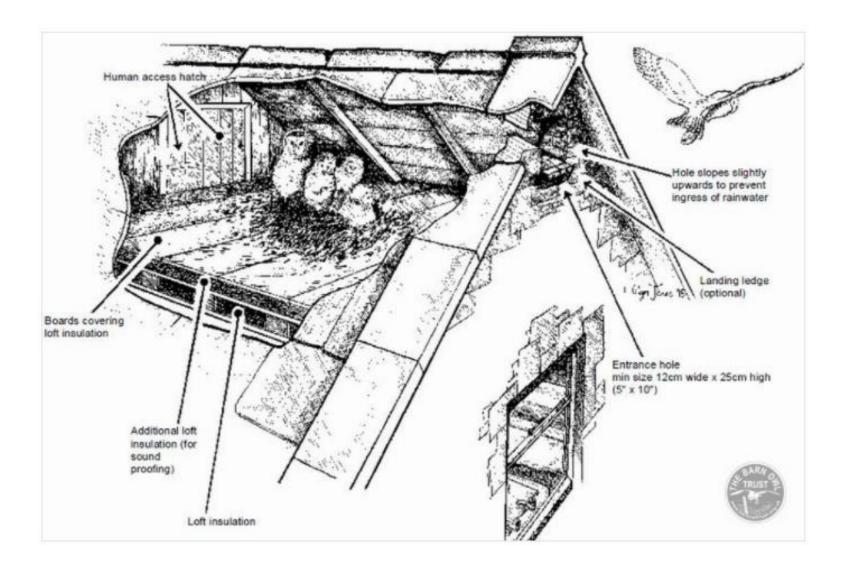


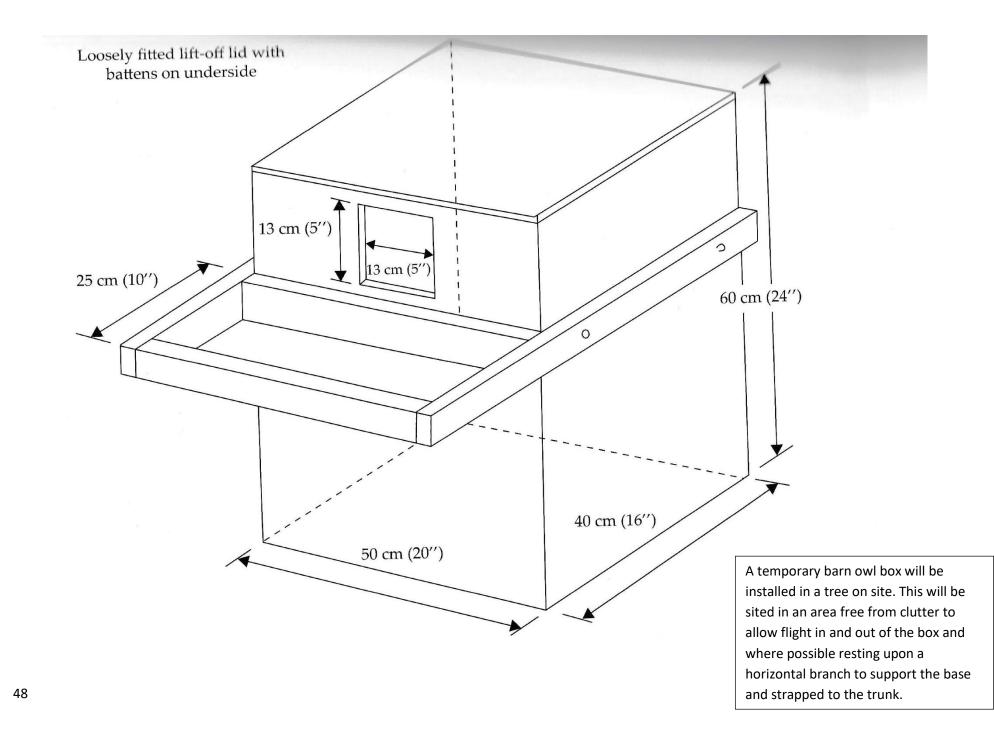
EXISTING BUILDING TO BE CONVERTED



Taken from the Barn Owl Conservation Handbook

The permanent barn owl roosting provision will be located within the building to ensure longevity. A barn owl box will be installed within the roof space and the access hole will face outwards to the open fields to allow the barn owl to find the new roost, a perching platform and rain cover hood can be installed where this does not block the access into the barn owl box





Appendix 6: Ecological enhancements

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.



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.