

ECOLOGICAL ASSESSMENT REPORT

17th July 2023

Martinique Farm, East Martin,
Fordingbridge, Hampshire SP6 3JS

On behalf of: Mr Shering

Agent/planner: Raw Planning Ltd

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Draft/Final:	Final (no further survey recommendations)
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Client:	Mr Shering
Agent/planner:	Raw Planning Limited
Author(s):	Laurence Wills BSc (Hons), Georgia Linter BSc (Hons) and Fran Briggs MSc
Report prepared for issue by:	Laurence Wills BSc (Hons)
Report approved for issue by:	Amy Parsons BSc (Hons) ACIEEM
Local Planning Authority:	New Forest District Council (NFDC)

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Survey data lifespan


Information and data provided within this report is considered accurate at the time of writing. Bat 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, 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.

	ABR Ecology Ltd		
	Suite 7, The Old Pottery, Manor Way, Verwood, Dorset BH31 6HF		
	Tel:	01202 821325	Web: www.abrecology.com
	Lead ecologist email:	becci.abrecology@gmail.com	
	Registered Limited company in England and Wales no:	11266688	

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Executive summary

- ABR Ecology Ltd were commissioned by Raw Planning Ltd on behalf of Mr Shering to produce an Ecological Assessment report informed by a Preliminary Ecological Appraisal (PEA), Preliminary Roost Appraisal (PRA) and bat activity surveys at Martinique Farm, East Martin, Fordingbridge, Hampshire SP6 3JS. These surveys were conducted to advise on ecological constraints associated with the prospective development of the site. This report was requested to support a full planning application for the conversion of three barns into three residential properties with associated parking and landscaping.
- A PRA Report was produced by Joanna Ramsay Horbury on the 12th July 2021. A PEA and an update PRA were conducted by ABR Ecology Ltd on the 4th April 2022 by experienced class 2 bat licensed ecologist Becci Smith MCIEEM and assistant ecologist Sophie Morris. Two dusk emergence surveys were conducted on the 13th and 27th June 2022 and one dawn re-entry survey was conducted on 11th July 2022 upon the three barns.

Habitats and nutrient neutrality:

- The site comprises three barns, a static caravan, a woodstore, improved grassland, bare ground with tree stumps, scattered trees, ornamental hedgerows, hardstanding, and compost, log and brash piles.
- The application site lies within the catchment of the River Avon SAC and the development will need to demonstrate it is nutrient neutral. Further information is provided in Section 5.
- No 'important' hedgerows were identified on site (The Hedgerow Regulations 1997). All hedgerows on site will be retained and the works will be confined to the buildings, therefore no further action is recommended for hedgerows.

Badgers:

- No evidence of badgers was recorded on site and no further action is recommended for badgers.

Barn owls:

- No evidence of barn owl was recorded on site and no further action is recommended for this species.

Bats:

- The PRA in 2021 identified 'Barn 1', 'Barn 2' and 'Barn 3' to support confirmed bat roosts due to the presence of bat droppings. The update PRA identified 'Building

2' to support a confirmed roost for common pipistrelle bats (confirmed by DNA analysis) (no droppings were found in 'Barn 1' and 'Barn 3' during the update PRA). The 'static caravan' and 'wood store' were considered to hold 'negligible potential' for roosting bats.

- Bat activity surveys were conducted on 'Barns 1-3'; 'Barn 1' supports an occasional roost for a likely individual common pipistrelle bat, and 'Barn 2' and '3' support a total of two day roosts for low numbers of common pipistrelle bat.
- The works will result in the loss of all identified bat roosts through the conversion of the buildings into dwellings. **A bat European Protected Species (EPS) licence will therefore be required to allow the works to proceed lawfully following planning approval.** The EPS licence will detail a works schedule, method statement, provision of a toolbox talk to contractors, supervision of destructive works, and temporary and permanent replacement bat roosting facilities. Further information is provided in Section 5 of this report.
- All trees within the site were considered to hold 'negligible potential' for roosting bats. Therefore, no further recommendations for roosting bats in trees are made.
- The general site and area supports foraging and commuting bats and a 'bat friendly' lighting strategy is detailed in Section 5 to minimise lighting disturbance.

Dormice:

- The site was not considered to be suitable for dormice and no further action is recommended for this species.

Great crested newts and reptiles:

- Great crested newts and reptiles are not considered to be impacted by the proposals and no further action is recommended for these species.

Nesting birds:

- The hedgerows, mature trees and buildings on site hold high potential for nesting birds. A house sparrow's nest was also identified on the southeast elevation between the eaves and roof lining on 'Barn 2'. A mitigation and compensation strategy is presented in Section 5 for 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 additional bat roosting features, bird boxes, hedgehog-friendly fencing and the planting of new fruit trees as detailed in Section 5 of this report.

1. Introduction

ABR Ecology Ltd were commissioned by Raw Planning Ltd on behalf of Mr Shering to produce an Ecological Assessment report informed by a Preliminary Ecological Appraisal (PEA), Preliminary Roost Appraisal (PRA) and bat activity surveys at Martinique Farm, East Martin, Fordingbridge, Hampshire SP6 3JS (central grid reference: SU 07124 20382). These surveys were conducted to advise on ecological constraints associated with the prospective development of the site. This report was requested to support a full planning application for the conversion of three barns into three residential properties with associated parking and landscaping.

A PRA Report was produced by Joanna Ramsay Horbury BA (Hons) MSc on the 12th July 2021 (Horbury, J., 2021). The PEA and update PRA were conducted by ABR Ecology Ltd on the 4th April 2022 by experienced Natural England class 2 bat licensed ecologist Becci Smith MCIEEM and assistant ecologist Sophie Morris. Two dusk emergence surveys were conducted on the 13th and 27th June 2022 and one dawn re-entry survey was conducted on 11th July 2022 upon the three barns on site.

An existing site plan is provided in Appendix 1 and a proposed site plan in Appendix 2.

Site context

The application site is located within an agricultural setting just outside the rural village of Martin, Hampshire. The site consists of three large agricultural barns, with improved grassland and areas of concrete hardstanding. Scattered mature trees are present in the northern corner of the site with areas of scrub and hedgerows along the boundaries and also directly adjacent to the boundaries off-site. The immediate surrounding area comprises extensive arable fields and pasture, with hedgerows and scattered trees in the wider landscape which offer connectivity to woodlands approximately 2km from the site. The local and wider landscape therefore offers excellent potential for a range of 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 surveys and bat activity surveys which aimed to determine if a bat roost is present within any of the buildings/trees and/or whether the building/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 to allow the works to proceed lawfully.

2. Legislation and planning 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). 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*). 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 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, 2021) 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.’*

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, 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 4th April 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 owl was conducted on the 4th April 2022 by Natural England licensed barn owl ecologist Becci Smith MCIEEM. The ecologists conducted a thorough search inside the buildings for feeding remains,

feathers, splashing/droppings, pellets, nesting material and the presence of barn owls.

Bats

Preliminary Roost Appraisal (PRA)

An initial Preliminary Bat Roost Assessment report was produced by Joanna Ramsay Horbury BA (Hons), MSC (Horbury, J., 2021); the PRA survey was conducted on the 12th July 2021.

Update PRA survey

Natural England class 2 licensed bat ecologist Becci Smith MCIEEM and assistant ecologist Sophie Morris undertook an update PRA of the buildings and a PRA of trees on site. Timing and weather conditions for the survey are provided in the table below:

Survey date	Time of survey	Surveyor(s)	Equipment used	Weather conditions		
04/05/2022	10:00am	Becci Smith and Sophie Morris	Extendable ladder, high-powered torch, binoculars	Temp:	Okta cloud cover:	Beaufort wind force:
				13°C	8/8	1/12

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 buildings and trees, notably any sills, walls, floors, flat surfaces tree limbs, tear outs and wounds. 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/tree was 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, tear outs, woodpecker holes, soffits and behind lead flashing,

to name a few examples. 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 or tree 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.

Bat activity surveys

A total of six surveyors undertook the surveys on the buildings on site. Timings and weather conditions for each survey are provided in the table below:

Survey date	Timings	Surveyor(s)	Equipment used	Weather conditions		
				Temp:	Okta cloud cover:	Beaufort wind force:
13/06/2022 – Dusk emergence survey	Start: 21:07 Sunset: 21:22 End: 22:52	Becci Smith, Anne Smith, Georgia Linter, Laurence Wills, Martin Roberts and Kieran Mullany	Echo Meter Touch 2 with tablet x 6	Temp:	Okta cloud cover:	Beaufort wind force:
				Start: 14°C End: 12°C	0/8	0/12
27/06/2022 – Dusk emergence survey	Start: 21:07 Sunset: 21:26 End: 23:00	Becci Smith, Caitlin McQuillan, Fran Briggs and Martin Roberts	Echo Meter Touch 2 with tablet x 6	Temp:	Okta cloud cover:	Beaufort wind force:
				Start: 13°C End: 12°C	0/8	0/12
11/07/2022 - Dawn re-	Start: 03:30 Sunrise:05:06	Jenny Manley, Laurence	Echo Meter Touch 2 with tablet x 6	Temp:	Okta cloud cover:	Beaufort wind force:

entry survey	End: 05:21	Wills, Fran Briggs, Mattin Roberts and Kieran Mullany		Start: 13°C End: 13°C	3/8	0/12
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The activity surveys were conducted in accordance with The BCT Good Survey Practice Guidelines (Collins, 2016), and were conducted in suitable weather conditions (i.e. low wind speed, minimum temperature of 10°C at dusk and no precipitation). The surveys involved a number of surveyors positioned at optimal positions around the buildings, ensuring the best view of the roofs and elevations. The surveyors were specifically watching for any bats emerging and/or re-entering the buildings, whilst a note was also made on general bat behaviour and activity within the site vicinity, such as foraging, socialising and commuting bats across the site.

The surveyors used specialised bat recording equipment to detect any echolocating bats, and any sonograms (images) of bat calls on tablets were used to help identify the species of bat present. The surveyors also listened to the audible bat calls to aid the determination of the bat species.

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 were 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 4th April 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 surveys

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.

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.

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.

Bat activity surveys and bat sound analysis

Long-eared (*Plecotus spp.*) bats echolocate very quietly and are a later-emerging bat species, emerging from their roost when the light is dim. This makes it difficult to identify/observe bat activity and emergences/re-entries into the buildings. However, a dawn re-entry survey was conducted and this offered more favourable lighting conditions for observing potential long-eared bats returning to roost within the buildings.

Bats of the myotis (*Myotis spp.*) genus are difficult to distinguish due to their variable, and often similar, echolocation calls. The identification of myotis bats down to species level was therefore subject to the analyst's interpretation.

Survey data lifespan and reporting

The data within this report should not be seen as comprehensive. Data obtained from the HBIC data search (HBIC, 2022) 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.

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 building(s) will be required, as any conclusions provided herein may not be valid.

Update bat survey(s) will be required to inform a Natural England bat licence application.

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 designated area	Area of Outstanding Natural Beauty (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.
Toyd Down and Quarry	1.4km southeast	SSSI	6.68	Toyd Down lies at the extreme east of the Dorset Downs on the Hampshire-Wiltshire border. The SSSI falls into two distinct parts: A steep west-facing downland slope, grazed by sheep, and heavily dominated by upright brome. The sward comprises species-rich downland of the South Wiltshire type, with notable quantities of dwarf sedge, chalk milkwort, horseshoe vetch, devil's-bit scabious, field fleawort and autumn gentian. The other section comprises an abandoned chalk quarry believed to have been last worked around 1970. The contrast between the old and "new" grassland is of great interest, providing a good site for the study of colonisation of bare chalk next to well-established, species-rich downland. The site supports one of the strongest Hampshire colonies of the small blue butterfly and an important relic population of the grayling.
Martin Down	1.7km southwest	NNR	340.99	The NNR represents one of the largest areas of uninterrupted chalk downland in Britain. Notable plants found in the area include bastard toadflax, field fleawort, early gentian and lesser centaury. Twelve orchid species have also been identified,

				including burnt-tip, green-winged, greater butterfly and frog. Five bat species have been recorded in the area: noctule, serotine, brown long-eared, common and soprano pipistrelle; and brown hare is found throughout the site. Birds found at Martin Down include turtle dove, grey partridge, nightingale, skylark, yellowhammer and linnet.
Knighton Downs & Wood	1.7km northwest	SSSI	206.98	Knighton Downs and Wood comprises a large area of botanically diverse calcareous grassland, scrub and semi-natural woodland supporting several plant and butterfly species of nationally restricted distribution. Dominant grasses include sheep's-fescue, meadow oat-grass and quaking grass, while upright brome is a component of the more lightly grazed slopes. Glaucous sedge is common and the widespread abundance of the nationally scarce dwarf sedge is a striking feature of the site. Plants with a restricted British distribution are well represented and include field fleawort, bastard-toadflax, early gentian and burnt orchid. Knighton Wood is largely ash and pedunculate oak, with a shrub layer of hazel and scattered field maple, and supports ancient woodland species columbine, moschatel, sanicle, woodruff and wood speedwell. The open downland also supports several colonies of adonis blue and other butterfly species in national decline such as marsh fritillary, chalkhill blue and small blue.
Martin and Tidpit Downs	1.7km southeast	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. The chalk flora is exceptionally rich and includes species with both distinctly south-west and eastern distributions. Of particular note are the large populations of bastard toadflax, field fleawort, early gentian, saw-wort and lesser centaury, and the presence of at least eight local orchid species, including burnt-tip, green-winged, fly and frog. The heath contains

				calcifuges such as bell heather, heath bedstraw, sheep's sorrel, dwarf gorse and common bent. The scrub provides cover and feeding areas for nightingale, lesser whitethroat and tree pipit, as well as the more common species such as willow warbler, linnet and yellowhammer. The site supports large populations of marbled white, small blue and dark-green fritillary.
Chickengrove Bottom	2.9km northwest	SSSI	10.51	Chickengrove Bottom is mixture of botanically rich chalk grassland, scrub, and woodland, with invertebrates and reptiles well represented. Herbs associated with light grazing, such as yellow rattle, perforate St Johns-wort and marjoram, occur alongside species typical of the south-west Wiltshire chalk, including sawwort, devil's-bit scabious and betony. The scrub is species-rich and dominated by hazel. The woodland is of a calcareous hazel-ash type, with oak and ash standards over an understorey of coppiced hazel. The ground flora is dominated by dog's mercury and moschatel, with areas of ramsons. Sweet woodruff and butcher's broom occur.
Boulsbury Wood	3.3km southwest	SSSI	119.76	Boulsbury is a large varied wood lying astride the high county boundary ridge where Dorset and Hampshire meet. The wood is known to support ten different identifiable stand-types, some of which are known to be rare in Hampshire. The most characteristic association within the woods is oak standards with hazel coppice, although other areas are predominantly beech or ash, with rarer trees such as wych elm or small-leaved lime in places. Botanically, Boulsbury Wood the most species-rich wood in Hampshire and is the only locality for two species: meadow saffron and wood vetch.
Pentridge Down	3.4km southwest	SSSI	62.32	Pentridge Down is the largest surviving area of unimproved chalk downland in eastern Dorset lying midway between Blandford and Salisbury, close to Martin Down NNR. The chalk flora is of a high

				quality and is distinguished by the abundance of the nationally scarce dwarf sedge and other notable species such as wild thyme, squinancywort, horseshoe vetch, autumn gentian, chalk milkwort and bastard-toadflax. A diverse chalk scrub is locally prominent containing buckthorn, wild privet, wayfaring tree, and spindle. The nationally rare and protected fairy shrimp occurs in its only Dorset locality in two temporary pools on Pentridge Hill.
Throope Down	3.5km northeast	SSSI	37.8	Throope Down is a botanically rich sheep's-fescue-meadow oat-grass chalk grassland with associated butterflies. Herbs characteristic of the South-West Wiltshire Downs, such as saw-wort, devil's-bit scabious and betony, are well represented on the site. The mixture of herb-rich downland and scrub patches provides excellent conditions for many butterfly species, including green hairstreak, Adonis blue and small blue.
Bowerchalke Downs	4km northwest	SSSI	134.13	This site is an extensive area of floristically rich chalk grassland supporting areas dominated by dwarf sedge. Two other species with a localised national distribution are early gentian and musk orchid. The latter is found in an area particularly rich in orchids including pyramidal, bee, common spotted, fragrant and twayblade. Scrub is scattered on some of the slopes becoming dense in one or two places. There is a diversity of shrub and tree species; hawthorn, blackthorn, wayfaring tree, gorse, whitebeam, hazel and ash. The grassland supports a variety of butterfly species including dingy skipper, dark green fritillary and common blue.
Stratford Toney Down	4.4km northeast	SSSI	23.95	Stratford Toney Down exemplifies the botanically rich sheep's-fescue-meadow oat-grass chalk grassland community. It also supports nationally rare plant and butterfly species. Nationally rare species present on the site include the field fleawort and burnt orchid as well as bastard-toadflax and dwarf sedge which are frequent. A colony of the nationally rare Adonis blue butterfly

				occurs on the site and typical downland species such as the chalkhill blue and the marbled white.
Homington and Coombe Bissett Downs	5km northeast	SSSI	25.11	This site encompasses several locks of botanically rich chalk grassland supporting the nationally restricted dwarf sedge and bastard-toadflax. The mixture of open grassland and scrub provides excellent conditions for many butterfly species, including, common blue, marbled white and brimstone, as well as chalkhill blue and nationally restricted Adonis blue.

The site lies within the Cranborne Chase and West Wiltshire Downs AONB, the application may need to consider the dark skies' initiative, landscaping to offset visual impacts; the Cranbourne Chase Partnership Plan (2019 - 2024) should be consulted.

The site lies within the catchment of the River Avon SAC and therefore the development will need to demonstrate it is nutrient neutral, due to a net increase in residential units. This is discussed further in Section 5 of this report.

No impacts on the other above designated sites are anticipated due to the distance from the application site.

UK BAP priority habitats

The search revealed no UK Priority Habitats within 650m of the application site, and therefore no detrimental impacts on these habitats are anticipated within the local landscape.

Locally designated (non-statutory) sites

HBIC (HBIC, 2022) was consulted to identify any non-statutory designated sites within 1km of the application site; and no non-statutory sites were found within this area.

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 in the table below:

Species	Number of records	Most recent record	Closest record to site
<i>Birds</i>			
Barn owl	2	2013	Within 1km
Black redstart	1	2010	Within 1km

Corn bunting	20	2019	115m southeast
Cuckoo	1	2017	Within 1km
Dartford warbler	2	2006	Within 1km
Fieldfare	3	2019	Within 1km
Golden plover	6	2016	Within 1km
Grey partridge	7	2018	125m west
Hen harrier	5	2019	Within 1km
House sparrow	2	2019	Within 1km
Lapwing	4	2019	Within 1km
Linnet	2	2019	Within 1km
Merlin	3	2019	Within 1km
Mistle thrush	1	2012	Within 1km
Nightingale	1	2006	Within 1km
Quail	2	2019	Within 1km
Red kite	7	2018	Within 1km
Redstart	2	2015	Within 1km
Redwing	1	2014	Within 1km
Skylark	4	2015	Within 1km
Spotted flycatcher	1	2000	Within 1km
Starling	1	2002	Within 1km
Swift	1	2016	930m south
Turtle dove	3	2019	Within 1km
Wheatear	5	2019	Within 1km
Whinchat	2	2015	Within 1km
Yellow wagtail	1	2009	Within 1km
Yellowhammer	5	2019	Within 1km
<i>Mammals (including bats)</i>			
Brown hare	1	1971	Within 1km
Brown long-eared bat	3	2018	910m south
Common pipistrelle bat	2	2018	700m south
Eurasian badger	1	1998	Within 1km
Lesser noctule bat	1	2018	990m south
Long-eared bat sp.	1	2014	700m south
Natterer's bat	1	1986	1km southwest
Pipistrelle bat sp.	2	1986	615m northwest
Serotine bat	3	2018	705m south
Soprano pipistrelle bat	2	2018	700m south
<i>Notable invertebrates</i>			
Beaded chestnut	1	2018	850m southwest
Blood-vein	2	2018	850m southwest
Brussels lace	2	2018	850m southwest
Buff ermine	2	2018	850m southwest
Bulrush veneer	1	2017	850m southwest
Cinnabar	5	2018	850m southwest
Coast shade	1	2018	850m southwest
Common darter	4	2020	850m southwest

Diamond-spot sable	1	2012	850m southwest
Dot moth	2	2018	850m southwest
Dotted ermel	1	2018	850m southwest
Dusky thorn	2	2018	850m southwest
Feathered gothic	1	2017	850m southwest
Four-spotted footman	2	2018	850m southwest
Garden tiger	2	2018	850m southwest
Grey dagger	2	2018	850m southwest
Knot grass	2	2018	850m southwest
Lackey	1	2018	850m southwest
Mottled rustic	1	2018	850m southwest
Mouse moth	1	2018	850m southwest
Muslin footman	1	2018	850m southwest
Pied grey	1	2018	850m southwest
Reddish light arches	1	2018	850m southwest
Rosy rustic	1	2018	850m southwest
Rustic	1	2018	850m southwest
Scarce merveille du jour	1	2010	850m southwest
Shoulder-striped wainscot	1	2018	850m southwest
Small eggar	1	2016	850m southwest
Small emerald	1	2017	850m southwest
Small square-spot	2	2018	850m southwest
Spindle knot-horn	1	2018	850m southwest
White ermine	2	2018	850m southwest
<i>Flora</i>			
Basil thyme	1	1977	Within 1km
Broad-leaved spurge	1	2000	900m northeast
Field gromwell	1	1989	Within 1km
Frog orchid	2	1966	Within 1km
Red hemp-nettle	2	1990	490m northeast

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 improved grassland, bare ground with tree stumps, scattered trees, ornamental hedging, hardstanding, and log, compost and brash piles. A Phase 1 habitat map is provided in Appendix 3 and photographs of the site in Appendix 4, and habitat descriptions are provided below:

Improved grassland

Short-mown improved grassland is present across the site. The following species were recorded within the grassland:

Species	Abundance
Annual meadow-grass	Locally frequent
Cleavers	Locally frequent to occasional
Cock's-foot	Frequent
Common mouse-ear	Locally frequent
Common nettle	Occasional
Common sorrel	Locally occasional
Common whitlow grass	Locally frequent
Creeping bent	Locally abundant
Creeping buttercup	Frequent
Daisy	Occasional
Dandelion sp.	Locally rare
Dove's-foot crane's-bill	Locally occasional
Forget-me-not sp.	Locally occasional
Germander speedwell	Locally frequent
Greater plantain	Locally occasional
Groundsel	Rare
Hedgerow crane's-bill	Occasional
Hogweed	Locally occasional
Lords-and-ladies	Occasional
Perennial rye-grass	Dominant
Perennial sow-thistle	Rare
Red dead-nettle	Occasional
Red fescue	Locally frequent
Ribwort plantain	Occasional
Smooth sow-thistle	Occasional
Spear thistle	Rare
Springy turf-moss	Locally abundant
Violet sp.	Locally occasional
Wavy bitter-cress	Locally occasional
White clover	Locally abundant to locally occasional
Yorkshire-fog	Locally occasional

Bare ground

An area of bare ground with tree stumps is present along the northwest of the site (Appendix 3 – Target Note 2). The following species were recorded in this area:

Species	Abundance
Annual meadow-grass	Locally occasional
Bluebell sp.	Locally occasional
Chervil	Frequent
Cleavers	Locally frequent
Common field speedwell	Locally frequent
Common nettle	Occasional
Dandelion sp.	Locally occasional
Green alkanet	Rare

Ground elder	Locally occasional
Ground-ivy	Locally frequent
Herb-Robert	Locally occasional
Ivy	Frequent
Lesser celandine	Locally frequent
Lords-and-ladies	Occasional
Primrose	Locally rare
Red dead-nettle	Locally frequent
Winter heliotrope	Locally rare

Scattered trees

A number of scattered trees are present in the northern corner of the site and along the northeast boundary; this included mature trees and younger whips. Species recorded are presented in the table below:

Species	Abundance
Alder	Occasional
Ash	Rare
Douglas fir	Locally occasional
Field maple	Rare
Monterey cypress	Occasional

Non-native species-poor hedgerow ('H1')

A non-native species-poor hedgerow ('H1' – Appendix 3) stands between the area of improved grassland and bare ground at the northwest of the site and is dominated by box sp. with locally occasional ivy and lords-and-ladies.

Non-native species-poor hedgerow ('H2')

A well-maintained non-native species-poor cypress hedgerow ('H2' – Appendix 3) is present at the northeast boundary of the site with mature ash trees located at the east and west ends. Species recorded within this hedge are presented in the table below:

Species	Abundance
Alder	Locally frequent
Ash	Locally frequent to rare
Box sp.	Locally occasional
Bramble	Frequent
Cherry laurel	Locally occasional
Cleavers	Frequent
Dove's-foot crane's-bill	Locally occasional
Honeysuckle	Rare
Ivy	Abundant
Leyland cypress	Locally occasional
Lords-and-ladies	Locally occasional
Monterey cypress	Dominant
Red dead-nettle	Locally occasional
Smooth sow-thistle	Locally occasional

Non-native species-poor hedgerow ('H3')

A well-maintained non-native species-poor box/cypress hedgerow ('H3' – Appendix 3) is present at the western side of the main gate in the southwest of the site. The following species were recorded:

Species	Abundance
Box sp.	Locally dominant
Cleavers	Abundant
Common nettle	Locally occasional
Elm	Locally occasional
Ground-ivy	Locally frequent
Ivy	Abundant
Leyland cypress	Locally abundant
Lords-and-ladies	Locally occasional
Monterey cypress	Dominant
Red dead-nettle	Locally occasional
White dead-nettle	Locally occasional

Non-native species-poor hedgerow ('H4')

A box hedge ('H4' – Appendix 3) is present on the southwest boundary of the site. The following species were recorded:

Species	Abundance
Ash	Rare
Box sp.	Locally dominant
Cleavers	Abundant
Elm	Rare
Holly	Rare
Ivy	Dominant

Non-native species-poor hedgerow ('H5')

A well-maintained non-native species-poor cypress hedgerow ('H5' – Appendix 3) is present at the eastern side of the main gate and runs along the southwestern boundary of the site. The following species were recorded within this hedge:

Species	Abundance
Cleavers	Frequent
Cow's parsley	Locally occasional
Ground-ivy	Frequent
Hedgerow crane's-bill	Locally frequent
Leyland cypress	Dominant
Red dead-nettle	Occasional
Yorkshire-fog	Abundant

As all above hedgerows are dominated by non-native species, no hedgerows within the site were deemed to be 'important' under The Hedgerow Regulations

1997 or UK BAP habitats. The hedgerows will be retained as part of the proposed development, therefore no further action is recommended.

Hardstanding

Hardstanding is present comprising a driveway from the southern end of the site which continues north and then northeast. Hardstanding is also present around the buildings in the centre of the site. No flora species of interest were recorded within these areas.

Compost pile

A compost pile (Appendix 3 -Target Note 1) is present to the northwest of the site within an area of bare ground.

Log pile

A log pile (Appendix 3 – Target Note 3) is present on an area of hardstanding to the north of the site.

Brash

A pile of brash (Appendix 3 – Target Note 4) is present on an area of hardstanding in the middle of the site.

Badgers

No evidence of badgers was recorded on site or along the site boundaries such as badger hair, latrines, 'snuffle' marks or setts. There are also no recent records of badgers (HBIC, 2022) within the local area. The surrounding area provides excellent habitats for badgers, however, due to a lack of evidence, this species is considered unlikely to be present on site and no further action is recommended for badgers.

Barn owls

No evidence of barn owl was recorded within any of the buildings on site, therefore this species is not considered to be impacted by the proposed development.

Bats – Preliminary Roost Appraisal (PRA)

PRA survey 2021

An initial Preliminary Bat Roost Assessment report was produced by Joanna Ramsay Horbury BA (Hons), MSc (Horbury, J., 2021) and identified the following:

“Barn 1’ - The internal space is split into three storage areas and is boarded throughout but has no insulation. Multiple gaps were evident. No evidence of use by birds was observed in any of the three sections. From NE to SW; in the first section ~6 droppings of a small bat, most likely pipistrelle sp., were observed; in the second section no evidence of bats was observed; in the third section ~3 droppings of a small bat, most likely pipistrelle sp., were observed.”

“Barn 2’ – The building is a single skin of corrugated iron overlaying wooden panelled walls with an asbestos roof overlain with corrugated iron. ~6 bat dropping were observed on the corrugated iron wall panelling on the SE side of the building.”

“Barn 2’ – The internal space is boarded throughout and has no insulation. ~3 droppings of a small bat, most likely pipistrelle sp., were observed. Evidence of activity by a squirrel, in the form of paw prints in dust, was also observed.”

“Barn 3’ – The internal space is single skin corrugated iron with no boarding or insulation. ~2 droppings of a small bat, most likely pipistrelle sp., were observed.”

Update PRA 2022

Building descriptions

Descriptions of the buildings surveyed for roosting bats are provided in the table below, with building locations and photographs provided in Appendix 3 and 4, respectively:

Building name	Description
Barn 1 ('B1')	<ul style="list-style-type: none"> ▪ The single-storey barn is constructed of corrugated metal with plywood elevations and concrete foundations. ▪ The roof is pitched and constructed of corrugated metal. ▪ A southern extension is present and constructed of corrugated metal with a flat roof. ▪ No internal loft void is present. ▪ The internal space is as follows: <ul style="list-style-type: none"> ○ The roof is constructed from wooden rafters, battens and collar beams. ○ No lining is present on the southern sections. ○ Tarpaulin lining is present in the north.
Barn 2 ('B2')	<ul style="list-style-type: none"> ▪ The single-storey barn features corrugated metal elevations and a roof, with wooden panelling on the northeast elevation and concrete foundations. ▪ The roof is pitched with concrete/fibrous sheeting. ▪ Metal and wooden doorframes are present. ▪ No internal loft void is present. ▪ The internal space is as follows: <ul style="list-style-type: none"> ○ The roof is constructed from wooden rafter beams and chipboard walls are present.
Barn 3 ('B3')	<ul style="list-style-type: none"> ▪ The single-storey barn is constructed of cinderblock, corrugated metal and wooden elevations.

	<ul style="list-style-type: none"> ▪ The metal roof is pitched with a metal ridge. ▪ Wooden windows and door frames are present. ▪ No internal loft void is present. ▪ The internal space is as follows: <ul style="list-style-type: none"> ○ The roof is constructed from wooden rafter, batten and collar beams. ○ Chipboard inner lining is present.
Static caravan ('B4')	<ul style="list-style-type: none"> ▪ The static caravan has a metal panelled exterior and a metal flat roof. ▪ uPVC windows and doors are present. ▪ No internal loft void is present.
Woodstore ('B5')	<ul style="list-style-type: none"> ▪ The wooden log store has a flat metal roof with timber beam supports.

Preliminary Roost Appraisal (PRA) results

A summary of any bat evidence recorded during the visit is provided in the table below (see photograph on Page 52 – Appendix 5 for location of droppings recorded during update PRA survey):

Building name	PRA results
Barn 1 ('B1')	<ul style="list-style-type: none"> • Previous PRA undertaken in 2021 found nine pipistrelle sp. (<i>Pipistrellus sp.</i>) droppings (Horbury, J., 2021). • No droppings were found during the update PRA.
Barn 2 ('B2')	<ul style="list-style-type: none"> • During the previous PRA, nine pipistrelle droppings were recorded around and within the building (Horbury, J., 2021). • Three common pipistrelle (<i>Pipistrellus pipistrellus</i>) bat droppings were found on the corrugated iron wall panelling on the southeast elevation during the update PRA.
Barn 3 ('B3')	<ul style="list-style-type: none"> • Previous PRA undertaken in 2021 (Horbury, J., 2021) found two likely pipistrelle sp. droppings. • No droppings were identified during the update PRA.
Static caravan ('B4')	<ul style="list-style-type: none"> • No evidence of bats was recorded.
Woodstore ('B5')	<ul style="list-style-type: none"> • No evidence of bats was recorded.

DNA analysis of bat droppings

Droppings were sent to Swift Ecology Ltd for DNA analysis and confirmed the droppings recorded on the external wall of Barn 2 'B2' belonged to common pipistrelle bats.

Building assessments - potential bat roosting areas and bat access points

An inspection of the internal and external features of the buildings was undertaken to identify any potential bat access points and potential areas where bats could roost, and these are summarised below:

Building name	Potential bat access points	Potential roosting provisions	Potential of the building
Barn 1 ('B1')	<ul style="list-style-type: none"> Under the eaves of the metal pitched roof. 	<ul style="list-style-type: none"> Under the eaves between the metal roof and wooden walls. 	Confirmed roost for pipistrelle sp. bats
Barn 2 ('B2')	<ul style="list-style-type: none"> Gaps between metal and corrugated roof. Gaps at the eaves. 	<ul style="list-style-type: none"> Under the eaves between the metal and roof. 	Confirmed roost for common pipistrelle bat
Barn 3 ('B3')	<ul style="list-style-type: none"> Gaps between wooden walls and metal pitched roof. Gaps at the eaves. 	<ul style="list-style-type: none"> Under the eaves between the metal roof and wooden walls. 	Confirmed roost for pipistrelle sp. bats
Static caravan ('B4')	<ul style="list-style-type: none"> The roof was in good order and flush with no potential ingress points noted. The eaves were tight and flush along the elevations. No suitable gaps or roosting provisions were noted. 	<ul style="list-style-type: none"> No potential roosting provisions were present, no external crevices were noted. 	'Negligible potential' for roosting bats
Woodstore ('B5')	<ul style="list-style-type: none"> The roof was in good order and flush with no potential ingress points noted. The eaves were tight and flush along the elevations. No suitable gaps or roosting provisions were noted. 	<ul style="list-style-type: none"> No potential roosting provisions were present, no external crevices were noted. 	'Negligible potential' for roosting bats

Based on the previous PRA (Horbury, J., 2021) and update PRA survey, 'Barn 1' and 'Barn 3' were previously identified to support bat roosts for pipistrelle sp. (DNA analysis was not conducted during the former PRA and no droppings were identified during the update survey) and 'Barn 2' supports a roost for common pipistrelle bat (confirmed by DNA analysis of droppings). The surrounding local and wider landscape was also noted to provide highly suitable foraging and commuting habitats for bats. The 'static caravan' and 'woodstore' were considered to hold 'negligible potential' for roosting bats and no further action is recommended in relation to these buildings.

Following current national guidance, a suite of three bat activity (emergence/re-entry) surveys were conducted upon these buildings to identify the type of bat roost(s) present, the numbers of bats, locations of bat access points and if any additional species of bat are roosting within the building. The results of which are discussed under 'Bat activity surveys' below.

Roosting bats and trees

No trees within the site were considered to hold potential for roosting bats; all trees were considered to hold 'negligible potential' for roosting bats due to a

lack of Potential Roosting Features (PRFs) and due to their relative health. No further action is recommended in relation to roosting bats and trees.

Bat activity surveys

Bat activity surveys were conducted; no bats were observed emerging/re-entering 'Barn 1' during any of the surveys; a maximum count of two common pipistrelle bats were recorded roosting within 'Barn 2' during any one survey; and a maximum count of one common pipistrelle bat was recorded roosting within 'Barn 3' during any one survey. A summary of the surveys is provided in the table below whilst full survey results and the locations of bat emergence/re-entry points are provided in Appendix 5:

Survey date	Bat emergences/re-entries	General activity on site
13/06/2022 – Dusk emergence survey	'Barn 1'	
	<ul style="list-style-type: none"> No bats were seen emerging or re-entering 'Barn 1' during the survey. 	<ul style="list-style-type: none"> Common pipistrelles were seen commuting and foraging across 'Barn 1' between 21:48 and 21:59. A soprano pipistrelle bat was heard but not seen at 22:38 in the southwest. Serotine bats (<i>Eptesicus serotinus</i>) were seen commuting and foraging to the northeast of 'Barn 1' between 21:01 and 22:44.
	'Barn 2'	
27/06/2022 – Dusk emergence survey	<ul style="list-style-type: none"> Two common pipistrelles were seen emerging from the southern corner of 'Barn 2' on the eastern elevation under the corrugated iron roof at 21:25 and 21:37. 	<ul style="list-style-type: none"> A Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>) was heard not seen to the north of 'Barn 2' between 21:30 and 21:37. Common pipistrelles were seen commuting and foraging across 'Barn 2' between 21:25 and 22:47. A soprano pipistrelle bat was heard but not seen at 22:37 in the north. Serotines were seen commuting and foraging across 'Barn 2' between 22:01 and 22:41.
	'Barn 3'	
27/06/2022 – Dusk emergence survey	<ul style="list-style-type: none"> One common pipistrelle emerged from the eastern side of 'Barn 3' under the eaves at the southern end of the building at 21:41. 	<ul style="list-style-type: none"> Common pipistrelles were seen foraging and commuting across 'Barn 3' between 21:28 and 22:52. Serotine bats were seen commuting west to east over 'Barn 3' and the driveway between 22:02 and 22:44. A barbastelle was heard not seen in the west at 22:48.
	'Barn 1'	
27/06/2022 – Dusk emergence survey	<ul style="list-style-type: none"> No bats were seen emerging or re-entering 'Barn 1' during the survey. 	<ul style="list-style-type: none"> No bats were seen commuting or foraging around 'Barn 1' during the survey.
	'Barn 2'	

	<ul style="list-style-type: none"> No bats were seen emerging or re-entering 'Barn 2' during the survey. 	<ul style="list-style-type: none"> Common pipistrelles were heard not seen across 'Barn 2' between 21:57 and 22:43. Serotines were seen commuting south to north and back again between 'Barn 3' and 'Barn 2' between 22:11 and 22:56.
	'Barn 3'	
	<ul style="list-style-type: none"> One common pipistrelle emerged from the eastern side of 'Barn 3' under the eaves at the southern end of the building at 21:54. 	<ul style="list-style-type: none"> Common pipistrelles were seen foraging along the treeline in the west between 21:56 and 22:35. Serotines were seen commuting south to north and back again between 'Barn 3' and 'Barn 2' between 22:12 and 22:47.
11/07/2022 - Dawn re-entry survey	'Barn 1'	
	<ul style="list-style-type: none"> No bats were seen emerging or re-entering 'Barn 1' during the survey. 	<ul style="list-style-type: none"> A Leisler's bat (<i>Nyctalus leisleri</i>) was heard not seen in the northwest at 03:42. Common pipistrelles were seen foraging over the roof of 'Barn 1' between 03:50 and 04:22. A soprano pipistrelle bat was recorded at 03:52. Serotine bats were heard but not foraging and commuting around 'Barn 1' between 03:47 and 04:15. Long-eared sp. bats were heard but not seen at 03:40 and 04:17.
	'Barn 2'	
	<ul style="list-style-type: none"> Two common pipistrelles were seen re-entering the southern corner of 'Barn 2' on the eastern elevation under the corrugated iron roof at 04:23 and 04:31. 	<ul style="list-style-type: none"> Leisler's bats were heard but not seen across 'Barn 2' between 03:42 and 03:59. A noctule bat was heard but not seen at 03:48 in the north. Serotine bats were heard but not seen across 'Barn 2' between 03:43 and 04:14. Common pipistrelles were seen commuting and foraging across 'Barn 2' between 04:00 and 04:31.
	'Barn 3'	
<ul style="list-style-type: none"> No bats were seen emerging or re-entering 'Barn 3' during the survey. 	<ul style="list-style-type: none"> A noctule bat was heard but not seen at 03:42. Common pipistrelles were seen foraging and commuting across 'Barn 3' between 04:06 and 04:16. A serotine was heard but not seen at 04:13 in the northwest. 	

Conclusions

The proposed works include the conversion of the three barns into three new residential properties.

'Barn 1' supports an occasional roost for pipistrelle sp.; no droppings were present during the update PRA and DNA analysis of droppings was not conducted during the previous PRA, it is therefore assumed that this building supports likely common pipistrelle bat due to the presence of two additional roosts for this species present on site. A maternity roost is not considered to be present due to a lack of evidence within this building.

'Barn 2' supports a day roost supporting a maximum count of two common pipistrelle bats, located at the eaves at the southern corner of the eastern elevation. 'Barn 3' supports a day roost for an individual common pipistrelle bat also located at the eaves at the southern corner of the eastern elevation of this building.

The buildings are considered unlikely to support hibernating bats and this is due to the metal roofs, which would result in high thermal fluctuation; the metal roofs are considered likely to warm up and cool down rapidly with the winter sun and create unstable conditions for hibernation.

The proposed works will result in the loss of all identified bat roosts through full conversion of the three barns, which will include replacement roofs and elevations.

As the works will result in the loss of two day roosts and an occasional roost for common pipistrelles bat, a bat European Protected Species (EPS) licence from Natural England will be required following planning approval and prior to any works commencing. **Should works commence without an approved EPS licence from Natural England, then a wildlife crime will be committed.**

A bat mitigation, compensation and enhancement strategy is detailed in Section 5 of this report which must be implemented under the approved bat licence following planning approval to ensure the proposed works are lawful.

Commuting and foraging bats

In addition to the above bat roosts, high levels of general bat activity (including socializing, commuting and foraging bats) was recorded on-site including common, Nathusius' and soprano pipistrelle, barbastelle bat, long-eared bats, serotine, Leisler's and noctule bats. Additionally, there are records for natterer's bat (*Myotis nattereri*) bats in the local area (HBIC, 2022). The recorded presence

of barbastelle bat is of significance; this species is listed under Annex II of The EC Habitats and Species Directive 1992 due to its rarity.

A permanent change in the level of lighting on-site, particularly as a result of external light fixtures, holds potential to adversely impact the local bat population; bats will actively avoid lit areas, particularly long-eared and barbastelle species which are highly light-sensitive. Lighting can impede bats and effect foraging behaviours, as well as creating a 'vacuum effect', whereby insects are drawn towards light sources and outside of dark unlit habitats, reducing foraging times for bats using the site. The site and the immediate wider landscape features high quality bat habitats, including mature trees, hedgerow networks and grassland. To ensure bats will continue to use the site, a sensitive lighting strategy is detailed in Section 5 which will form part of the bat EPS licence.

Dormice

The scattered trees and the areas of ornamental hedging were assessed for their potential to support dormice. The ornamental hedging and trees lacked a variety of suitable food plants used by dormice and there are no known records for dormice identified within the data search (HBIC, 2022). Additionally, an EPS licence search was undertaken using MAGIC (MAGIC, 2022) and no licences were identified within 10km of the site. Therefore, this species is not considered likely to be present on site and no further action is recommended for dormice.

Great crested newts

The majority of the site comprised short-mown improved grassland and hardstanding, which are considered to be of limited value for great crested newts (GCN). A pond was identified approximately 90m to the northwest of the site (MAGIC, 2022), situated within private grounds; access permission was not granted to survey this pond. The nearest known breeding pond is located approximately 8.5km southeast of the site (MAGIC, 2022) and due to a lack of records and presence of sub-optimal habitats on site, GCN are not considered to be impacted as part of the proposed development and no further action is recommended for GCN.

Nesting birds

The hedgerows, mature trees and buildings on site hold high potential for nesting birds. A house sparrow nest was identified on the southeast elevation between the eaves and roof lining of 'Barn 2' (see photo 17 – Appendix 4). Under The Wildlife and Countryside Act (1981) (as amended), it is an offence to disturb

nesting birds and therefore a mitigation and compensation strategy is detailed in Section 5 to ensure impacts on nesting birds are minimized during the proposed works.

Reptiles

The majority of the site comprised hardstanding and short-mown improved grassland which is considered to be of limited value for reptiles. The ornamental hedges and compost pile may provide fringe habitats for reptiles; however, it is considered unlikely due to the isolated nature of these habitats and due to the ongoing regular maintenance of the grassland. The brash pile and log pile are newly created and are surrounded by hardstanding. For these reasons, impacts on reptiles are not anticipated and no further action for reptiles is recommended.

5. Ecological mitigation, compensation and enhancement strategy

River Avon SAC nutrient increases

The application site falls within the catchment of the River Avon SAC. There is a need to consider water discharge into the River Avon SAC.

Where the additional sewage discharges from the development cannot be accommodated by the Sewage Treatment Works (STW), the development will be required to undertake additional measures to demonstrate that the proposals would not have an adverse effect upon the SAC. This may include land conversion / management agreements with farmers in the catchment to change land use output from high to low, in combination with water restriction usages.

A drainage scheme will therefore need to be designed indicating how surface water run-off would be managed, and that will ensure any foul water is directed away from the River Avon. A nutrient budget calculator will also be required and can only be determined once drainage has been finalised; consultation with the Local Planning Authority must be undertaken to determine suitable mitigation.

Bat mitigation, compensation, and enhancement strategy

The proposed works will result in the destruction of two common pipistrelle day roosts and one occasional roost for likely common pipistrelle bat (DNA analysis of droppings was not conducted) (a 'commoner' species) (Wray *et al.*, 2010).

In accordance with The Bat Mitigation Guidelines (Mitchell-Jones, A. J., 2004), two day roosts and an occasional roost for a 'common' bat species are of 'low conservation significance' and the level of mitigation and compensation required for this development includes flexibility over provisions of bat boxes, access to new buildings, with no timing restraints or post-monitoring required.

As the proposed works will result in the loss of the identified bat roosts, **a bat European Protected Species (EPS) licence from Natural England will be required prior to any works commencing.** The EPS licence can only be sought following approval of planning consent(s).

The following works method statement will be implemented in line with current guidance and will form part of the bat EPS licence from Natural England (see Appendix 6 for details of bat mitigation and compensation):

Temporary roosting provisions – bat boxes to be erected prior to works commencing:

- To ensure temporary roosting provisions are on site, prior to any works commencing, two 'Improved Cavity Bat Boxes' will be erected on mature trees in the north of the site. The boxes will be erected at a minimum height of 3.5m from ground level and the entrances will not be obstructed by limbs or foliage to ensure a clear flight path to each bat box. The bat boxes may be purchased from websites such as www.nhbs.com or www.wildcare.co.uk.

Temperature / weather restrictions:

- No timing restrictions will apply for works due to the low number of bats roosting within the buildings. However, works may only commence following four nights/days when temperatures are consecutively above 8°C to safeguard any potential bats. Works will not take place during adverse weather conditions (during rain or strong winds) where the bat may be harmed if it became disturbed and flew away.

Mitigation - Ecological Clerk of Works (ECoW) for bats:

- Prior to any works commencing, the licensed bat worker will provide a 'toolbox talk' to the contractors on the site regarding the legal protection afforded to bats, bat biology, the contractors' responsibilities and any conditions set out within this report and the approved EPS licence. The contractors will be continually aware of bats and the potential for them to be present during the works and a copy of the licence will always be retained on site for contractors to refer to.
- A licensed bat worker will attend the site on the day of all roof and elevation removal works etc. An internal survey will take place prior to any destructive works looking for bats within the buildings and endoscopes may be used to search under eaves and at the wall tops. Should a bat be present within any areas, the bat worker wearing gloves will capture the bat by hand or with a hand net and transport the bat to the bat boxes within the site. If no bats are present, then works will continue.
- The bat licensed ecologist will supervise the 'soft' dismantling of the roof panels, ridge coverings, wall tops/eaves and linings/battens etc. Soft dismantling will be undertaken by hand and hand tools only, each feature will be removed gently pulled away from the roof to avoid crushing and careful ridge removal and thorough check within the eaves and ridge areas will be undertaken by hand. Other features will be removed carefully and inspected for the presence of bats and/or bat evidence. Should any bats be

present the licensed bat worker will remove the bat to the bat box following an examination of the bat.

- Once the features suitable to support roosting bats have been dismantled, then works can continue unsupervised. Should a bat be discovered at any other time then works will cease and the licensed bat ecologist contacted for advice. All contractors are strictly forbidden from handling bats.
- Injured or underweight bats will be taken immediately into care (as directed by the Batworker's Manual, s. 7. 3, pp 64 – 66; 3rd ed. 2004 and with reference to the Bat Conservation Trusts Bat Care Guidelines a Guide to bat care for rehabilitators 2nd ed 2016).

Compensation - permanent replacement bat roosting provisions

As the proposed works will result in the loss of two common pipistrelle day roosts and one occasional roost, the following replacement bat roosting features will be provided within the newly converted dwellings:

- To compensate for the loss of the two common pipistrelle day roosts and occasional roost., a total of three bat access tiles will be created on the new dwellings. Each new plot will feature one raised tile located on the southeast-facing pitch of the roof. The access tiles will lead to a crevice between the tile and felt. This will be created by raising a tile by 20mm with small wedges either side of the tile. A crevice will be created allowing the bats to roost between the tile and the underlining felt.
- **The new roofs of all the new dwellings must be lined exclusively with bituminous 1F type roofing felt; Breathable Roofing Membranes (BRMs) are non-woven and are NOT suitable for roosting bats**, this is due to loose fibres 'fluffing up' over time and resulting in entrapment/injury and eventual death of roosting bats (Waring *et al.*, 2011). Natural England licences will be granted where breathable membranes will be used.
- No lighting will be erected within 5m of the replacement access tiles. Any proposed external lighting within the site will be motion triggered and directed away from the roof and hooded/cowled towards the ground (see below for full lighting strategy).

Commuting and foraging bats

The site supports high numbers of foraging and commuting bats, of note is barbastelle bat which is a very rare species listed under Annex II of The EC Habitats and Species Directive 1992. A considerate lighting scheme will be required to ensure the local bat population is not deterred from foraging on site

and accessing replacement bat roosts. The following strategy will be implemented and form part of the bat EPS licence from Natural England:

- Any external lighting required as part of the development (e.g. security lighting) will be motion-triggered, set on timers (1 minute or less) and directed towards the ground to avoid upward light spill.
- For external light fixtures, only LED type luminaires which lack UV elements will be used, due to their sharp cut-off and lower intensity with a more directional light spill through a narrower beam. A warm white spectrum (ideally 2700Kelvin but up to 3000Kelvin however, lower is preferred) will be adopted to reduce the blue light component. Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Hoods, baffles and/or cowls will be used as a last resort to direct the light spill downward and prevent upward illumination.
- No lighting will be erected within 5m of the new bat access tiles to ensure bats are not deterred from accessing roosting features.

European Protected Species (EPS) licence application

The above bat mitigation and compensation strategy will be fully implemented under a bat EPS licence. The bat EPS licence can only be sought from Natural England after Planning Permission has been granted and the appropriate surveys have been undertaken. The licence must be approved by Natural England prior to any works commencing on-site to allow the works to proceed lawfully; if works proceed without EPS licensing in place the works would constitute an offence. **Natural England requires a minimum of 6 weeks to process and issue a bat licence application following planning approval.** Note that an update building inspection will be required within 3 months of the bat licence application; and if the licence is applied for after 30th April 2023, a minimum of one update dusk survey upon the buildings will be required.

Bat EPS licences will only be issued where the application has considered the three following tests and met the following requirements:

- The development is in the interests of public health and safety or is required for other imperative reasons of overriding public interest.
- There is no satisfactory alternative to the development.

- The development will not be detrimental to the maintenance of the bat populations concerned at a Favourable Conservation Status (FCS) in their natural range.

The three tests above must be explored at the planning stage (as noted in the R (Vivienne Morge) v Hampshire County Council 2011 case). The tests have been considered below:

Imperative reasons of overriding public interest

The applicant is proposing conversion of the buildings to three new residential units; the existing buildings have come to the end of their useful life and the site has become redundant.

There is an identified need in the New Forest District Council Local Plan 2016-2036 Part One: Planning Strategy under 'Policy STR5: Meeting our housing needs' where there is a target to deliver at least 10,420 homes in the Plan area between 2016-2036, with approximately 2,000 homes to be delivered in the period 2021-22 to 2025-26 (New Forest District Council, 2020). The conversion of the redundant barns will help contribute towards the local housing stock and deliver new homes within the Plan area. The conversion of the barns to dwellings will make best use of the site and ensure the buildings do not deteriorate further, whilst ensuring the bat population on site is preserved.

No satisfactory alternative

The applicant no longer has use for the buildings which are deteriorating and have come to the end of their useful life. The full demolition and construction of three new dwellings was considered as an alternative, however, conversion was considered the most economically viable option whilst preserving the character of the site. The 'do nothing' option has been discounted, as the buildings would continue to deteriorate and the site would serve no useful purpose to the landowner.

The proposed works have been judged as the most satisfactory option, whilst ensuring the preservation of the bat population present on site.

Favourable conservation status of the bat population

The above mitigation strategy has been presented with a view to ensure the bat population is retained and enhanced within the site.

Nesting birds

The ornamental hedging and scattered trees within the site have high potential to be utilised by nesting birds. A house sparrow nest was seen on the southeast elevation between the eaves and roof lining on 'Barn 2' which will be lost to the works. The bird nest must be replaced as part of the final proposed plans, The following mitigation strategy will be strictly adhered to for any vegetation clearance works, this will minimise impacts on any potential nesting birds on-site and within the vicinity:

- One 'Vivara Pro WoodStone House Sparrow Nest Box' will be placed on the northeast gable of 'Plot 2' as close to the apex as possible to compensate for the loss of the house sparrow nest (see Appendix 6).
- Preferably, vegetation clearance and destructive building works will not take place from 28th February to 30th September to avoid the period within the nesting season.
- Should site clearance and/or building works take place within the nesting season, a pre-works check for signs of nesting birds will be undertaken by the ecologist. If an active nest is encountered, all works will cease immediately, and the nest will be left undisturbed. With areas of scrub/denser vegetation this will involve phased clearance in small sections, allowing the ecologist to check the area before strimming continues. The ecologist will instate a minimum 5m works exclusion buffer zone marked out with red/white hazard tape and a second site visit by the ecologist to check the status of the nest will be required before works can continue in this area. Works may only continue when the nest is deemed to be unoccupied/no longer active by the ecologist.
- **If a bird's nest is encountered at any other unsupervised time, all works in the area must cease immediately the ecologist must be contacted immediately to provide further advice.**

Ecological enhancements

To ensure the proposed development is compliant with Section 15 of the NPPF and Policy DM2 of the local plan (New Forest District Council, 2020), the following ecological enhancements will be included as part of the development (see Appendix 6 for locations and designs):

- Three additional 'raised bat access tiles' leading to an area between the tile and bitumen felt will be installed in the dwellings (one access tile on each of the new dwellings) This will be created by raising a tile by 20mm with

small wedges/rolled lead either side of the tile. A crevice will be created allowing the bats to roost between the tile and the underlining felt.

- Three 'Vivara Pro WoodStone House Sparrow Nest Box' will be placed on each of the new dwellings (one bird box per dwelling) on the northeast gables as close to the apex as possible.
- Three new fruit trees will be planted and must be from British sourced stock, such as apple (*Malus spp.*), crab apple (*Malus sylvestris*), plum (*Prunus domestica*) or pear (*Pyrus spp.*). The fruit trees will provide foraging opportunities for local birds and support invertebrates.
- Any remaining landscaping and planting will comprise native British species only and sourced from British-grown stock. Species such as hazel, rowan, elder, hawthorn, blackthorn, beech and hornbeam.
- 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 13cm x 13cm to create hedgehog highways across the gardens.

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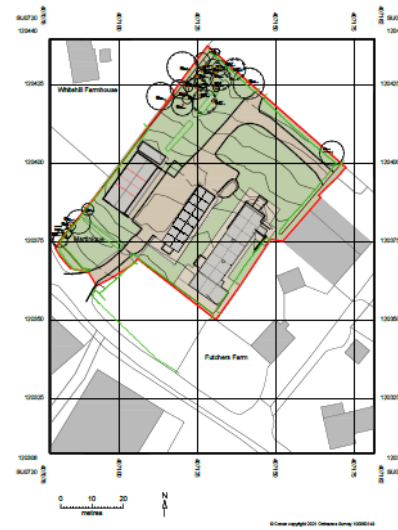
Appendix 1: Existing site plan

Martinique Farm

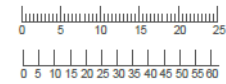
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Existing Site plan 1:500



Site Location plan 1:1250

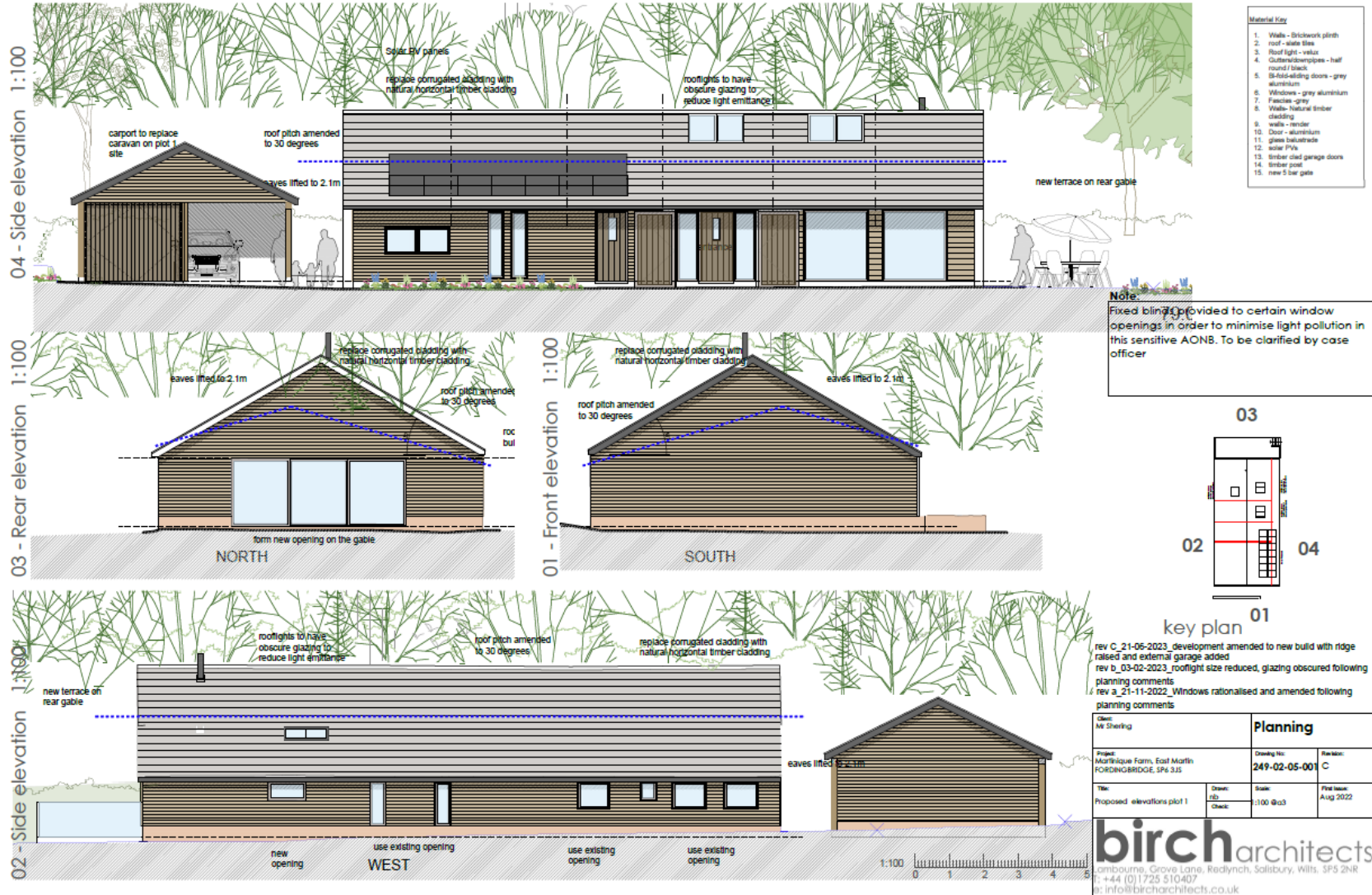


Rev -

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Project: Martinique Farm, East Martin FORDINGBRIDGE, SP6 3JS		Drawing No: 249-02-01-001	Revision:
Title: Existing Site plan	Drawn: ES	Scale: 1:500 & 1:250	Print Issue: Aug 2022
 birch architects Lambourne, Grove Lane, Redlynch, Salisbury, Wilt. SP5 2NR T: +44 (0)1725 510407 E: info@bircharchitects.co.uk			

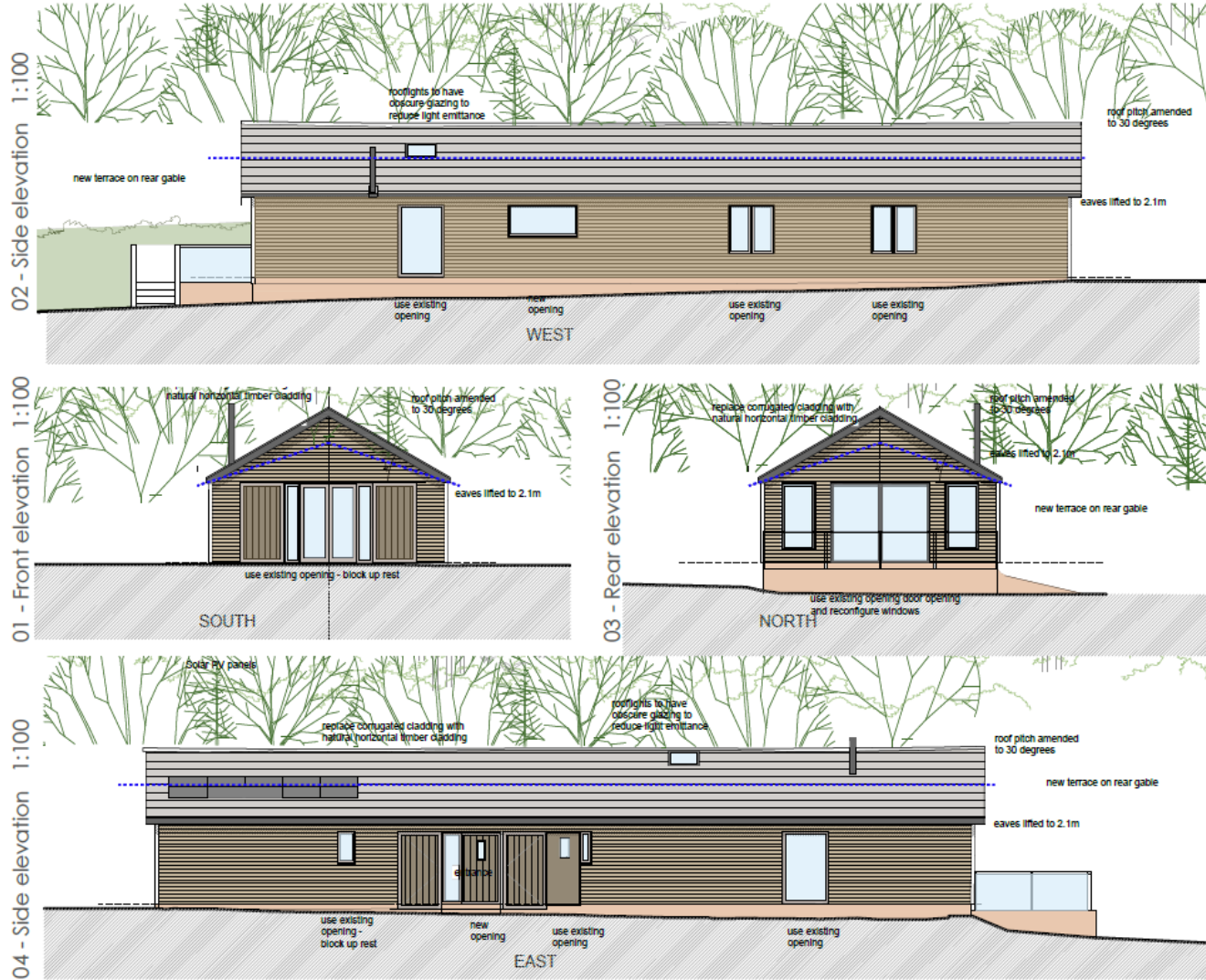
Martinique Farm

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Martinique Farm

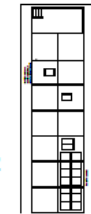
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Material Key

1. Walls - Birchwork plinth
2. roof - slate tiles
3. Roof light - velux
4. Gutters/downpipes - half round /black
5. Bi-fold sliding doors - grey aluminium
6. Windows - grey aluminium
7. Fascias - grey
8. Walls - natural timber cladding
9. walls - render
10. Door - aluminium
11. glass balustrade
12. solar PVs
13. timber clad garage doors
14. timber post
15. new 2 bay gate

03



key plan 01

Note:
Fixed blinds provided to certain window openings in order to minimise light pollution in this sensitive AONB. To be clarified by case officer



rev C_21-05-2023_development amended to new build with ridge raised and external garage added
rev b_03-02-2023_rooflight size reduced, glazing obscured following planning comments
rev a_21-11-2022_Windows rationalised and amended following planning comments

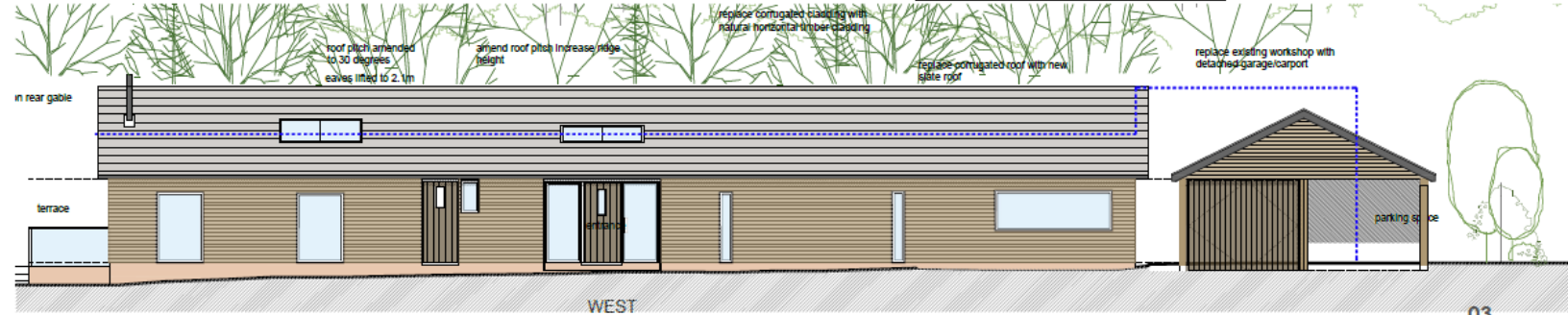
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Title: Proposed elevations plot 2	Drawn: JEB	Scale: :100 @A3	Print Date: Aug 2022

bircharchitects
Lambourne, Grove Lane, Keadyinch, Salisbury, Wilt. SP9 2NR
T: +44 (0)1725 510407
E: info@bircharchitects.co.uk

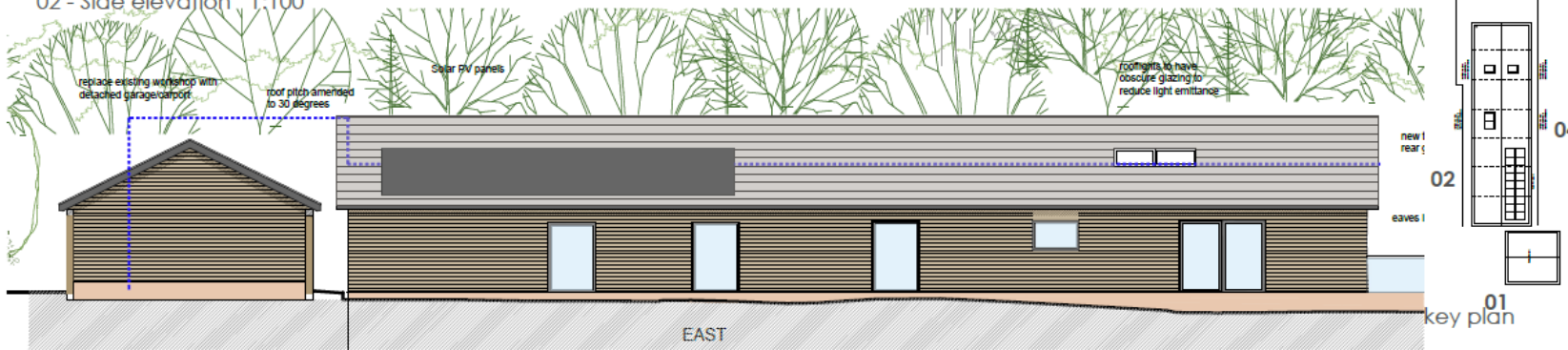
Martinique Farm

Note:
Fixed blinds provided to certain window openings in order to minimise light pollution in this sensitive AONB. To be clarified by case officer

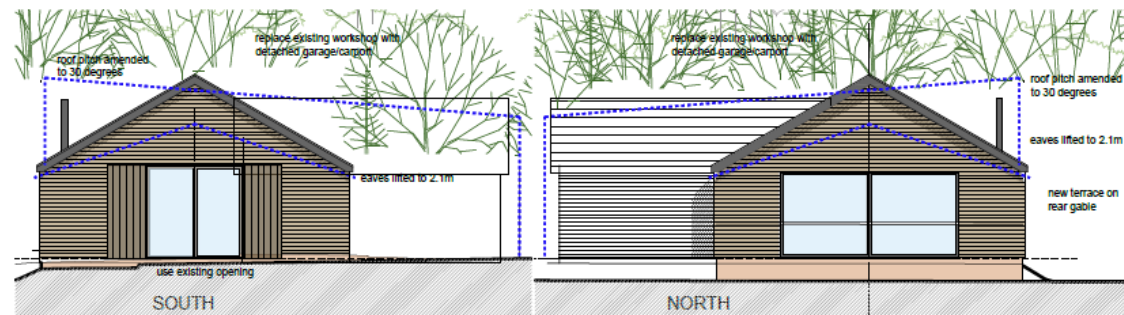
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02 - Side elevation 1:100



04 - Side elevation 1:100



01 - Front elevation 1:100

03 - Rear elevation 1:100

- Material Key**
1. Walls - Brickwork piers
 2. roof - slate tiles
 3. Roof light - white
 4. Outbuildings - half round / black
 5. Bi-fold sliding doors - grey aluminium
 6. Windows - grey aluminium
 7. Frames - grey
 8. Walls - Natural timber cladding
 9. walls - render
 10. Door - aluminium
 11. glass balustrade
 12. solar PVs
 13. timber clad garage doors
 14. timber post
 15. new 5 bar gate

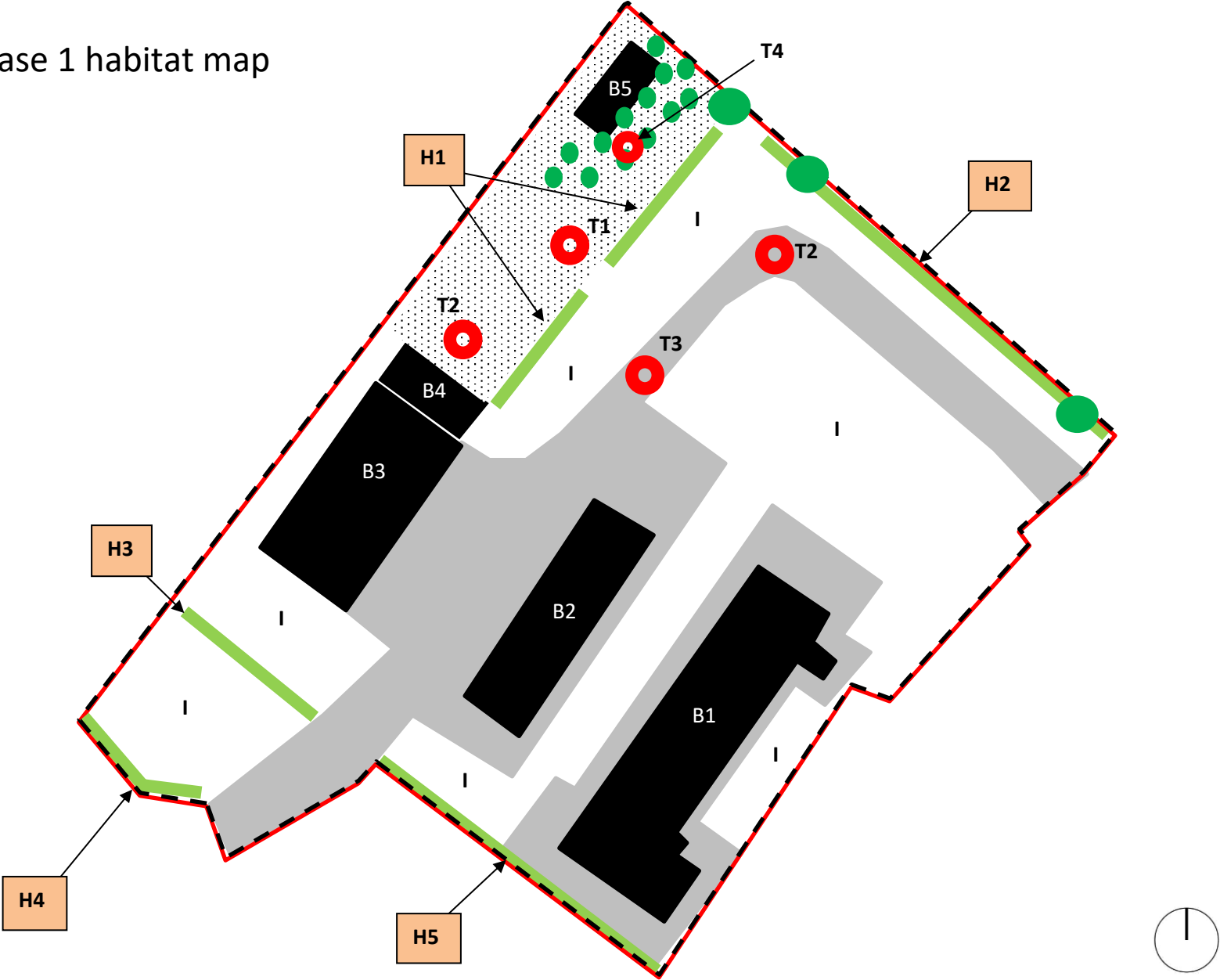


rev C_21-06-2023_development amended to new build with ridge raised and external garage added
rev D_03-02-2023_footlight size reduced, glazing obscured following planning comments
rev A_21-11-2022_Windows rationalised and amended following planning comments








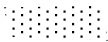

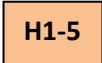
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Project: Martinique Farm, East Martin FORDINGBRIDGE, SP6 3JS		Drawing No: 249-02-05-003	Revision: C
Title: Proposed elevations plot 3	Drawn: LSD	Scale: 1:100 @a3	File Issue: Aug 2022

bircharchitects
Lombourne, Grove Lane, Redlynch, Salisbury, Wilt, SP5 2NR
t: +44 (0)1725 510407
e: info@bircharchitects.co.uk

Appendix 3: Phase 1 habitat map



Phase 1 habitat map key

Habitat code	Description
	Improved grassland
	Application site boundary
	Scattered trees
	Fence
	Non-native species-poor hedgerows
	Buildings
	Hardstanding
	Bare ground
	Target Notes
	Hedgerow numbers

Building references

Building reference	Description
B1	'Barn 1'
B2	'Barn 2'
B3	'Barn 3'
B4	'Static caravan'
B5	'Woodstore'

Target Note references

Target Note reference	Description
T1	Compost pile
T2	Log pile
T3	Brash pile
T4	Bird nest box

Appendix 4: Photographs



Photo 1: East elevation of 'B1'.



Photo 2: East elevation of 'B2'.



Photo 3: East elevation of 'B3'.



Photo 4: North elevation of 'B1'.



Photo 5: West elevation of 'B4'.



Photo 6: Hard standing between 'B2' and 'B3'.



Photo 7: Compost pile in area of bare ground.



Photo 8: Scattered trees at the north of the site.



Photo 9: Brush pile.



Photo 10: Main lawn northwest of buildings.



Photo 11: Cypress hedge ('H5') at southwest boundary.



Photo 12: Hedgerow at northeast boundary ('H2').



Photo 13: Interior of 'B1'.



Photo 14: Interior of 'B1'.



Photo 15: Interior of 'B3'.



Photo 16: Bat droppings on external of 'B2'.



Photo 17: House sparrows nesting in 'B2'.

Appendix 5: Bat activity survey results

13th June 2022- Dusk emergence survey ('Barn 1')

Bat activity survey						
Date: 13/06/2022	Sunset: 21:22	Weather conditions: Clear	Location: Martinique Farm, East Martin- 'Barn 1'			
Temp: Start: 14°C End: 12°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 0/8	Start Time: 21:07	End Time: 22:52	Surveyors and locations: Kieran Mullany in east and Laurence wills in southwest
Time	Sp. if ID'd	Number	Comments			
21:48	Common pipistrelle	1	Foraging up and down hedgerow to the east.			
21:59	Common pipistrelle	1	Commuted north to south between 'Barn 1' and 'Barn 2'.			
22:01	Serotine	1	Foraging around site in the northeast.			
22:14	Serotine	1	Heard not seen in the southwest.			
22:15	Serotine	1	Commuted southeast to northwest across 'Barn 1'.			
22:34	Serotine	1	Heard not seen in the southwest and east.			
22:38	Soprano pipistrelle	1	Heard not seen in the southwest.			
22:44	Serotine	1	Heard not seen in the southwest.			

13th June 2022- Dusk emergence survey ('Barn 2')

Bat activity survey						
Date: 13/06/2022	Sunset: 21:22	Weather conditions: Clear	Location: Martinique Farm, East Martin- 'Barn 2'			
Temp: Start: 14°C End: 12°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 0/8	Start Time: 21:07	End Time: 22:52	Surveyors and locations: Georgia Linter in south and Martin Roberts in north
Time	Sp. if ID'd	Number	Comments			
21:25	Common pipistrelle	1	Emerged from south corner of 'Barn 2' where corrugated iron roof bends over front elevation (see red circle in image below).			
21:30-21:37	Nathusius' pipistrelle	1	Heard not seen in the north .			
21:31	Common pipistrelle	1	Foraging in north then commuted south over 'Barn 2'.			
21:37	Common pipistrelle	1	Emerged from south corner of 'Barn 2' where corrugated iron roof bends over front elevation (see red circle in image below).			
21:45-21:58	Common pipistrelle	2	Heard not seen in north.			
22:01	Serotine	1	Commuted southwest to northeast between 'Barn 2' and 'Barn 3'.			
22:10	Serotine	1	Commuted south to north over 'Barn 2' towards trees.			
22:11	Serotine	1	Commuted west to east over 'Barn 2' towards hedgerow.			

22:14	Serotine	2	Commutated southwest to northeast between 'Barn 2' and 'Barn 3'.
22:15	Common pipistrelle	1	Heard not seen in the south.
22:29	Serotine	1	Heard not seen in the north.
22:31	Serotine	1	Commutated west to east over 'Barn 2' towards treeline.
22:34	Serotine	1	Heard not seen in the north.
22:37	Soprano pipistrelle	1	Heard not seen in the north.
22:41	Serotine	1	Heard not seen in the north.
22:47	Common pipistrelle	1	Heard not seen in the north.



13th June 2022- Dusk emergence survey ('Barn 3')

Bat activity survey						
Date: 13/06/2022	Sunset: 21:22	Weather conditions: Clear	Location: Martinique Farm, East Martin- 'Barn 3'			
Temp: Start: 14°C End: 12°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 0 /8	Start Time: 21:07	End Time: 22:52	Surveyors and locations: Becci Smith in west and Anne Smith in east
Time	Sp. if ID'd	Number	Comments			

21:28	Common pipistrelle	1	Commuted south to west along southwest hedge.
21:30	Common pipistrelle	1	Commuted south to north over 'Barn 3'.
21:34	Common pipistrelle	1	Foraging in the north along northwest hedge.
21:38	Common pipistrelle	1	Commuted north to south over 'Barn 3'.
21:41	Common pipistrelle	1	Emerged from southern eaves of 'Barn 3' then commuted north along western elevation (see red circle in image below)
21:41- end	Common pipistrelle	1	Foraging along northwest hedge.
21:45	Common pipistrelle	1	Commuted south to north along treeline.
21:49	Common pipistrelle	1	Commuted south to north along treeline then foraging in north.
21:58	Common pipistrelle	1	Commuted south to north along treeline.
22:02	Serotine	1	Commuted west to east over 'Barn 3' and driveway.
22:03	Serotine	2	Commuted west to east over 'Barn 3' and driveway.
22:15	Serotine	1	Commuted west to east over 'Barn 3' and driveway.
22:29-22:34	Serotine	1	Heard not seen in the east and west.
22:44	Serotine	1	Heard not seen in the west.
22:48	Barbastelle	1	Heard not seen in the west.



27th June 2022- Dusk emergence survey ('Barn 1')

Bat activity survey						
Date: 27/06/2022	Sunset: 21:26	Weather conditions: Clear	Location: Martinique Farm, East Martin- 'Barn 1'			
Temp: Start: 13°C End: 12°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 0 / 8	Start Time: 21:11	End Time: 22:56	Surveyors and locations: Fran Briggs in the north and Martin Roberts in the south.
Time	Sp. if ID'd	Number	Comments			
No bats were seen across 'Barn 1' during the survey.						

27th June 2022- Dusk emergence survey ('Barn 2')

Bat activity survey						
Date: 27/06/2022	Sunset: 21:26	Weather conditions: Clear	Location: Martinique Farm, East Martin- 'Barn 2'			
Temp: Start: 13°C End: 12°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 4-5/8	Start Time: 21:11	End Time: 22:56	Surveyors and locations: Fran Briggs in the north and Martin Roberts in the south.
Time	Sp. if ID'd	Number	Comments			
21:57 – 22:10	Common pipistrelle	1	Heard but not seen in the south, infrequently.			
22:11	Serotine	1	Commuted between 'Barn 2' and 'Barn 3' from southwest to northeast.			
22:14 – 22:56	Serotine	1	Commuting across the site, infrequently.			
22:17	Common pipistrelle	1	Heard but not seen in the south.			
22:20 – 22:23	Serotine	1	Commuted between 'Barn 2' and 'Barn 3' from northeast to southwest and back again.			
22:22	Common pipistrelle	1	Heard but not seen in the north.			
22:29	Serotine	1	Heard but not seen in the south.			
22:31	Common pipistrelle	1	Heard but not seen in the south.			
22:39	Serotine	1	Heard but not seen in the south.			
22:43	Common pipistrelle	1	Heard but not seen in the south.			
22:46	Serotine	1	Heard but not seen in the south.			

27th June 2022- Dusk emergence survey ('Barn 3')

Bat activity survey						
Date: 27/06/2022	Sunset: 21:26	Weather conditions: Clear	Location: Martinique Farm, East Martin- 'Barn 3'			
Temp: Start: 13°C End: 12°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 0 / 8	Start Time: 21:07	End Time: 22:52	Surveyors and locations: Becci Smith in the south and Caitlin McQuillan in the north

Time	Sp. if ID'd	Number	Comments
21:54	Common pipistrelle	1	Emerged from the eastern side of 'Barn 3' under the eaves at the southern end of the building and then commuted east and foraged along the western hedgerow until 21:58 (see red circle in image below).
21:56 – 22:35	Common pipistrelle	2	Foraging along the treeline to the west.
22:02 – 22:25	Common pipistrelle	1	Intermittent foraging along the western hedgerow.
22:12	Serotine	2	Commuted south to north between the two western buildings.
22:13	Common pipistrelle	1	Commuted south to north between the two western buildings.
22:13	Serotine	3	Commuted south to north between 'Barn 2' and 'Barn 3'.
22:17	Common pipistrelle	1	Commuted north to south between 'Barn 2' and 'Barn 3'.
22:20	Serotine	1	Commuted north to south between 'Barn 2' and 'Barn 3'.
22:23	Serotine	1	Commuted east to west along the south and then, north to south between 'Barn 2' and 'Barn 3'.
22:30	Serotine	1	Commuted south to north.
22:35	Serotine	1	Heard not seen in the south.
22:42	Serotine	1	Heard but not seen in the north and south.
22:47	Serotine	1	Heard not seen in the south.



11th July 2022- Dawn re-entry survey ('Barn 1')

Bat activity survey						
Date: 11/07/2022	Sunrise: 05:06	Weather conditions: Clear	Location: Martinique Farm, East Martin- 'Barn 1'			
Temp: Start: 13°C End: 13°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 3/8	Start Time: 03:30	End Time: 05:21	Surveyors and locations: Laurence Wills in the south and Kieran Mullany in the northwest.
Time	Sp. if ID'd	Number	Comments			
03:42	Noctule	1	Heard but not seen in the northwest.			
04:06	Common pipistrelle	1	Heard but not seen in the northwest.			
04:08	Common pipistrelle	3	Foraging over the roof.			
04:13	Serotine	1	Heard but not seen in the northwest.			
04:16	Common pipistrelle	1	Heard but not seen in the northwest.			

11th July 2022- Dawn re-entry survey ('Barn 2')

Bat activity survey						
Date: 11/07/2022	Sunrise: 05:06	Weather conditions: Clear	Location: Martinique Farm, East Martin- 'Barn 2'			
Temp: Start: 13°C End: 13°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 3/8	Start Time: 03:30	End Time: 05:21	Surveyors and locations: Laurence Wills in the south and Martin Roberts in the north.
Time	Sp. if ID'd	Number	Comments			
03:42	Leisler's bat	1	Heard but not seen in the north.			
03:43	Serotine	1	Heard but not seen in the south.			
03:48	Noctule	1	Heard but not seen in the north.			
03:49	Serotine	1	Heard but not seen in the south.			
03:52	Leisler's bat	1	Heard but not seen in the north.			
03:53	Leisler's bat	1	Heard but not seen in the south.			
03:59	Leisler's bat	1	Heard but not seen in the south.			
04:00	Common pipistrelle	1	Commuted south to north over 'Barn 2'.			
04:03	Common pipistrelle	1	Heard but not seen in the north.			
04:05	Serotine	1	Heard but not seen in the north.			
04:05	Common pipistrelle	1	Heard but not seen in the north.			
04:07 – 04:20	Common pipistrelle	2	Commuting and foraging around the east boundary of the site.			
04:07	Common pipistrelle	1	Commuted from southeast to northwest.			
04:14	Serotine	1	Heard but not seen in the north.			
04:15	Common pipistrelle	1	Heard but not seen in the north.			

04:21	Common pipistrelle	1	Committed over 'Barn 2' from southwest and circled around.
04:23	Common pipistrelle	1	Re-entered the southeast of 'Barn 2' at the eaves (see red circle in image below).
04:24	Common pipistrelle	2	Circling the north end of the building.
04:30	Common pipistrelle	1	Committed from southwest to north behind me.
04:31	Common pipistrelle	1	Re-entered at southern elevation of 'Barn 2' under the eaves (see red circle in image below).



11th July 2022- Dawn re-entry survey ('Barn 3')

Bat activity survey						
Date: 11/07/2022	Sunrise: 05:06	Weather conditions: Clear	Location: Martinique Farm, East Martin - 'Barn 3'			
Temp: Start: 13°C End: 13°C	Wind Force (Bft): 0/12	Equipment: EchoMeter Touch 2 + tablets x 2	Cloud cover (Oktas): 3/8	Start Time: 03:30	End Time: 05:21	Surveyors and locations: Jenny Manley in the south and Fran Briggs in the north.
Time	Sp. if ID'd	Number	Comments			
03:40	Long-eared sp.	1	Heard but not seen in the northwest.			
03:42	Leisler's bat	1	Heard but not seen in the northwest.			

03:47	Serotine	1	Heard but not seen in the southwest.
03:50 – 04:30	Common pipistrelle	1	Foraging in the southwest.
03:52	Soprano pipistrelle	1	Commuted north to south over the roof.
03:52	Common pipistrelle	1	Heard but not seen in the northwest.
04:04	Common pipistrelle	1	Heard but not seen in the northwest.
04:06	Serotine	1	Commuted northeast to southwest over building.
04:07	Common pipistrelle	1	Foraging in the northeast.
04:12	Serotine	2	Foraging in the southwest.
04:15	Serotine	1	Heard but not seen in the northwest.
04:17	Long-eared sp.	1	Heard but not seen in the southwest.
04:18	Common pipistrelle	2	Commuted north to south on the west side.
04:22	Common pipistrelle	1	Commuted between 'Barn 2' and 'Barn 3' north to south.

Appendix 6: Ecological mitigation, compensation and enhancement plan

Key:



x 3 raised 'bat access tiles' to be placed on the southeast-facing roof pitch of the dwellings (one tile per dwelling) to compensate for the loss of the common pipistrelle day roosts and occasional roost. The access tiles will lead to a crevice between the tile and felt. This will be created by raising a tile by 20mm with small wedges/rolled lead either side of the tile. A crevice will be created allowing the bats to roost between the tile and the underlining felt (See Figure 1 overleaf).



x 3 additional raised 'bat access tiles' to be installed on the southeast-facing roof pitch of the dwellings (one tile per dwelling) as an ecological enhancement.

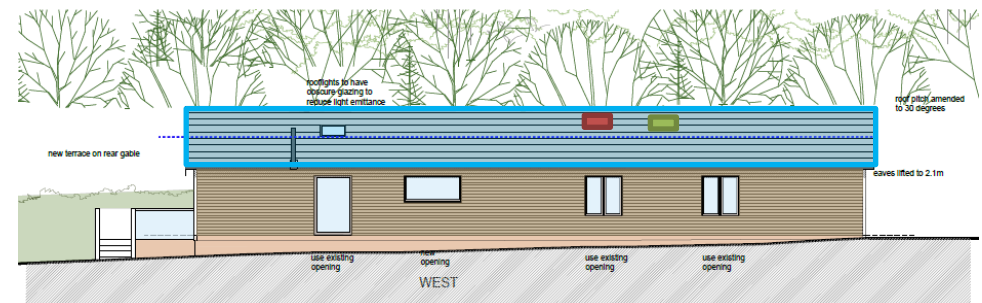


The new roofs of all the new dwellings (Plots 1-3) **must be lined exclusively with bituminous 1F type roofing felt; Breathable Roofing Membranes (BRMs) are non-woven and are NOT suitable for roosting bats.**

Plot 1:



Plot 2:



Plot 3:

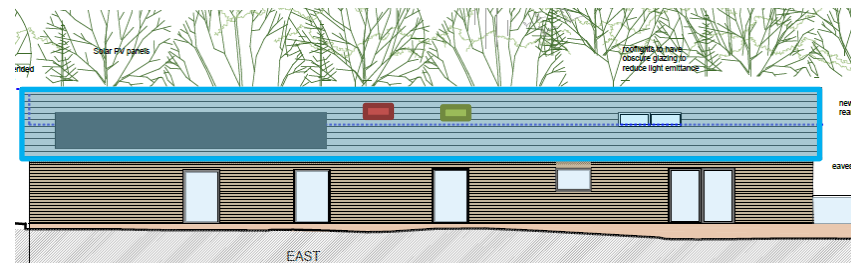
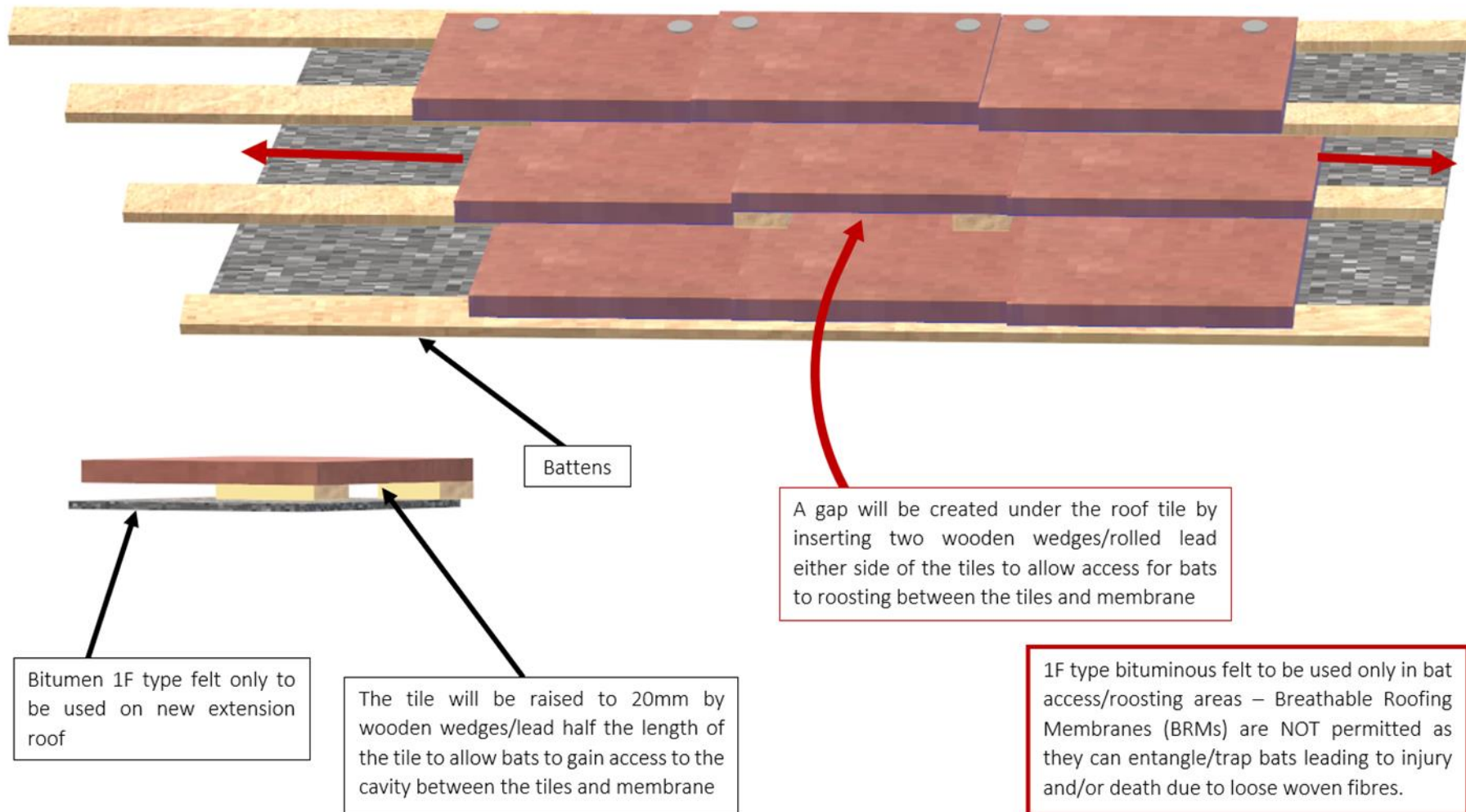


Figure 1: Raised bat access tile design



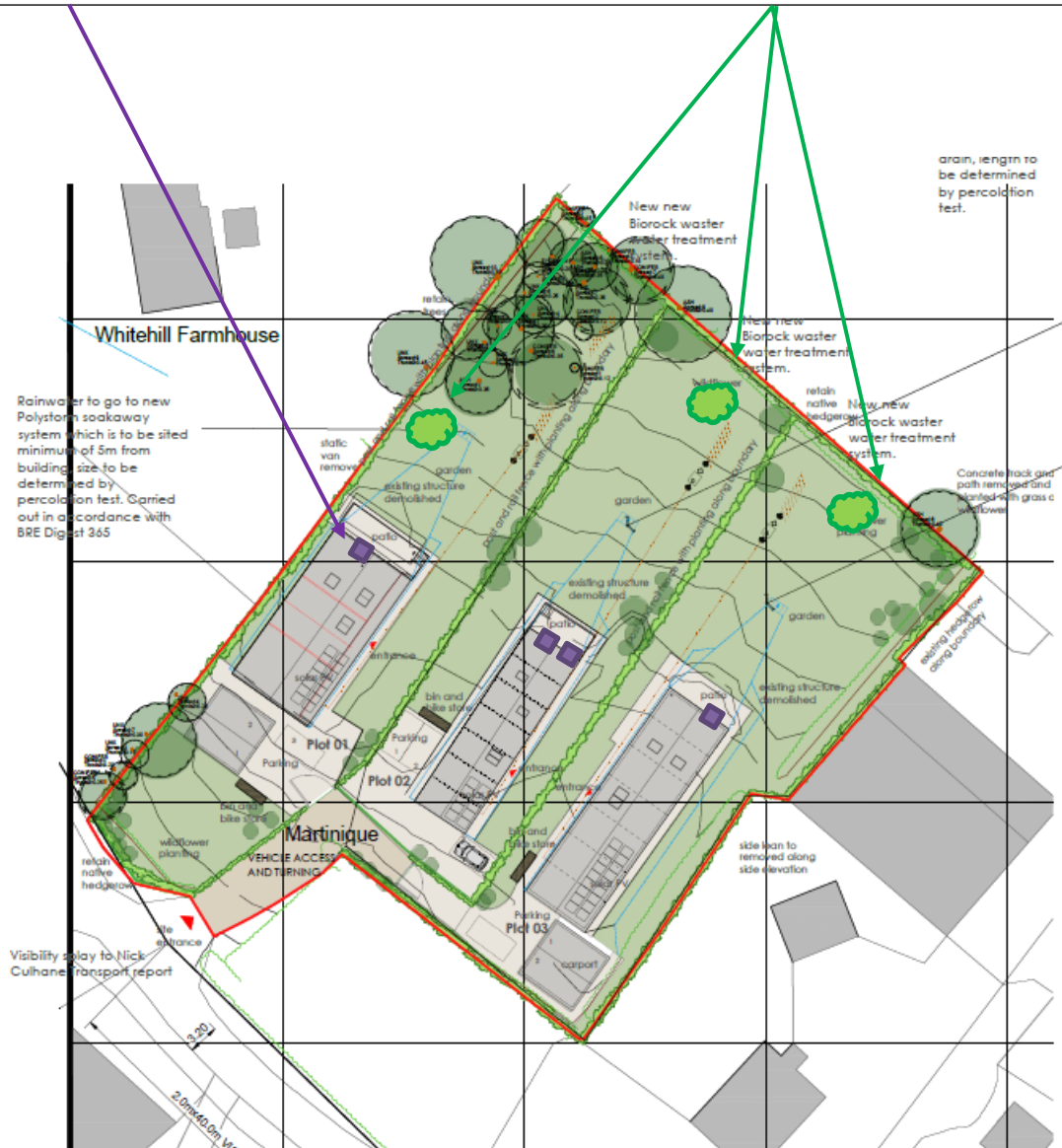
Key:



x 4 'Vivara Pro WoodStone House Sparrow Nest Boxes' will be erected on each of the new dwellings the northeast gables as close to the gable apex as possible (one for compensation for the nest that will be lost from 'Barn 2' and one in each dwelling as an ecological enhancement).



x 3 fruit trees to be planted in the northeast of the site as an ecological enhancement. The fruit trees must be from British sourced stock.



Any new fencing will be hedgehog friendly.



New fruit trees must be British sourced stock such as apple, pear and plum



'Vivara Pro House Sparrow Box' design (can be purchased from websites such as www.nhbs.com or www.wildcare.co.uk)

