

A photograph of a dense forest with many thin tree trunks and a large, moss-covered log in the foreground. The forest floor is covered with ferns and other green plants.

Preliminary
Bat Roost
Assessment

Grey Barn
Church Lane, Pagham

Version 1 – 3rd November 2022

South Downs
Ecology



Preliminary Bat Roost Assessment

Grey Barn, Church Lane, Pagham

Document Reference: GS103.GreyBarn.PBRA.v1.0

Version 1 – 3rd November 2022

Contents

Summary	3
1.0 Introduction	4
2.0 Scope of Assessment.....	5
3.0 Planning Policy and Legislation	6
4.0 Methodology.....	11
5.0 Baseline Ecological Conditions and Protected Species Assessment.....	13
6.0 Protected Species Assessment.....	15
7.0 Evaluation of Impacts and Mitigation.....	17
8.0 Ecological Enhancements.....	20
9.0 Conclusions	21
10.0 References	22
11.0 Appendix A - Site Photos.....	23
12.0 Site Aerial	27

Summary

Mr and Mrs Nash have commissioned a Preliminary Bat Roost Assessment of proposals at the existing dwelling known Grey Barn, Church Lane, Pagham (SZ 87942 97593, *hereafter referred to as 'the site'*).

A Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment was carried out on the 1st November by George Sayer (*BSc (Hons) Environmental Sciences, PgDip Endangered Species Recovery, MArborA, MCIEEM, NE Licence Holder – Bats Level 2 and GCN - Ecologist*).

The proposal area consists of existing buildings and hard surface, of negligible ecological value, with gardens of amenity grassland and introduced shrubs of very low ecological value.

The proposals are to replace the existing conservatory with a front porch, construct a single storey rear extension and dormer windows, an extension of the existing garage and part conversion to tourist accommodation. The garage roof has collapsed and been removed, whilst the dwelling roof has recently been replaced.

The proposals are not anticipated to have any significant impact upon ecology; the dwelling is considered to offer 'low' bat roost potential, but proposals do not impact any areas of bat roost potential. With very basic avoidance and mitigation measures the proposals stand a 'negligible' chance of disturbing commuting or foraging bats or their roosts. No further surveys are currently recommended at the site for these proposals.

The proposals are not considered to have a negative impact upon habitats or protected species in accordance with planning policy and once enhancements are considered, would result in a minor net gain. Provided a contribution to the Strategic Access Management and Monitoring (SAMM) of the Pagham Harbour Ramsar/SAC/SPA/SSSI is provided for increased recreational disturbance, impacts upon the designated sites would be negligible.

The proposals would therefore accord with the relevant Arun District Council Policies, the NPPF (2021) and relevant legislation.

1.0 Introduction

- 1.1 Mr and Mrs Nash have commissioned a Preliminary Bat Roost Assessment of proposals at the existing dwelling known Grey Barn, Church Lane, Pagham (SZ 87942 97593, *hereafter referred to as 'the site'*).
- 1.2 A Preliminary Ecological Appraisal and Preliminary Bat Roost Assessment was carried out on the 1st November by George Sayer (BSc (Hons) Environmental Sciences, PgDip Endangered Species Recovery, MA ArborA, MCIEEM, NE Licence Holder – Bats Level 2 and GCN - Ecologist).
- 1.3 The following ecological impact assessment report has been completed by George Sayer. The purpose of the assessment has been to identify whether any potential impacts upon protected species, habitats or designated sites might occur, and to propose mitigation or avoidance measures where necessary.
- 1.4 Based on the results of the appraisal, recommendations for potential ecological enhancements have been provided.

Site Description and Surrounding Area

- 1.5 The site consists of an existing detached dwelling, surrounded by hard surface access paths and garden. To the east of the site is a single-storey derelict garage. The dwelling has recently been re-roofed whilst the roof of the garage has collapsed and been removed, with several caravans now parked in the footprint. The site is bounded by a wooded shaw which wraps around the east, south and west of the property, and the hard surfaces of Church Road and an access track to the north. Beyond this lie grassland paddocks to east and south, and detached dwellings in extensive gardens to west and north.
- 1.6 The site is located to the south-west of Pagham, almost adjacent the north-eastern edge of Pagham Harbour and associated mudflats and saltmarsh.
- 1.7 Soils are described as “loamy and clayey soils of coastal flats with naturally high groundwater”.

Proposals

- 1.8 The proposals are for a Planning Application to replace the existing conservatory with a front porch, construct a single storey rear extension and dormer windows; an extension of the existing garage and part conversion to tourist accommodation.

2.0 Scope of Assessment

1. *Categorise habitats present on the site;*
2. *Identify habitat which may have potential for protected species;*
3. *Identify whether any signs of protected species are present on-site;*
4. *Recommend whether further surveys are required, or whether there are any relevant constraints with regards to protected species;*
5. *Identify impacts of the proposed development and set out appropriate avoidance, mitigation and compensation measures;*
6. *Provide recommendations as to how the site and proposals could be enhanced with regards to protected species and habitats.*

- 2.1 This appraisal and assessment is deemed to be relevant for a maximum of 18 months due to the possibility of changes in the habitats on-site. Should the site or proposals alter, the ecologist should be consulted to confirm that the appraisal is still valid.

3.0 Planning Policy and Legislation

National Planning Policy

- 3.1 The National Planning Policy Framework (NPPF) 2021 sets out the government planning policies for England and how they should be applied. 'Chapter 15: Conserving and Enhancing the Natural Environment' states that development should be 'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'
- 3.2 The Government Circular 06/2005, which is referred to by the NPPF, provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

Local Planning Policy

- 3.1 The site is within the Arun District; the proposals should be assessed against the Arun District Local Plan 2011-2031. Local Planning Policy relevant to this site include Policies ENV DM1 (*Designated Sites of Biodiversity and Geological Importance*), ENV DM2 (*Pagham Harbour*), ENV DM3 (*Biodiversity Opportunity Areas*), Em4 (*Protection of Trees*), and ENV DM5 (*Development and Biodiversity*) of the Arun Local Plan 2011 – 2031 (adopted 2018).
- 3.2 *The Arun District adopted Plan (adopted 2018) Policy H SP2 states development must:*

Protect, conserve or enhance the natural environment, landscapes and biodiversity;
- 3.3 *Policy ENV SP1 states:*

Arun District Council will encourage and promote the preservation, restoration and enhancement of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites.
- 3.4 *Policy W SP1 states development will be supported when it:*

Takes account of flood risk and promotes the incorporation of appropriate mitigation measures into new development, particularly Sustainable Drainage Systems that reduces the creation and flow of surface water and improves water quality;
- 3.5 *Policy ENV DM1 Designated Sites of biodiversity or geological importance states:*

a. Proposed development likely to have an adverse effect on land with the designated features of any Site of Biodiversity or Geological Importance as listed in Tables 17.1 - 17.7 or any subsequently designated sites (either individually or in combination with other developments), will not normally be permitted. Consideration will be given to the exact designated features present on the site, their scarcity/rarity and recognition of the protection offered by their existing status. Development on wildlife sites with the highest value will only be permitted exceptionally where the following can be demonstrated:

- i. There is no alternative solution (which shall be adequately demonstrated by the developer).*
- ii. There are reasons of public health or public safety or Adoption Arun Local Plan 2011-2031 (July 2018) Arun District Council 209 17 Natural Environment*
- iii. There are benefits of primary importance to the environment or iv. There are imperative reasons of overriding public interest. Notwithstanding the above however, the presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.*
- b. In determining any planning application affecting Sites of Biodiversity or Geological Importance the Council will ensure that the intrinsic natural features of particular interest are safeguarded or enhanced having regard to;*
 - i. The European, National or Local status and designation of the site;*
 - ii. The nature and quality of the site's features, including its rarity value; iii. The extent of any adverse impacts on the notified features of interest; iv. The need for compensatory measures in order to re-create remaining features of habitats on or off the site.*
- c. Where appropriate the Council will ensure the effective management of designated sites through the imposition of planning conditions or Section 106 agreements as appropriate.*

3.6 Policy ENV DM2 Pagham Harbour states:

- a. Within Zone A (0-400m from the boundary) as identified on the Policies Maps, development will only be permitted in exceptional circumstances where the developer is able to demonstrate there will be no detrimental effects on Pagham Harbour, including non-native species and the water environment. Regard shall also be had to tests 1-4 as set out in Policy DM1 (Designated Sites of Biodiversity or Geological Importance).*
- b. Within Zone B (0-5km) for all new residential development and development which is likely to have an impact on Pagham Harbour will be required to:*
 - i. Make developer contributions towards the agreed strategic approach to access management at Pagham Harbour.*
 - ii. create easily accessible new green spaces for recreation within or adjacent to the development site. These shall be capable of accommodating the predicted increases in demand for local walking, including dog walking. Good pedestrian links shall be provided between housing areas and new and existing green space in order to discourage car use.*
- c. Major developments (as defined in the GDPO 1995 as amended(61)) taking place outside Zone B and close to its boundary will be considered on a case by case basis to determine any potential effects on Pagham Harbour, and the need for any avoidance or mitigation measures.*

3.7 Policy ENV DM3 Biodiversity Opportunity Areas states that development shall:

- a. Retain and sympathetically incorporate locally valued and important habitats, including wildlife corridors and stepping stones*
 - b. Be designed in order to minimise disturbance to habitats*
- Development proposals that do not reasonably address opportunities for enhancing these through their design, layout and landscaping or access/management shall not be permitted.*

Where a development scheme would result in a habitat loss, mitigation measures will be proposed as part of the proposed scheme and such measures agreed with the Local Planning Authority prior to the determination of any planning application. Within Biodiversity Opportunity Areas (BOAs) identified on the Policies Maps or where likely to have an impact on species or habitats within the BOAs, any application for planning permission shall include a properly conducted survey of the presence of that species and habitat and impact(s) that development may have on the BOA.

3.8 Policy ENV DM4 Protection of trees states that:

Development will be permitted where it can be demonstrated that trees protected by a Tree Preservation Order(s), (TPO) identified as Ancient Woodland, in a Conservation Area or contributing to local amenity, will not be damaged or destroyed now and as they reach maturity, unless development:

- a. Would result in the removal of one or more trees in the interests of good arboricultural practice. This shall be demonstrated by the developer following the advice of a suitably qualified person which shall be guided by BS 5837 (2012). Details of any advice received having regard to BS 5837 (2012) shall be submitted, in writing, as part of a planning application; or*
- b. Would enhance the survival and growth prospects of other protected trees;*
- c. The benefits of the proposed development in a particular location outweigh the loss of trees or woodland, especially ancient woodland.*

Where planning permission is granted in any of the above instances, conditions shall be used to ensure that, for any trees which are removed as part of a development, at least an equivalent number of a similar species and age (where practical) are planted on the proposed development site. Sufficient space for replacement trees to mature without causing future nuisance or damage shall be provided. The planting of new trees shall form an integral part of the design of any development scheme. Proper provision must be made for the protection and management of trees or areas of woodland on-site when undertaking development. A management plan shall be provided as part of a planning application in accordance with BS 5837 (2012) in order to ensure that trees are adequately protected during development and appropriately maintained in the future. Conditions for the continued protection of trees on sites shall be included in any planning permission given. Where there are existing trees on or adjacent to a development site, developers shall be required to provide:

- d. Land and tree surveys*
- e. A tree constraints plan*
- f. An arboricultural impact assessment to include a tree protection plan and arboricultural method statement*

These will ensure that development is planned to take a comprehensive view of tree issues at an early stage in the design process and that development works do not have a negative impact on existing trees.

3.9 Policy ENV DM5 Development and biodiversity states that:

Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement. Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be indirectly affected by the proposals. All surveys shall be carried out at an appropriate time of year and shall be undertaken by a qualified and, where appropriate, suitably licensed person. All developments shall have regard to Natural England's standing advice for protected species.

3.10 Policy GI SP1 Green Infrastructure and development states:

The existing Green Infrastructure Network, as shown on the Green Network Maps for each parish and town, must be considered at an early stage of the design process for all major development proposals.

All major development must be designed to protect and enhance existing Green Infrastructure assets, and the connections between them, in order to ensure a joined up Green Infrastructure Network. The Green Infrastructure Network must be protected from light pollution to ensure that areas defined by their tranquillity are protected from the negative effects of light in development.

Where compatible with nature conservation objectives, development proposals must identify opportunities to connect existing Green Infrastructure assets with the coast, the South Downs National Park or to the District's inland villages. Opportunities to enhance the network should take account of the multiple functions of Green Infrastructure assets and should be based upon those opportunities set out in the supporting text.

Legislation

3.11 Legislation relating to wildlife and biodiversity of particular relevance to this EclA includes:

- The Conservation of Habitats and Species Regulations 2017;
- The Wildlife and Countryside Act 1981 (as amended);
- The Natural Environment and Rural Communities (NERC) Act 2006;
- The Hedgerow Regulations 1997;
- The Protection of Badgers Act 1992;
- The Protection of Mammals Act 1996.

- 3.12 All species of bat and their roosts are protected under The Conservation of Habitats and Species Regulations 2017 and The Wildlife and Countryside Act (as amended) 1981. It is an offence to intentionally kill, injure or handle a bat, to possess a bat (live or dead), disturb a roosting bat, or sell or offer a bat for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not.
- 3.13 All UK bird species are protected against disturbance whilst occupying a nest under the Wildlife and Countryside Act 1981. Developments that could predictably disturb, kill or injure nesting birds could result in an offence. Furthermore, a number of bird species are targets of UK and Local Biodiversity Action Plans and listed as Species of Principle Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. This obligates local authorities to have regard to the purpose of conserving biodiversity with particular emphasis on targeted species.
- 3.14 All mammals receive general protection against cruelty, inhumane killing or injuring under the Protection of Mammals Act 1996.
- 3.15 Water voles and reptiles receive protection under The Conservation of Habitats and Species Regulations 2017 and The Wildlife and Countryside Act (as amended) 1981 whilst dormice and great crested newts receive protection under The Conservation of Habitats and Species Regulations 2017.

4.0 Methodology

Desktop Study

- 4.1 A desktop study was conducted using the government 'MAGIC' Map GIS tool; a search was carried out for all international statutory designated sites (Ramsar, SAC, SPA) within 12.0 km of the site; national statutory designated sites (SSSI, NNR, LNR) within 2.0 km of the site; and non-statutory designated sites (SNCI) and priority habitats within 2.0 km of the site. These have been summarized below and their significance considered in the context of the development proposals. A search was also carried out to identify features of ecological interest in the area, such as water bodies and ancient woodland. Given the overall scale and nature of the site and the proposals, a full data search from SxBRC was not considered appropriate. This is in accordance with CIEEM current guidance for such projects.

Site Visit

- 4.2 A site visit was conducted on 1st November 2022. During the survey any constraints with regard to protected species were considered; the site was considered for their potential for protected species even when signs of these species were not noted at the time of survey.
- 4.3 The property was assessed by an experienced, licenced bat surveyor (*George Sayer 2018-34434-CLS*) for its potential to hold roosting bats; roof voids were assessed where relevant, and access points identified using high power torch; endoscope and binoculars as appropriate. Any evidence of bats such as grease marks, bat droppings, urine splashes were noted. The bat roost assessment was conducted following the Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines (2016).
- 4.4 Due to the site visit being carried out over one day, it is possible that some signs of protected species may not be apparent within this short timeframe. This is a constraint recognised within the Survey Guidelines and all reasonable effort has been made to identify evidence of protected species.
- 4.5 The buildings have both been subject to recent modifications; which may have removed evidence of protected species. The uncertainty this may have introduced to the assessment have been considered alongside precautionary compensation measures.

Ecological Impact Assessment

- 4.6 The methodology for Ecological Impact Assessment (EcIA) follows best practice guidelines set by the Chartered Institute of Ecology & Environmental Management (CIEEM): 'Guidelines for Ecological Impact Assessment' (CIEEM, 2018). This includes identifying the baseline conditions on the site and subsequently rating the potential effects of the development based on the sensitivity and value of the resource affected, combined with the magnitude, duration and scale of the impact (or change). This is initially assessed without mitigation measures, and then assessed again after allowing for the proposed mitigation measures; this provides the residual effects. The assessment is divided into construction effects and longer-term operational effects.
- 4.7 Each ecological feature within the site has been considered within a defined Geographic context such as:
- International and European;
 - National;
 - Regional;
 - County;
 - District;
 - Local;
 - Site Level;
 - Negligible.
- 4.8 Based upon CIEEM guidance, value was determined with reference to the following factors:
- Its inclusion as a Designated Site or other protected area;
 - The presence of habitat types of conservation significance, e.g. Habitats of Principal Importance (NERC 2006);
 - The presence (or potential presence) of species of conservation significance e.g. Species of Principal Importance (NERC 2006);
 - The presence of other protected species e.g. those protected under The Wildlife and Countryside Act 1981;
 - The sites social and economic value.

5.0 Baseline Ecological Conditions and Protected Species Assessment

Desktop Study

Designated Sites within 10.0km

- 5.1 The following information is included so that the site can be considered within the ecological context of the surrounding area, guiding decisions related to habitat change and protected species; these sites are not necessarily representative of the habitat on or surrounding the site and may not be influenced by the proposals.
- 5.2 The closest designated site is the Pagham Harbour RAMSAR, SPA, SAC, SSSI. The site is c.75.0m east of the designations and within the Impact Risk Zone, within which an increase in overnight accommodation requires contributions to the Strategic Access Management and Monitoring of the sites, also known as the Bird Aware Scheme.

Habitats

Desk Study

- 5.3 UK Priority Habitats within 2.0 km of the site include mudflats, saltmarsh, sand dunes, coastal vegetated shingle, saline lagoons, coastal and floodplain grazing marsh, lowland meadows, intertidal sand and mud, reedbeds, traditional orchards and deciduous woodland. None of these habitats are in immediate proximity to the site but many are present within the Pagham Harbour, c.75.0 m west.

Site Assessment

- 5.4 The site is given over to the existing dwelling and garden, habitats of **low value** which are discussed further below.

Buildings and Structures

- 5.5 The structures affected by the proposals consist of a brick and stone detached dwelling with slate tiled roof (B1) and a brick-built garage, with no roof present (B2). The building is in fairly good condition and offers **negligible ecological value** in a broader sense. The potential for the buildings to support protected species is discussed in the preliminary bat roost assessment below.

Hard Surfaces

- 5.6 The property is surrounded by hard surfaced access paths, with the rear being used for storage of building materials. The habitat offers **negligible ecological value**.

Introduced Shrubs and Trees

- 5.7 The garden contains small areas of ornamental planting and shrubs such as *Fuschia sp.*, *Pittosporum sp.* and small trees such as apple trees. The ornamental plants are of **negligible** ecological value whilst trees offer **site value**.

Amenity Grassland

- 5.8 The garden contains amenity grassland lawn, generally well-kept at a low sward height, dominated by perennial rye-grass *lolium perenne* with few forbs present. The habitat offers **site value** at most.

6.0 Protected Species Assessment

Bats

Desk Study

- 6.1 Common pipistrelle bats (*Pipistrellus pipistrellus*), soprano pipistrelle bats (*Pipistrellus pygmaeus*), Nathusius' pipistrelle bats (*Pipistrellus nathusii*), serotine bats (*Eptesicus serotinus*) brown long-eared bats (*Plecotus auratus*) and noctule bats (*Nyctalus noctula*) are present within the local area and recorded in local sites such as the Pagham South proposal.

Site Assessment

- 6.2 The main dwelling consists of a brick and stone building with half-hipped roof covered in slates, with several dormer windows, and a conservatory to the western aspect. The roof has recently been replaced with new tiles, dormers, soffits and fascias all in good condition, and devoid of likely access points or evidence such as droppings. The upper portion of the dwelling is clad in timber shingles to the western and southern aspects. Many of these are warped and lifting. On the western aspect (where the conservatory is present) the lifting is minor and does not create crevices or access points. To the south, the deterioration is more severe with missing shingles providing access to the batten-space behind. No evidence of bats was noted but given the time of year and weather evidence would not necessarily be present. The building is undergoing refurbishment which has likely raised the levels of noise and general activity on-site, making use less likely.
- 6.3 Internally the main dwelling's loft contains new insulation against the roof, which is tightly sealed, and new boarding for access. The majority of the loft space is new but the tops of several walls were original and were inspected. Several mouse droppings were found but no bat droppings. The timbers in the roof are known to have been treated for insects, with dead insects within the loft suggestive of woodworm or deathwatch beetle. No evidence of bats was found; however, given the works undertaken evidence would have been unlikely.
- 6.4 Overall, the building B1 is considered to offer **low** bat roost potential, limited to the southern wall shingles.
- 6.5 B2 consists of a brick built single storey garage. The garage originally had a flat felt roof; however, this apparently failed over the summer and was removed. Several caravans are now parked in the garage space. Several small cavities were noted to the walls and were inspected with a torch, but no evidence of bats was found, and the lack of cover would make these cavities very wet and exposed to wind. The garage offers **negligible** bat roost potential.
- 6.6 The immediate surroundings are that of the edge of Pagham Harbour. The Harbour includes large areas saltmarsh and grazing marsh. The site is surrounded by a narrow wooded shaw, suitable for bats. The garden would be suitable foraging for low numbers of common bats. The surroundings would be suitable for a wider range of bats flying along treelines and foraging in marsh, although (as suggested in the desk study) bats present locally are generally common, more light-tolerant species. The site itself is considered of **low potential** for foraging and commuting bats.

Birds

Desk Study

- 6.7 Numerous bird species are present in the local area, including a number of woodland and farmland species and species which use the nearby harbour and coastal habitats.

Site Assessment

- 6.8 No droppings or nest material were found to suggest use of the buildings by birds. No evidence of nesting was noted in the loft. The surrounding garden contains suitable habitat for garden birds. The fields to north and south are partially suitable for wintering birds but are screened from the site by the wooded shaw. Overall, the site is of **site value** to birds.

Other

- 6.9 No potential for or evidence of any other protected species such as badger, water vole, dormouse, reptile, rare plants or notable invertebrates was recorded. The garden is well-maintained but might support individual hedgehogs. No impacts upon other protected species are considered likely and have not been assessed further.

7.0 Evaluation of Impacts and Mitigation

Designated Sites

Potential Impacts

- 7.1 Given the intervening distances, and the nature of the proposals, any impacts upon local designated sites would be of minor magnitude and highly unlikely to occur. Impacts might include dust and emissions degrading the nearby Pagham Harbour, and noise disturbing birds using the areas around the North Wall. Indirect impacts from traffic pollution during construction might cause degradation of the protected sites, which all sit relatively near to the main roads to and from the site. This increase in pollution would be minimal, with no increase in such impacts arising in the future.
- 7.2 Indirect impacts include increased recreational disturbance of birds forming a qualifying feature of the Pagham Harbour SPA. The site is located on the edge of the footpath along the North Wall and as such, an increase in overnight accommodation is highly likely to result in increased recreational disturbance.

Mitigation and Compensation

- 7.3 All construction will be undertaken in accordance with best practice advice with regards to control of dust, noise and emissions.
- 7.4 The applicant is committed to contribute the appropriate amount (*as determined by the LPA*) to the Solent Bird Aware Scheme. The LPA is able to use their standard HRA template to assess impacts upon the designated sites.

Residual Impacts

- 7.5 Once mitigation is taken into account, the impacts will be negligible.

Habitats

Potential Impacts

- 7.6 The proposals would impact only the existing building and surrounding hard surfaces, and potentially very small areas of introduced shrubs and amenity grassland. In the absence of mitigation, the proposals would include dust, noise and light pollution of adjacent habitats including trees and the wooded shaw. Impacts upon the harbour habitats such as mudflats are relatively unlikely. Impacts are of **minor magnitude** at no more than **site level**.

Mitigation and Compensation

- 7.7 All construction will be undertaken in accordance with best practice advice with regards to control of dust, noise and emissions. Any chemicals or fuel shall be stored appropriately and on existing hard surfaces. Dust suppression measures shall be used such as covering skips or aggregate piles and deliveries, and not undertaking dust-generating activities during high winds.

Residual Impacts

- 7.8 Once mitigation is taken into account, the impacts will be negligible.

Bats

Potential Impacts

- 7.9 The main dwelling is classified as offering 'low' bat roost potential. This is limited to the dilapidated shingling to the south, which is not proposed for alteration as part of the proposals. It is considered highly unlikely that works would disturb a bat roost, given that no works are proposed to this area and that there is already a background level of noise and activity here. Given the recent re-roofing works, it is not possible to confirm whether bat roosts were previously present in the dwelling; it is considered highly unlikely that bat roosts were ever present in the garage.
- 7.10 Significant impacts upon foraging or commuting bats are considered unlikely, but possible through damage to vegetation and inappropriate lighting.

Mitigation and Compensation

- 7.11 Where the conservatory requires removal, the shingles shall be removed by hand with due care as a matter of course. In the highly unlikely event that a bat or evidence thereof be discovered, works shall cease until an appropriate course of action is determined by the licenced ecologist.
- 7.12 Should the southern shingles require replacement in the future, further assessment of the works shall be undertaken to determine if bats are present.
- 7.13 To compensate for the possibility of bats having been disturbed through roofing works, the new building extension shall include integrated bat roost features such as integrated bat boxes, to ensure no loss of potential roosting opportunities on the site.
- 7.14 Works shall be designed to minimise disturbance of any bats which might use the surroundings. Lighting shall be designed in accordance with BCT/ILP Guidance Note 08/18. Trees shall be retained and protected in accordance with BS5837:2012.

Residual Impacts

- 7.15 The overall impact of the scheme will be negligible.

Nesting Birds

Potential Impacts

- 7.16 It is considered highly unlikely that any nesting birds would be disturbed through the proposals.

Mitigation and Compensation

- 7.17 None required.

Residual Impacts

- 7.18 The overall impact of the scheme will be negligible.

Other Species

Potential Impacts

- 7.19 There is a minor risk of harm to hedgehogs through inappropriate storage of materials,

Mitigation and Compensation

- 7.20 Materials shall be stored on existing hard surfaces, and shall be checked before manual removal.

Residual Impacts

- 7.21 The overall impact of the scheme will be negligible.

8.0 Ecological Enhancements

8.1 Because of the scale and nature of the proposals, ecological enhancement opportunities within the construction zone are limited. The most beneficial enhancements would involve:

- Installation of new bat roost features to the building, such as an integrated bat box, beyond those recommended as precautionary compensation;
- Installation of bird nesting features to the building such as a swift nest feature and a sparrow terrace;
- Installation of a bug hotel or bee bricks to the building;
- Installation of a hedgehog house or hedgehog hibernation feature to the garden;
- Planting of native flowering and night scented species to the garden once works are complete.

9.0 Conclusions

- 9.1 Overall, the proposals are considered to represent a 'negligible' impact upon ecology and no further surveys are recommended. The proposal area consists of existing buildings and hard surfaces of negligible ecological value.
- 9.2 The proposals are not anticipated to have any significant impact upon ecology; the proposals are considered to stand a 'negligible' chance of disturbing bats or their roosts, or foraging and commuting habitats. No further surveys are currently recommended at the site for these proposals.
- 9.3 No significant effects are anticipated upon the Pagham Harbour Ramsar, SAC, SPA, SSSI, or any other designated site.
- 9.4 When mitigation and enhancements have been taken into account, the proposals are not considered to have a negative impact upon habitats or protected species in accordance with planning policy and once enhancements are considered, would result in a minor net gain. The proposals would therefore accord with the relevant local and national planning policies and the relevant legislation.

10.0 References

- Bat Conservation Trust (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines. Third Edition. Available online: <http://www.bats.org.uk/pages/batsurveyguide.html>
- Bat Conservation Trust and Institution for Lighting Professionals (BCT/ILP, 2018). Bats and artificial lighting guidance note. Available online: <https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting>
- British Standards Institution. (2013). BS 42020:2013 Biodiversity – Code of practice for planning and development. London: BSI
- Joint Nature Conservation Committee (JNCC 2010). Handbook for Phase 1 habitat survey - a technique for environmental audit. Available online: <http://jncc.defra.gov.uk/page-2468>
- CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM (2018) Guidelines for Ecological Impact Assessment, 1st edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- CIEEM (2020) Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester, UK.
- CIEEM (2021) Bat Mitigation Guidelines, Beta Version 1.0. Chartered Institute of Ecology and Environmental Management, Winchester.
- Joint Nature Conservation Committee (JNCC 2010). Handbook for Phase 1 habitat survey - a technique for environmental audit. Available online: <http://jncc.defra.gov.uk/page-2468>
- MAGIC Interactive Map Tool (Accessed 3rd November 2022): www.magic.gov.uk
- Streeter, D. (2010). The Most Complete Guide to the Flowers of Britain and Ireland; Harper Collins, London.

11.0 Appendix A - Site Photos

Photo 1 – View of dwelling roof from the east.



Photo 2 – View of the dwelling from the west.



Photo 3 – View inside the loft.



Photo 4 – View of the shingles to the south.



Photo 5 – View of remains of the garage, and hard surfaces between this and the dwelling.



Photo 6 – View of the remains of the garage roof and door.



Photo 7 – View of the remains of the garage roof and door.



Photo 8 – View of the western hard surfaces between dwelling and garage.



12.0 Site Aerial

