

**SOWLEY HOUSE, EAST END, LYMINGTON,
HAMPSHIRE**

PRELIMINARY ECOLOGICAL APPRAISAL

Final Document

September 2022

Preliminary Ecological Appraisals Protected Species Surveys and Licensing NVC EclA HRA Management Plans
Habitats Badger Bats Hazel Dormouse Birds Reptiles Amphibians Invertebrates Riparian and Aquatic Species




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The Preliminary Ecological Appraisal has been undertaken with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017). This report has been produced in accordance with the CIEEM Guidelines for Ecological Report Writing 2017 (CIEEM, 2017). The survey work has been undertaken in line with references within CIEEM's Source of Survey Guidance (CIEEM, 2017).

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**SOWLEY HOUSE, EAST END, LYMINGTON,
HAMPSHIRE**

PRELIMINARY ECOLOGICAL APPRAISAL

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EXECUTIVE SUMMARY

Ecological Survey and Assessment Ltd (ECOSA) have been appointed by Tetra Tech Planning to undertake a Preliminary Ecological Appraisal of Sowley House and Sowley House Cottage, Lymington. The purpose of the appraisal is to assess the site's ecological baseline and identify constraints and opportunities associated with the redevelopment at the site, to inform a future planning application. The site is located to the east of Lymington, Hampshire and comprises a house with an adjacent cottage and grounds. The redevelopment proposals comprise the refurbishment of Sowley House and Sowley House Cottage.

The main findings of the Preliminary Ecological Appraisal are:

A confirmed bat roost was recorded within Sowley House Cottage due to the presence of bat droppings within the roof void and the presence of live bats heard within the property;

Sowley House is assessed as having moderate suitability to support roosting bats;

Sowley House Cottage also supports nesting birds;

The habitats on site have suitability for supporting foraging and commuting bats;

Further Roost Characterisation surveys have been recommended to ascertain the status of bat roosts within Sowley House Cottage. Further bat emergence/re-entry surveys have also been recommended to determine the presence/likely absence of bats within the Sowley House. These surveys will support the future planning application;

Potential impacts on bats and birds have been identified and initial recommendations for avoiding these impacts have been made. Other mitigation and compensation measures have also been suggested;

If the planning application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by Tetra Tech Planning to undertake a Preliminary Ecological Appraisal to identify the ecological constraints and opportunities associated with the redevelopment of Sowley House ('the house') an Sowley House Cottage ('the cottage'), Sowley Lane, East End, Lymington, Hampshire, SO41 5SQ (hereafter referred to as the site).

1.2 The Site

The site is located 4.8 kilometres east of Lymington, Hampshire, centred on National Grid Reference (NGR) SZ 3781 9642 (**Map 1**).

The site measures approximately 0.2 hectares and comprises two residential properties (Sowley House and Sowley House Cottage) and the adjacent grounds. The site is surrounded by linear wooded features in all directions.

The wider landscape comprises marsh to the south and farmland with associated boundary woodland and hedgerows to the east and west. A large pond lies north of the site and is surrounded by woodland. The Solent lies approximately 500 metres south of the site.

1.3 Aims and Scope of Report

The information within this report is based on a field survey and desktop study carried out during April and May 2022. The objectives of the appraisal are:

To provide preliminary baseline information on the current habitats, the suitability of the site to support notable and protected species, and evidence of notable and protected species both on site and in the immediate vicinity of the site, where relevant;

To identify the proximity of any statutory sites designated for nature conservation importance;

To identify the likely ecological constraints associated with the proposals;

To identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy'¹;

¹ In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

To identify any additional surveys that may be required to inform an Ecological Impact Assessment (EclA); and

To identify the opportunities offered by the proposals to deliver ecological enhancement

1.4 Site Proposals

Proposals for the site comprise the refurbishment of the house and the cottage. Works to the loft space, where dormer windows are present are also proposed.

The appraisal made reference to an initial proposals plan produced by Groves-Raines Architect Ltd., dated August 2022 (Project No. 1880A) (**Appendix 1**).

It is anticipated that planning permission will be sought during 2022 with construction commencing soon after permission has been granted.

2.0 PLANNING POLICY CONTEXT

2.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the New Forest National Park administrative area. This information is then used to make necessary make recommendations for mitigation and enhancements in order to ensure any future planning application accords with relevant planning policy.

2.2 Planning Policy

2.2.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. The original document was published in 2012 with the most recent revised NPPF published in July 2021. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 11 of the NPPF "*Plans and decisions should apply a presumption in favour of sustainable development*". However, Paragraph 182 goes on to state that "*The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.*".

The NPPF sets out that development proposals should not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 174 states that the planning system 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...*".

A number of principles are set out in Paragraph 180, including that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and incorporating biodiversity in and around developments should be encouraged. Specific reference is also made to the protection of irreplaceable habitats², including ancient woodland³. Where loss to irreplaceable habitats occurs planning permission would normally be refused unless there are wholly

² The NPPF defines irreplaceable habitats as "*Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.*"

³ Natural England defines ancient woodland as "An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)."

exceptional reasons and an adequate compensation strategy is in place. Paragraph 180 also states “*development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*”. Paragraph 181 also sets out that potential SPAs, SACs and listed or proposed Ramsar sites or sites acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as habitat sites.

In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states “*the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat*”. Paragraph 99 states “*it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the Proposed Project Development, is established before planning permission is granted*”.

2.2.2 Local Policy

Local planning policy within the New Forest National Park is provided by the New Forest National Park Local Plan 2016-2036, adopted August 2019. Four policies are of relevance to ecology and biodiversity:

Policy SP5: Nature Conservation Sites of International Importance

This policy refers to the protection of internationally designated sites for nature conservation and the need to avoid or fully mitigate any potential impacts on these sites, including a financial contribution to mitigate for increased recreational pressure on these sites;

Policy SP6: The Natural Environment

This policy refers to the protection and enhancement of nationally, regionally and locally important sites, and priority habitats and protected species, and states the need for suitable mitigation, compensation, and enhancement measures in order to achieve the required biodiversity net gain;

Policy SP9: Green Infrastructure

This policy refers to the need to encourage connectivity between habitats and designated sites, and the need to relieve recreational pressure on internationally designated sites; and

Policy DP2: General Development Principles

This policy refers to the need to protect and enhance trees, hedges and hedgerows and to include new planting of native trees and hedgerows where appropriate.

3.0 METHODS

3.1 Introduction

This section details the methods employed during the Preliminary Ecological Appraisal. Any significant limitations to the survey methods are also considered.

3.2 Zone of Influence

To define the total extent of the study area for this appraisal (Zone of Influence⁴), the proposed scheme was reviewed to establish the spatial scale at which ecological features could be affected. The appropriate survey radii for the various elements of the appraisal (i.e. desktop study and field survey) have been defined in the relevant sections below. These distances are determined based on the professional judgement of the ecologist leading the appraisal, taking into account the characteristics of the site subject to appraisal, its surroundings and the nature and scope of the proposals. Determination of the Zone of Influence is an iterative process and will be regularly reviewed and amended as the project evolves.

3.3 Scoping

Protected species considered within this appraisal are those species/species groups considered likely to be encountered given the geographical location and context of the site. As the impacts of the proposed works are limited to within the footprint of the on-site buildings only species likely to occur within buildings have been considered within this appraisal. These are discussed within the results section (Section 4.0) of the current report. Where such a species is unlikely to be present on site a justification for likely absence is provided. Species considered likely absent from the site are not then considered in the potential ecological constraints and mitigation measures section (Section 5.0) of this report.

3.4 Desk Study

A full biological record centre desktop study was not undertaken as part of this appraisal. This was not considered necessary given the limited scale of the proposals.

3.4.1 Multi-Agency Geographic Information for the Countryside

The Multi-Agency Geographic Information for the Countryside (MAGIC) database (DEFRA, 2022) was reviewed on 5th May 2022 to establish the location of statutory designated sites located within the vicinity of the site. This included a search for all internationally and nationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Wetlands of International Importance (Ramsar sites), Sites of Special Scientific Interest (SSSIs), National Nature Reserves

⁴ The Zone of Influence, as defined by CIEEM, is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities.

(NNRs) and Local Nature Reserves (LNRs) within one kilometre of the site. Where appropriate, the desk study search area has been extended to take account of any appropriate statutory designated sites which need consideration in terms of potential in-direct effects and which support particularly mobile species, particularly those specifically mentioned in local planning policy. The Impact Risk Zones (IRZ) were also obtained from MAGIC, which are used to help guide and assess planning applications for likely effects on SSSIs.

Sites within two kilometres of the site boundary where European Protected Species Mitigation (EPSM) licences have been granted were reviewed. This information allows a greater understanding of the potential for European protected species to be present in the local area.

3.4.2 Other Sources of Information

Online mapping resources, at an appropriate scale, were used to identify the presence of habitats such as woodland blocks, ponds, watercourses and hedgerows, in the vicinity of the site. These habitats may offer resources and connectivity between the site and suitable habitat in the local area, which may be exploited by local species populations.

The presence of ponds or other waterbodies within a 500 metre radius of the site in particular are noted in relation to great crested newt. The 500 metre radius is a standardised search radius to assist in the assessment of the suitability of a site and its surrounding habitat to support this species, based on current Natural England guidance (English Nature, 2001).

3.5 Field Survey

The field survey broadly followed standard Phase 1 habitat survey methodology (JNCC, 2010). The field survey covered all accessible areas of the site.

3.5.1 Protected and Notable Species Appraisal

A preliminary appraisal of the site's suitability to support legally protected and notable species was carried out. The following species/species groups were considered during the appraisal.

Bats

The survey conformed to current Bat Conservation Trust guidelines (Collins, 2016). An assessment was made of the suitability of buildings on the site and immediately on the site boundary to support roosting bats based on the presence of Potential Roosting Features such as loose or missing roof tiles or lifted lead flashing. A detailed external and internal inspection of accessible structures was undertaken to compile information

on potential and actual bat entry/exit points; potential and actual bat roosting locations; any evidence of bats found.

An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The assessment of the suitability of the site to support roosting, foraging and commuting bats is based on a four-point scale as detailed in **Appendix 4**.

Birds

The appraisal of breeding birds on the site was based on the suitability of habitat present to support nesting bird communities, the presence of bird species that may potentially nest within the available habitat and evidence of nesting such as old or currently active nests.

The assessment of wintering birds was based on an assessment of the suitability of the habitat on site to support important wintering bird species and populations. Particular attention was paid to the suitability for the site to support wintering farmland bird species, waders and wildfowl.

3.6 Field Survey Details

The field survey was carried out by Helen Butt, Senior Ecologist of ECOSA on 25th April 2022. The weather conditions were dry with approximately 80% cloud cover, an ambient temperature of 13°C and a moderate breeze.

During the survey, the surveyor was equipped with a ladder, 10x40 binoculars, a high powered torch and a digital camera.

3.7 Limitations

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. The field survey has therefore not produced a complete list of plants and animals and in the absence of evidence of any particular species should not be taken as conclusive proof that the species is absent or that it will not occur in the future.

Online mapping resources provide an indication of habitat features present in the wider area, but do not provide a detailed assessment of habitat types.

Not all potential bat roosting features are accessible to the surveyor e.g. gaps beneath roof materials, and therefore assessments are based upon the potential for these features to provide suitable roosting opportunities.

It is not always possible to provide definitive assessments of a species' presence/likely absence at a site and so in the absence of direct evidence, assessments and

recommendations are based on the presence of suitable habitat within/adjacent to a site and the results of species records within the desk study data.

The roof void of the cottage is not boarded and therefore, all areas of the loft could not be inspected during the survey. The internal void was surveyed from the loft hatch.

A section of roof void present in the house was also not inspected during the initial survey. This area will be surveyed prior to any additional survey works and the results will be used to update this report accordingly.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Introduction

This section details the results of the Preliminary Ecological Appraisal undertaken for the site. It assesses the baseline ecological conditions of the site at the time the desktop study was completed and based on the ecological features recorded during the field survey.

4.2 Statutory Designated Sites

There are eight statutory designated sites of nature conservation interest situated within one kilometre of the site boundary. These are:

Solent and Southampton Water (Ramsar site) – Located 40 metres west of the site and designated for its tidal/intertidal habitats, rare assemblage of plants and invertebrates and for supporting important populations/species of birds.

Solent and Southampton Water (SPA) – Located 40 metres west of the site and is an important area for a number of Annex I breeding bird species and European important populations of wintering birds.

Solent Maritime (SAC) – Located 40 metres west of the site and designated for supporting a range of important coastal habitats and rare species including Desmoulin's whorl snail *Vertigo moulinsiana*.

Hurst Castle and Lymington River Estuary (SSSI) – Located 40 metres west of the site and designated for supporting a wide range of coastal habitats, rare invertebrates and plants of international importance.

The New Forest (SSSI) – Located 75 metres north of the site and designated for supporting lowland heath, valley and seepage step mire, or fen, and ancient pasture woodland, including riparian and bog woodland.

Sowley Pond (SSSI) – Located 80 metres north of the site and designated for being an integral part of the marshland system of the west Solent and is important for a number of breeding wetland birds.

North Solent (NNR) – Located 645 metres south-east of the site and designated for coastal habitat including estuaries and salt marsh which supports a diverse mix of habitats and wildlife. The site supports breeding lapwing *Vanellus vanellus*, avocet *Recurvirostra avosetta*, redshank *Tringa totanus*, brent goose *Branta bernicla*, skylark *Alauda arvensis* and warblers.

Boldre Foreshore (LNR) – Located 710 metres south-west of the site and is designated for supporting a variety of coastal habitats and supporting breeding populations of wintering waders and waterfowl.

Further details of the statutory designations listed above are provided in **Appendix 2**.

4.3 Notable and Legally Protected Species

4.3.1 Bats

Desktop Study Results

Consultation with the MAGIC database produced five granted EPSM licences for bats within two kilometres of the site boundary. These are:

EPSM2013-6514 – Granted for the destruction of a common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and brown long-eared bat *Plecotus auritus* resting place between 2013 and 2014, approximately 600 metres south-east of the site;

2015-9511-EPS-MIT – Granted for the destruction of a common pipistrelle and soprano pipistrelle resting place between 2015 and 2020, approximately one kilometre south-east of the site;

2018-34007-EPS-MIT – Granted for the destruction of a common pipistrelle, soprano pipistrelle and brown long-eared bat resting place between 2018 and 2019, approximately 1.3 kilometres north-west of the site;

2018-33090-EPS-MIT – Granted for the destruction of a common pipistrelle resting place between 2018 and 2019, approximately 1.5 kilometres south-east of the site; and

EPSM2010-2025 – Granted for the destruction of a common pipistrelle and brown long-eared bat resting place and breeding site between 2010 and 2012, approximately 1.5 kilometres east of the site.

Building Assessment

Two buildings are present within the application boundary. The house is assessed as having moderate suitability to support roosting bats. The cottage is a confirmed roost for bats. The results of the building assessment are provided in **Table 1**.




Foraging and Commuting Habitat




The wider grounds of the site contain several scattered trees which are well connected to further linear wooded features to the east and west of the site. These wooded areas

extend to the north and the south in the wider landscape providing highly suitable foraging and commuting habitat for bats. The pond present to the north and the marsh to the south also provide highly suitable habitats for foraging and commuting for bats.

Overall, the wider grounds are assessed as having high suitability for foraging and commuting bats.

Table 1: Building Assessment – Summary of Features with Bat Roost Potential and Evidence of Bat Roost Activity

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Sowley House	 <p>Figure 1: Exterior of Sowley House</p>  <p>Figure 2: Multiple lifted tiles on roof</p>  <p>Figure 3: Missing hanging tiles on front elevation</p>	<p>The house is a two-storey brick built property with a complex roof, featuring multiple pitches (Figure 1).</p> <p>The tiles on the roof are clay pan tiles with roll top ridge tiles. Hanging tiles are present on the front elevation.</p> <p>The soffits are wooden and the house has multiple chimneys.</p>	<p>There are multiple lifted roof tiles with gaps underneath (Figure 2) and missing hanging tiles with suitable gaps for crevice dwelling species (Figure 3).</p>	<p>No evidence of roosting bats was recorded during the survey.</p>	<p>Moderate suitability</p>

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Sowley House Cottage	 <p>Figure 4: Exterior of cottage</p>  <p>Figure 5: Internal roof void</p>  <p>Figure 6: Lifted roof tiles</p>	<p>The cottage is a two-storey brick built building (Figure 4).</p> <p>The roof is hipped with dormer windows. The roof tiles are clay pan tiles with roll top ridge tiles.</p> <p>Hanging tiles are present on the sides of the dormer windows.</p> <p>The internal roof void extends across the entire footprint of the building and is construction from a timber frame with block insulation against the pitch and rockwool-style insulation on the floor (Figure 5).</p>	<p>There are multiple lifted roof tiles with gaps on multiple elevations providing access to the void (Figure 6).</p> <p>A further access/egress point is present at the top corner where the dormer window meets the roof on the eastern elevation (Figure 7).</p>	<p>A small number of bat droppings were recorded in the roof void (Figure 8).</p> <p>Individual bats could be heard during the survey where the dormer window meets the roof (Figure 7).</p> <p>Bat droppings were also found at this location on the outside of the cottage in large numbers where it is assumed (and confirmed by client communication) that bats emerge from/access the roost (Figure 9).</p>	Confirmed roost

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
	 <p>Figure 7: Lifted tiles where dormer meets roof</p>  <p>Figure 8: Bat droppings within the roof void</p>  <p>Figure 9: Bat droppings outside of the property</p>				

4.3.2 Birds

Field Survey Results

Species recorded on site during the survey included wood pigeon *Columba palumbus* and mallard *Anas platyrhynchos* (both amber listed species⁵), great tit *Parus major*, robin *Erithacus rubecula*, carrion crow *Corvus corone*, chaffinch *Fringilla coelebs* and blue tit *Cyanistes caeruleus*.

Evidence of bird nesting material was recorded at the cottage on the western elevation on the right of the chimney at the eaves (**Figure 10**). Bird droppings were also recorded at various locations beneath the eaves.



Figure 10: Bird nesting material

4.4 Summary of Key Ecological Features

The following features are those with greatest ecological value that lie within the site's Zone of Influence:

The cottage is a confirmed roost for bats;

The house has moderate suitability to support roosting bats; and

The cottage was recorded as having suitability to support nesting birds.

⁵ The UK's birds are split in to three categories of conservation importance - red, amber and green. Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green. Amber list criteria include species which are: in unfavourable conservation status in Europe; subject to historical population decline during 1800–1995, but recovering; subject to moderate (25-49%) decline in UK breeding population or contraction of UK breeding range over last 25 years, or the longer-term period; subject to moderate (25-49%) decline in UK non-breeding population over last 25 years, or the longer-term period; rare breeders (1–300 breeding pairs in UK); rare non-breeders (less than 900 individuals), or; internationally important species with at least 20% of European breeding or non-breeding population in UK.

5.0 POTENTIAL ECOLOGICAL CONSTRAINTS AND RECOMMENDATIONS

5.1 Introduction

This section identifies potential constraints to the proposed development scheme based on the key ecological features as identified in Section 4.0 and summarised in Paragraph 4.4. Recommendations are included for mitigation and compensation based on the identified ecological constraints, and opportunities for enhancement are discussed.

5.2 Further Survey

Further ecological survey work will need to be undertaken prior to the submission of any planning application in order to allow the Local Planning Authority to fully assess the potential effects of the proposals on protected species. At this stage, it is therefore not possible to confirm that the proposals for the site meet the requirements of NPPF and New Forest National Park Local Plan (refer to Section 2.0). The full detail of mitigation measures cannot be established without the results of more detailed survey work. The more detailed survey work recommended for the site are:

Bat roost characterisation surveys (Sowley House Cottage) (Paragraph 5.4.2)

Bat emergence/re-entry surveys (Sowley House) (Paragraph 5.4.2)

Details of the survey requirements including survey effort and timings are provided in the relevant sections below.

5.3 Designated Sites

5.3.1 Potential Constraints

There are eight statutory designated sites within the data search area. The closest sites are Southampton and Solent Water Ramsar and SPA, Solent Maritime SAC and Hurst Castle and Lymington River SSSI, which are all located 40 metres west of the site. No adverse impacts are anticipated, given the small scale, nature and extent of the redevelopment proposals (confined to the existing buildings only) and the reason for the site's designation (the presence of coastal habitats and wintering bird populations).

The remaining four statutory designated sites are located between 75 metres and 710 metres from the site. Given the small-scale extent of the proposals, distance between these designated sites and the site itself and the reasons for these site's designation, no adverse impacts are anticipated.

5.3.2 Potential Mitigation and Compensation Measures

Given that no potential constraints in relation to designated sites have been identified, no mitigation or compensation measures will be required.

5.3.3 Enhancement Opportunities

No enhancement measures are proposed in relation to designated sites.

5.4 Bats

5.4.1 Potential Constraints

Unmitigated, the refurbishment of the house and the cottage has the potential to result in the killing/injury of individual roosting bats. In the absence of compensatory measures, the works have the potential to result in the long-term loss of bat roosts at the site, if the refurbishment results in the loss of access/egress points or loss of internal roof space.

If new external lighting is due to form part of the proposals, this may result in disturbance to foraging and commuting bats at the site.

In England, bats and their habitat are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, all bat species are protected under the Conservation of Habitats and Species Regulations 2017. Refer to **Appendix 5** for details.

5.4.2 Further Survey

As bat droppings and evidence of live bats were recorded within the roof void of the cottage, further Roost Characterisation surveys will be required in order to determine the status of the roost, species, numbers of bats and specific access/egress points.

According to best practice guidelines (Collins, 2016), the level of survey effort required to collect the relevant information that is needed for an impact assessment and the design of mitigation strategies is considered site-specific. In this instance, it is considered that three surveys (two dusk emergence surveys and a single dawn re-entry survey) should be an appropriate level of survey effort to collect the necessary information.

These surveys would be carried out between the months of May and September inclusive with at least two of the surveys occurring between the months of May and August. A total of four surveyors would be required to provide sufficient survey coverage of the building. These surveys would be anticipated to be completed between July and September 2022.

The bat droppings collected during the site visit will be sent for DNA analysis to confirm the species.

In addition, due to the house having been assessed as having suitability to support roosting bats due to the presence of suitable potential roosting features, further bat

emergence/re-entry surveys are also required in order to determine the presence/likely absence of roosting bats within the building.

In accordance with the current best practice guidelines (Collins, 2016) for a building assessed as having moderate suitability to support roosting bats a total of two surveys (one dusk and one dawn survey) will be required. Where the presence of roosting bats is confirmed, the data also allows for an assessment of the status of the roost present. The surveys must be undertaken within the bat survey season (May to September, inclusive) with one of the surveys undertaken during the peak bat survey season (May to August, inclusive). Surveys must be undertaken at least two weeks apart from one another.

The dusk emergence surveys will commence approximately 15 minutes before sunset until approximately two hours after sunset. The dawn re-entry survey will commence approximately two hours before sunrise until 15 minutes after sunrise. Three surveyors will be required to cover all areas of the building. Surveyors will be experienced and will be equipped with specialised bat detectors. Upon completion of the surveys, identification of the bats present through bat call analysis can be undertaken to reveal the species utilising the site.

5.4.3 *Potential Mitigation and Compensation Measures*

Due to the presence of confirmed roosts within the cottage, if the refurbishment works will impact the roost, a bat licence from Natural England will need to be obtained after planning has been granted and prior to any works commencing at the site. The data collected from the initial survey and the further Roost Characterisation surveys would feed into the licence application and be used to devise a suitable mitigation strategy. Suitable mitigation and compensation measures would be recommended on the completion of these further surveys. These are likely to entail sensitive timings of work, use of traditional roofing felt as opposed to Breathable Roofing Membrane (BRM), site supervision by an ecologist and provision of replacement roost features.

The mitigation and compensation measures for roosting bats will be provided on completion of the further surveys of the house. If bats are confirmed to be roosting within the house during the emergence/re-entry surveys, a Natural England Protected Species Licence would also be required prior to the commencement of works to this building as well. The bat emergence/re-entry survey data would be incorporated into the bat licence application to inform an appropriate mitigation strategy, which would include sensitive timing of works, sensitive working methods and the provision of compensatory roosting features, if required. This may entail the installation of bat access tiles, access to roof void for roosting bats or creation of crevices for roosting individuals.

In the first instance, it is recommended that no external lighting is introduced as part of the scheme. If required, guidance on bats and artificial lighting should be followed (Bat Conservation Trust, 2018) to avoid disturbance to foraging, commuting and roosting bats. External lighting should comprise hooded luminaires directed away from suitable bat habitat. Ideally the bulbs would be LED and at the warmer end of the spectrum (e.g. avoiding blue or white light). LED lights emit much lower levels of UV and therefore have a lower impact on wildlife (ARUP, 2014). Any lighting on the outside of buildings should be motion-activated and task related, associated with specific entrance/exit points. The lux level should be as low as possible to allow tasks to be carried out safely and effectively. Guidance on task related lighting levels published by the Chartered Institution of Building Services Engineers (CIBSE) (CIBSE, 2002) should be followed.

5.4.4 *Enhancement Opportunities*

Suitable enhancement opportunities for bats would be recommended on completion of the further surveys however measures may include the provision of bat boxes within the wider grounds of the site.

5.5 *Birds*

5.5.1 *Potential Constraints*

The refurbishment works of the cottage may harm and/or disturb breeding birds if carried out during the nesting season of March to August inclusive and in the absence of compensation, will lead to a loss of nesting habitats.

All birds, their nests, eggs and young are legally protected, with certain exceptions, under the Wildlife and Countryside Act 1981. Refer to **Appendix 5** for details.

5.5.2 *Further Survey*

No further surveys are necessary with regards to breeding birds.

5.5.3 *Potential Mitigation and Compensation Measures*

The refurbishment works should be undertaken outside the breeding bird season of March to August, inclusive, or if not possible, an ecologist should be present immediately prior to the works to check for signs of nesting activity. Active nests should be left with a suitable buffer until nesting ends.

5.5.4 *Enhancement Opportunities*

As a form of enhancement, one single Vivara Pro WoodStone house sparrow box and one Vivara Pro Woodstone Build-in Swift Nest Box (or similar alternatives) could be installed on both the cottage and the house after the completion of the refurbishments to provide further nesting opportunities for breeding birds.

6.0 CONCLUSION

6.1 Conclusion

The cottage is known to support a bat roost due to the presence of bat droppings within the roof void and live bats heard within the property. The house has moderate suitability for supporting roosting bats. The cottage also supports breeding birds and the habitats wider grounds of the site are also suitable for supporting foraging and commuting bats. Potential impacts on these ecological features have been identified and initial mitigation and compensation measures proposed. However, further Roost Characterisation surveys and further emergence/re-entry surveys in relation to bats are required in order to ascertain the status of roosts within the cottage and to determine the presence/likely absence of bats within the house. These will inform a detailed mitigation strategy for the development and support a future application for a Natural England protected species licence, which will be required prior to the commencement of works. Suitable enhancements for the site include the provision of bat boxes within the wider grounds of the site and bird boxes installed on the cottage and the house.

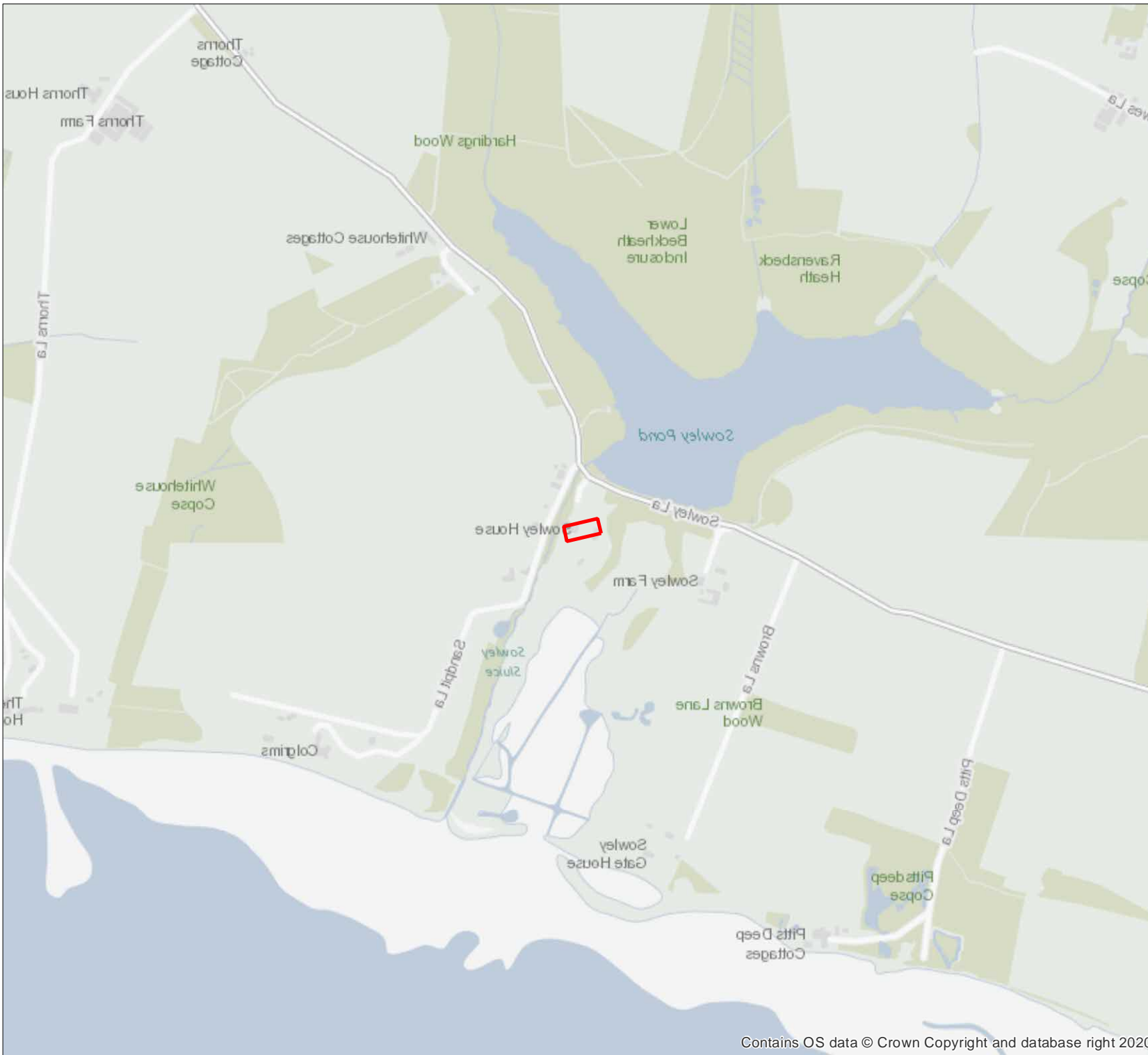
6.2 Updating Site Survey

If the planning application boundary changes or the proposals for the site alter, a re-assessment of the scheme in relation to ecology may be required. Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

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Map 1 Site Location Plan



SOWLEY HOUSE, SOWLEY LANE, EAST END, LYMINSTON, HAMPSHIRE

PRELIMINARY ECOLOGICAL APPRAISAL

Map 1 - Site Location Plan

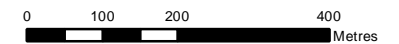
Client:	Tetra Tech Planning
Date:	May 2022
Status:	Final

KEY

Site Boundary



Scale at A4: 1:10,000



Prepared by: EV	Date: 100522
Last amended by: N/A	Date: N/A

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Appendix 1 Site Proposals Plan

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practice@gras.co
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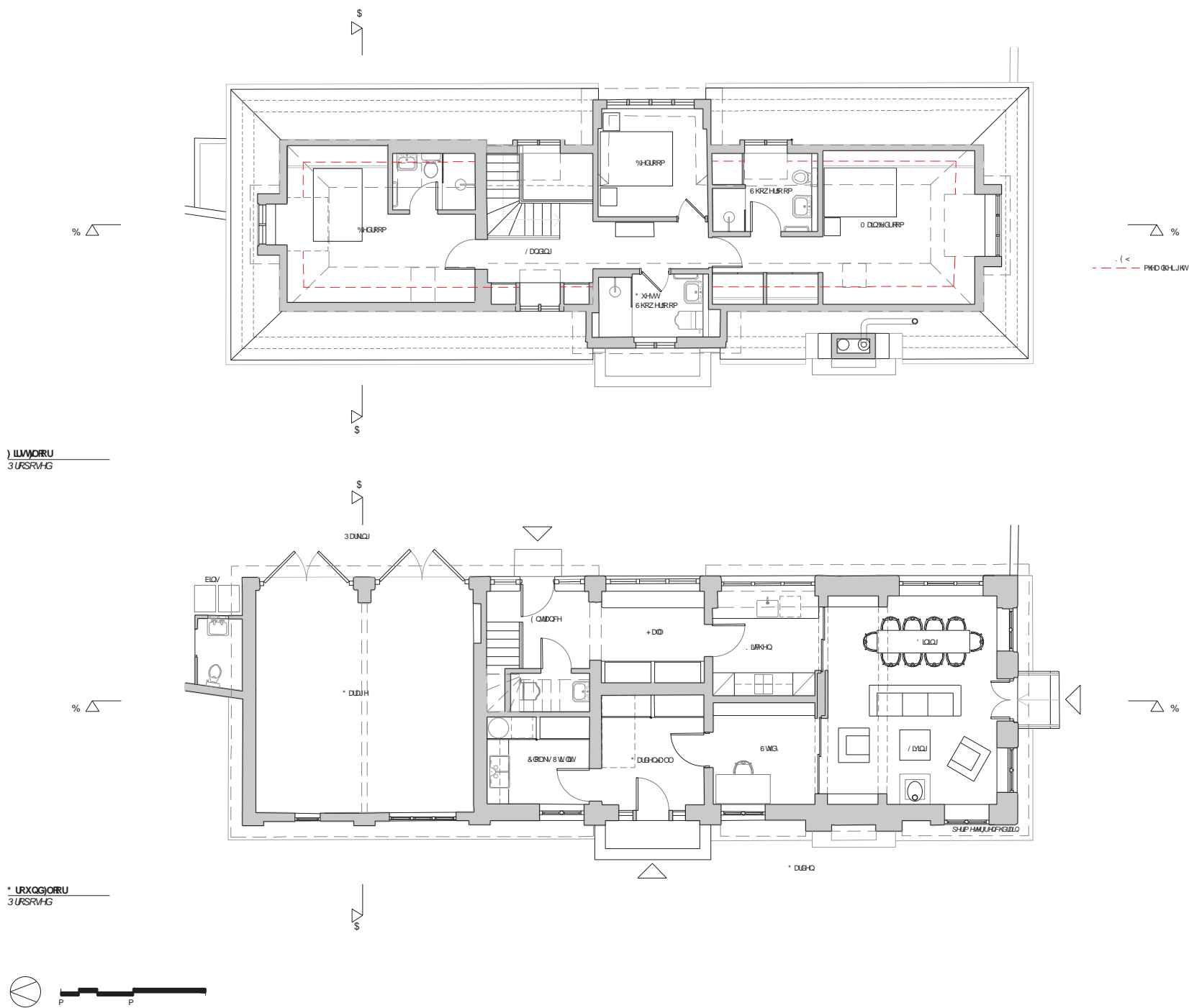
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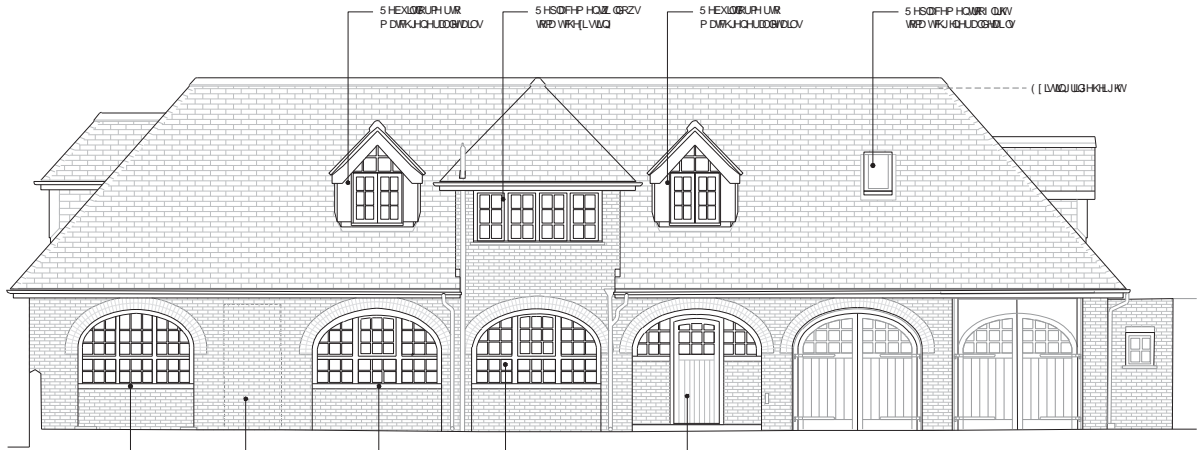
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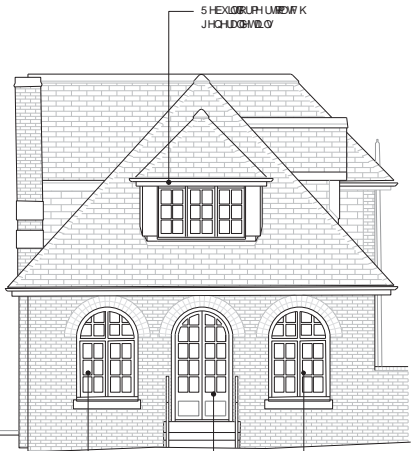




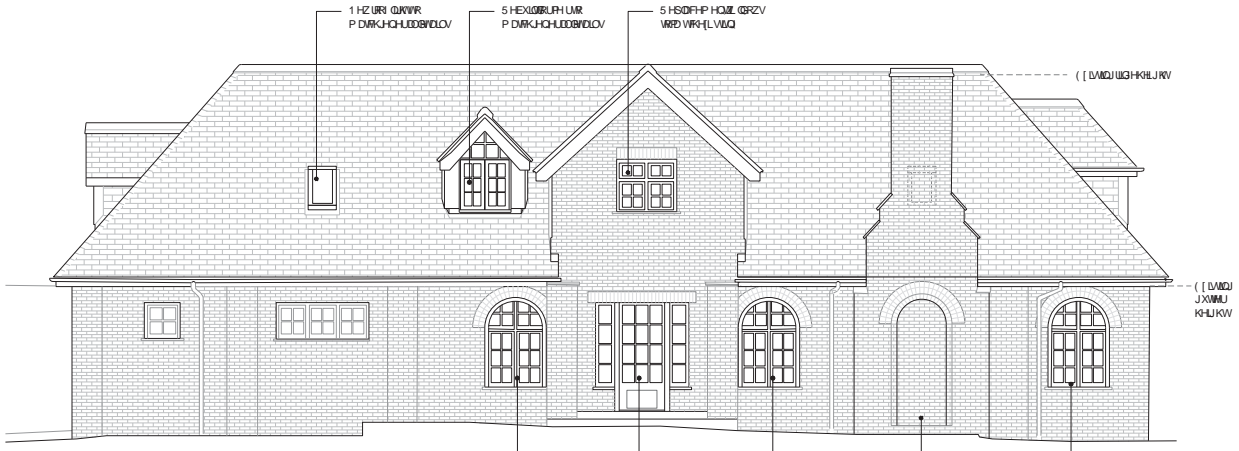
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prior to construction. Drawings to be read
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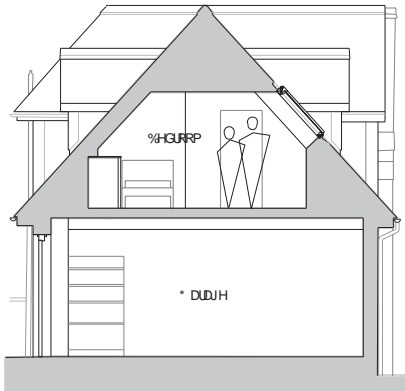
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Appendix 2 Statutory Designated Sites within the Desktop Study Area

Details of statutory designated sites within the desktop study area, as listed in Paragraph 4.2 are provided in **Table 2**.

Table 2: Statutory Designated Sites Located Within the Desktop Study Area

Site Name	Solent and Southampton Water
Site Designation	Ramsar Site
Approximate Relative Location	40 metres west
Reasons for Designation:	
<p>The site is designated under Ramsar Criterion 1, 2, 5 and 6.</p> <p>Criterion 1 – The site is one of the few major sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. It includes many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs.</p> <p>Criterion 2 – The site supports an important assemblage of rare plants and invertebrates. At least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site.</p> <p>Criterion 5 – species with international importance: 51,343 waterfowl, count in winter (1998/99 – 2002/2003).</p> <p>Criterion 6 – species/populations occurring at levels of international importance.</p> <p>Qualifying species/populations (as identified at designation)</p> <p>Species with peak counts in spring/autumn:</p> <p style="padding-left: 40px;">Ringed plover <i>Charadrius hiaticula</i></p> <p>Species with peak counts in winter:</p> <p style="padding-left: 40px;">Dark-bellied brent goose <i>Branta bernicla bernicla</i>;</p> <p style="padding-left: 40px;">Eurasian teal <i>Anas crecca</i>; and</p> <p style="padding-left: 40px;">Black-tailed godwit <i>Limosa limosa</i>.</p>	

Site Name	Solent and Southampton Water
Site Designation	SPA
Approximate Relative Location	40 metres west
Reasons for Designation:	
<p>The site qualifies for supporting the following Annex I species:</p> <p>Breeding</p> <p style="padding-left: 40px;">Common tern <i>Sterna hirundo</i>, 267 pairs representing at least 2.2% of the breeding population in Great Britain;</p> <p style="padding-left: 40px;">Little tern <i>Sterna albifrons</i>, 49 pairs representing at least 2.0% of the breeding population in Great Britain;</p> <p style="padding-left: 40px;">Mediterranean gull <i>Larus melanocephalus</i>, 2 pairs representing at least 20.0% of the breeding population in Great Britain;</p> <p style="padding-left: 40px;">Roseate tern <i>Sterna dougallii</i>, 2 pairs representing at least 3.3% of the breeding population in Great Britain; and</p>	

Sandwich tern *Sterna sandvicensis*, 231 pairs representing at least 1.7% of the breeding population in Great Britain.

This site also qualifies by supporting populations of European importance of the following migratory species:

Over winter

Black-tailed godwit, 1,125 individuals representing at least 1.6% of the wintering Iceland - breeding population;
Dark-bellied brent goose, 7,506 individuals representing at least 2.5% of the wintering Western Siberia/Western Europe population;
Ringed plover, 552 individuals representing at least 1.1% of the wintering Europe/Northern Africa - wintering population; and
Teal, 4,400 individuals representing at least 1.1% of the wintering North-western Europe population.

The site also qualifies under Article 4.2 for regularly supporting at least 20,000 waterfowl.

Site Name	Solent Maritime
Site Designation	SAC
Approximate Relative Location	40 metres west
Reasons for Designation:	
<p>Annex I habitats that are the primary reason for selection of this site:</p> <ul style="list-style-type: none"> • Estuaries • Spartina swards (<i>Spartinion maritimae</i>) • Atlantic salt meadows <i>Glauco-Puccinellietalia maritimae</i> <p>Annex I habitats present as a qualifying feature but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> • Sandbanks which are slightly covered by sea water all the time • Mudflats and sandflats not covered by seawater at low tide • Coastal lagoons • Annual vegetation of drift lines • Perennial vegetation of stony banks • Salicornia and other annuals colonizing mud and sand • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection:</p> <ul style="list-style-type: none"> • Desmoulin's whorl snail <i>Vertigo moulinsiana</i> 	

Site Name	Hurst Castle and Lymington River Estuary
Site Designation	SSSI
Approximate Relative Location	40 metres west
Reasons for Designation:	
<p>The site extends along nine kilometres of the north-west Solent shore and embraces a wide range of coastal habitats of limited distribution on the south coast which are of biological and geomorphological importance. The SSSI comprises the estuaries of three substantial streams, intertidal muds, cord-grass <i>Spartina anglica</i> marshes and high level mixed saltmarsh. The habitats support an assemblage of rare invertebrates and plants of intertidal importance. Saltmarsh provides nesting sites for nationally important breeding populations of terns and black-headed gulls <i>Larus ridibundus</i>. The site supports internationally important over-wintering populations of wildfowl and waders. The rich invertebrate fauna includes eight nationally rare and 13 nationally notable species.</p>	

Site Name	The New Forest
Site Designation	SSSI
Approximate Relative Location	75 metres north
Reasons for Designation:	
<p>The New Forest embraces the largest area of unsown vegetation in lowland England including heathland, valley and seepage step mire, fen, and ancient pasture woodland; including riparian and bog woodland. The New Forest supports a variety of nationally and internationally important flora and fauna and British Red Book Data species, notably breeding and wintering birds, invertebrates and native reptile species. Older trees provide roosting sites for many species of bat, including Bechstein's bat. Associated with the settlement edge lawns that are seasonally poached and heavily grazed are an assemblage of nationally rare and scarce plants. They include small fleabane <i>Pulicaria vulgaris</i> and pennyroyal <i>Mentha pulegium</i>, slender marsh bedstraw <i>Galium debile</i> and coral necklace <i>Illecebrum verticillatum</i>, which is nationally scarce. Less acidic ponds support important populations of amphibians, including the rare great crested newt <i>Triturus cristatus</i>.</p>	

Site Name	Sowley Pond
Site Designation	SSSI
Approximate Relative Location	80 metres north
Reasons for Designation:	
<p>Sowley Pond is an important refuge for both surface feeding and diving ducks and in this respect functions as an integral part of the marshland system of the west Solent, which includes Hurst Castle to Lymington River Estuary Site of Special Scientific Interest and the North Solent Site of Special Scientific Interest and National Nature Reserve. The pond is surrounded by mature oak <i>Quercus</i> and Scots pine <i>Pinus sylvestris</i> woodland which supports the largest Hampshire heronry. Numbers of tufted duck <i>Aythya fuligula</i> and pochard <i>A. ferina</i> are often substantial. Breeding wetland birds include mallard, tufted duck and great crested grebes <i>Podiceps cristatus</i>.</p>	

Site Name	North Solent
Site Designation	NNR
Approximate Relative Location	645 metres south-east
Reasons for Designation:	
<p>The following are designated features for the NNR:</p> <ul style="list-style-type: none"> Aggregations and assemblages of non-breeding birds Aggregations of breeding birds Assemblage of breeding birds of lowland damp grassland Assemblage of breeding birds of open waters and their margins Assemblage of breeding birds of sand dunes and saltmarshes Assemblage of rare and scarce invertebrate species Coastal lagoons Coastal and river cliffs Fen and mire communities Mudflats and sandflats not covered by seawater at low tide 	

Site Name	Boldre Foreshore
Site Designation	LNR
Approximate Relative Location	710 metres south-west

Reasons for Designation:

The site is part of the Solent and Southampton Water Ramsar site and SPA, Solent Maritime SAC, Hurst Castle and Lymington River Estuary SSSI and Lymington and Keyhaven Marshes. The site supports a variety of coastal habitats including saltmarsh, shingle, grassland, fresh and brackish pools and mudflats. The site also supports breeding populations of gulls, terns and waders along with wintering waders and wildfowl.

Appendix 3 Sites Designated for Nature Conservation

Statutory Sites

Internationally Designated Sites - Ramsar Sites, Special Areas of Conservation and Special Protection Areas

Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) form a network of protected sites across the European Union and United Kingdom. In the United Kingdom the primary legislative protection is afforded to these sites under the Conservation of Habitats and Species Regulations 2017 (as amended).

Ramsar sites are designated as wetlands of international importance which are afforded similar legislative protection to SPAs and SACs.

SACs are sites which support internationally important habitats or internationally important assemblages or populations of species. SPAs are designated for supporting internationally important populations of birds. SACs, SPAs and Ramsar sites are generally also designated as Sites of Special Scientific Interest.

Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) there is a legal requirement that competent authorities, such as local planning authorities, need to consider whether plans or projects are likely to have a significant adverse effect on SPAs, SACs or Ramsar sites, either alone, or in combination with other plans or projects. In the event that a likely significant effect cannot be ruled out, on the basis of objective information, then the competent authority must undertake an “Appropriate Assessment” to fully assess the plan or project against the site’s conservation objectives. Unless certain defined derogation tests can be met, the competent authority may not authorise nor undertake any plan or project which adversely affects the integrity of a SPA, SAC or Ramsar site.

Nationally Designated Sites – Sites of Special Scientific Interest and National Nature Reserves

Sites of Special Scientific Interest (SSSIs) receive legal protection under the Wildlife and Countryside Act 1981 (as amended). Such sites are designated to protect specific areas of biological or geological interest of national importance. Such sites also generally receive strict protection through the planning system.

National Nature Reserves (NNRs) are also usually designated as SSSIs and are specifically managed for their wildlife value. They receive legal protection through the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). As with SSSIs, these sites generally receive strict protection through the planning system.

Locally Designated Sites – Local Nature Reserves

Local Nature Reserves (LNRs) are designated by local authorities under the National Park and Access to the Countryside Act 1949. These are generally designated not only for their local wildlife value but also for education, scientific and recreational purposes. These sites generally receive protection from development through the planning system.

Appendix 4 Appraisal Criteria for Bats

The criteria used to assess the suitability of roosting and foraging/commuting habitat for bats is based on industry guidelines and outlined in **Table 3**⁶.

Table 3: Criteria used to Assess Suitability of Roosting and Foraging/Commuting Habitat for Bats

Suitability	Description of roosting habitats	Commuting and foraging habitats
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
Moderate	A structure of tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically/structure that does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerows or un-vegetated stream, but isolated (i.e. not very well connected to the surrounding landscape by other habitat). Suitable, but isolated, habitat that could be used by small numbers of foraging bats such as a lone tree or a patch or scrub.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

⁶ Table adapted from (Collins, 2016)

Appendix 5 Relevant Legislation

Bats

All UK bat species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations. These make it an offence to:

Deliberately capture, injure or kill any such animal;

Deliberately disturb any such animal, including in particular any disturbance which is likely:

To impair its ability to survive, breed, or rear or nurture their young;

To impair its ability to hibernate or migrate;

To affect significantly the local distribution or abundance of that species;

Damage or destroy a breeding site or resting place of any such animal;

Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or

Intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

Greater horseshoe bat *Rhinolophus ferrumequinum*;

Lesser horseshoe bat *Rhinolophus hipposideros*;

Bechstein's bat *Myotis bechsteinii*;

Barbastelle *Barbastella barbastellus*; and

Greater mouse-eared bat *Myotis myotis*.

In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

Breeding Birds

With certain exceptions, all wild birds, their nests and eggs are protected by Section 1 of the Wildlife and Countryside Act 1981 (as amended). Therefore, it is an offence, to:

Intentionally kill, injure or take any wild bird;

Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; or

Intentionally take or destroy the egg of any wild bird.

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls. Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

Intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young; or

Intentionally or recklessly disturb the dependent young of any such bird.