

**TOURNERBURY WOODS, TOURNERBURY LANE,
HAYLING ISLAND, HAMPSHIRE**

ECOLOGICAL IMPACT ASSESSMENT

Final Document Rev.1

October 2025

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

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ECOLOGICAL IMPACT ASSESSMENT

Table of Contents

EXECUTIVE SUMMARY	1
1.0 INTRODUCTION	2
1.1 Background.....	2
1.2 The Site	3
1.3 Aims and Scope of Report.....	3
1.4 Site Proposals.....	4
2.0 PLANNING POLICY CONTEXT	6
2.1 Introduction	6
2.2 Planning Policy	6
2.2.1 <i>National Policy</i>	6
2.2.2 <i>Local Policy</i>	7
3.0 METHODS.....	11
3.1 Introduction	11
3.2 Zone of Influence	11
3.3 Scoping	11
3.4 Desk Study	15
3.4.1 <i>Multi-Agency Geographic Information for the Countryside</i>	15
3.4.2 <i>Other Sources of Information</i>	15
3.5 Field Survey.....	16
3.5.1 <i>Survey Methods</i>	16
3.5.2 <i>Survey Details</i>	17
3.5.3 <i>Field Survey Limitations</i>	17
3.6 Bat Survey	17
3.6.1 <i>Survey Methods</i>	17
3.6.2 <i>Survey Details</i>	20
3.6.3 <i>Survey Limitations</i>	23
3.7 Criteria used to Assess Ecological Value	24
4.0 BASELINE ECOLOGICAL CONDITIONS.....	25
4.1 Introduction	25
4.2 Statutory Designated Sites	25
4.2.1 <i>Baseline Ecological Conditions</i>	25
4.2.2 <i>Evaluation</i>	25
4.3 Habitats.....	27
4.3.1 <i>Baseline Ecological Conditions</i>	27
4.3.2 <i>Evaluation</i>	38
4.4 Bats.....	38
4.4.1 <i>Baseline Ecological Conditions</i>	38
4.4.2 <i>Evaluation</i>	48
4.5 Badger	50
4.5.1 <i>Baseline Ecological Conditions</i>	50
4.5.2 <i>Evaluation</i>	50
4.6 Birds.....	51
4.6.1 <i>Baseline Ecological Conditions</i>	51
4.6.2 <i>Evaluation</i>	52

5.0	ASSESSMENT OF ECOLOGICAL EFFECTS AND MITIGATION/COMPENSATION/ENHANCEMENT MEASURES	53
5.1	Introduction	53
5.2	Scheme Design	53
5.3	Designated Sites	53
5.3.1	<i>Potential Impacts and Effects</i>	53
5.3.2	<i>Mitigation Measures</i>	54
5.3.3	<i>Significance of Residual Effects</i>	55
5.3.4	<i>Compensation</i>	55
5.3.5	<i>Enhancement</i>	55
5.4	Habitats.....	55
5.4.1	<i>Potential Impacts and Effects</i>	55
5.4.2	<i>Enhancement</i>	55
5.5	Bats.....	55
5.5.1	<i>Potential Impacts and Effects</i>	55
5.5.2	<i>Enhancement</i>	56
5.6	Badger	56
5.6.1	<i>Potential Impacts and Effects</i>	56
5.6.2	<i>Enhancement</i>	56
5.7	Birds.....	56
5.7.1	<i>Potential Impacts and Effects</i>	56
5.7.2	<i>Mitigation Measures</i>	57
5.7.3	<i>Significance of Residual Effects</i>	57
5.7.4	<i>Compensation</i>	57
5.7.5	<i>Enhancement</i>	57
6.0	CONCLUSION.....	58
6.1	Conclusion	58
7.0	REFERENCES	59
Map 1	Site Location Plan	
Map 2	Baseline Habitats Map	
Map 3	Bat Emergence Survey	
Map 4	Bat Transect Survey	
Map 5	Bat Automated Detector Survey	
Map 6	Location of Statutory Designated Sites	
Appendix 1	Protected and Notable Species Appraisal Methods	
Appendix 2	Assessment Criteria for Roosting Bats	
Appendix 3	Automated Detector Settings	
Appendix 4	Statutory Designated Sites within the Desktop Study Area	
Appendix 5	Sites Designated for Nature Conservation	
Appendix 6	Baseline Habitats	
Appendix 7	Relevant Legislation	

Appendix 8 Appraisal Criteria for Bats

EXECUTIVE SUMMARY

Ecological Survey and Assessment Ltd (ECOSA) have been appointed by The Tournerbury Woods Estate to undertake an Ecological Impact Assessment in support of Havant Borough Council's redetermination of the retrospective planning application (APP/23/00076) for a wedding and events venue at Tournerbury Woods Venue, Hayling Island. The site is located on the eastern side of Hayling Island and comprises mainly broadleaved and plantation woodland with saltmarsh habitat to the south and smaller areas of grassland, ponds and developed land. This report presents the findings of the updating ecological survey work undertaken. The main findings of the Ecological Impact Assessment are:

- The site is located within Chichester and Langstone Harbours Ramsar site/SPA and Chichester Harbour SSSI. The site is also located adjacent to the Solent Maritime SAC. The impact assessment associated with internationally designated sites is considered further within a site-specific Shadow Appropriate Assessment.
- No material change in habitats was recorded at the site between the survey work undertaken in 2018 and subsequent update undertaken in 2025. The habitats within the site comprise other neutral grassland, modified grassland, lowland mixed deciduous woodland, other woodland; broadleaved, mixed scrub, developed land; sealed surface, artificial unvegetated; unsealed surface, waterbodies, saltmarsh, a line of trees and ditches. The most important habitats within the site consist of lowland mixed deciduous woodland and coastal saltmarsh, both of which are Habitats of Principal Importance.
- Woods Cottage supports low status day roosts of common pipistrelle and soprano pipistrelle. The wedding and events area has been assessed as supporting foraging and commuting bats. In addition, the wedding and events area contains suitable habitat for breeding birds and wintering woodland birds. No evidence of badger activity was recorded on the site.
- As this is a retrospective planning application, the associated impacts have already taken place. There have been no significant changes to the site's ecological status since the previous ecological assessment. In light of this, the enhancement measures previously agreed upon and reiterated in this report (bat boxes) should be implemented as planned.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by The Tournerbury Woods Estate to undertake an Ecological Impact Assessment in support of Havant Borough Council's redetermination of the retrospective planning application for a wedding and events venue at Tournerbury Woods, Tournerbury Lane, Hayling Island, Hampshire PO11 9DL (hereafter referred to as the site).

A suite of previous ecological survey work has been undertaken at the site (**Table 1**) in support of a planning application and retrospective planning application seeking consent for the change of use of the site to a wedding and events venue (references: APP/18/00943, APP/21/01310 and APP/23/00076).

Table 1: Previous ecological survey work undertaken at the site

Survey Type	Year	Report
Phase 1 Habitat Survey	2013	Phase 1 Habitat Survey (John Wenman Ecological Consultancy, 2013)
National Vegetation Classification (NVC) Survey	2014	National Vegetation Classification (NVC) Survey (John Wenman Ecological Consultancy, 2014)
Updated Phase 1 Habitat Survey	2018	Updated Phase 1 Habitat Survey (John Wenman Ecological Consultancy, 2018)
Breeding Bird Survey	2014	Breeding Bird Survey Report (Hampshire Ecological Services, 2015)
Heronry Surveys	2015 and 2019	Heronry Survey Report (Hampshire Ecological Services, 2019)
Bat Transect Surveys and Bat Emergence Surveys	2020	Bat Survey Report (Hampshire Ecological Services, 2020b)

An Ecological Impact Assessment was prepared by Hampshire Ecological Services in 2020 (Hampshire Ecological Services, 2020a). The report presented results of the above ecological surveys undertaken between 2014 and 2019 in relation to habitats and breeding birds. This was complemented by the Bat Survey Report (Hampshire Ecological Services, 2020b) and a shadow Habitats Regulations Assessment in 2020 (Hampshire Ecological Services, 2020c). The original application was refused by the planning committee in June 2021 (APP/18/00943). The refusal was not due to ecological issues.

Following the refusal, a Shadow Appropriate Assessment was prepared in 2021 (Holbury Consultancy Services, 2021) and submitted to Havant Borough Council in support of a retrospective planning application seeking consent for the change of use

of the site to a wedding and events venue (reference APP/21/01310). The other ecological documents that supported the application included the Ecological Impact Assessment (Hampshire Ecological Services, 2020a) and Bat Survey Report (Hampshire Ecological Services, 2020b). The retrospective planning application was deferred by the planning committee in December 2022 (reference: APP/21/01310).

The Ecological Impact Assessment (Hampshire Ecological Services, 2020a), Bat Survey Report (Hampshire Ecological Services, 2020b) and Shadow Appropriate Assessment (Holbury Consultancy Services, 2025) were subsequently submitted to Havant Borough Council in support of a separate application of a retrospective planning permission for the change of use of land as a wedding and events venue (reference: APP/23/00076). Havant Borough Council subsequently granted consent on 15th September 2023.

In response to judicial review proceedings, the consent has subsequently been overturned. The judicial review proceedings did not focus on ecological issues. Havant Borough Council is expected to redetermine the planning application in 2025. Due to the length of time that has passed since the previous ecological assessment this report has been written to update the ecological baseline for the site. This report summarises the findings of previous ecological surveys and presents the updating survey work undertaken in 2025.

1.2 The Site

The Tournerbury estate is located on the eastern side of Hayling Island, Hampshire, centred on National Grid Reference (NGR) SZ 7331 9963 (**Map 1**). The baseline habitats map (**Map 2**) depicts the boundary of the site.

The wedding and events venue itself is set in the south-east corner of the estate to the immediate north of Woods Cottage with surrounding broadleaved woodland on NGR SZ 7330 9960. The estate is bounded by equine paddocks with adjacent mudflats to the south and saltmarsh habitat to the south-east. To the north of the site lies Tournerbury farmyard and golf course.

The wider area of Hayling Island is predominantly agricultural / equine paddock with an urban area along the southern coast and extending north along the main road.

1.3 Aims and Scope of Report

The information within this report is based on a field survey and desktop study and relevant species-specific surveys carried out between April and September 2025. The objectives of the appraisal are:

- To provide 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 provide baseline information on ecological features within the site's Zone of Influence and determine the importance of these features;
- To identify the proximity of any statutory sites designated for nature conservation importance;
- To assess, characterise and quantify the effects on ecological features, including cumulative effects, and identify significant effects in the absence of any mitigation;
- To set out measures to avoid, mitigate and compensate for significant ecological effects in accordance with the 'mitigation hierarchy'¹;
- To provide an assessment of the significance of any residual effects; and
- To identify the opportunities offered by the proposals to deliver ecological enhancement.

1.4 Site Proposals

Proposals for the site comprise Havant Borough Council's redetermination of the retrospective planning application for a wedding and events venue. The proposals comprise a change of land use and retention of a marquee, log cabin with decking and gazebo. It also includes use of land as a campsite in association with events and other temporary structures including trailer toilet facilities sited adjacent to the marquee, additional pop-up gazebos used by caterers and third-party suppliers and bouncy castles/other inflatables.

The estate will be accessed on event days across the field owned by the adjoining landowner and via an existing access track along the northern boundary of Woods Field. Access is intended to utilise the track previously granted planning permission under Application APP/17/00207, as amended by APP/21/00536 and already part implemented by the adjoining Tournerbury Farm landowner pursuant to that later consent.

Wedding and event activities have taken place at Tournerbury Wood for over 15 years. The proposals for the permanent use of the site as a wedding venue will make use of

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'.

the existing buildings on site. No vegetation is to be removed and no additional lighting is to be introduced.

2.0 PLANNING POLICY CONTEXT

2.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the Havant Borough Council 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 December 2024. 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 195 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 187 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 193, 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 193 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 194 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 Havant Borough is provided by the Havant Borough Core Strategy 2011, adopted March 2011. Two policies refer in part to ecology and biodiversity:

- **Policy CS11: Protecting and Enhancing the Special Environment and Heritage of Havant Borough**

This policy refers in part to biodiversity stating that planning permission will be granted for development that protects and, where possible, enhances the borough's statutory and non-statutory designated habitats and features of biological interest through appropriate adaptation and mitigation measures, has particular regard for nature conservation designations with international designations given the highest regard, protects wildlife habitats and corridors to prevent fragmentation and to allow species to adapt to climate change and acknowledges the emerging evidence from the Solent Disturbance and Mitigation Project and published recommendations and further research.

- **Policy DM9: Development in the Coastal Zone**

This policy refers to the protection of the coastal zone. The relevant part of the policy with regards to ecology states that permission will only be granted in the coastal zone where it can be demonstrated that there will be no harmful effects on nature conservation within the Chichester and Langstone Harbour SSSIs and

SPA, Solent Maritime SAC and Ramsar site, or any SINC's and Local Nature Reserves.

Havant Borough Council are currently preparing a new Local Plan to replace the Core Strategy. Five policies within the Building a Better Future Plan refer specifically to ecology and biodiversity:

- **Policy 19: Biodiversity Net Gain**

This policy states that developments must result in biodiversity net gain.

- **Policy 20: International and National Nature Conservation Sites**

This policy states that planning permission will only be granted where:

- Development avoids or mitigates harm to all internationally and nationally designated sites;
- The applicant has identified and assessed the extent of any harm to the value of the designated sites through adequate and proportionate information and any matters arising are addressed through an avoidance or mitigation plan which includes provision for ongoing management and maintenance; and
- Impact assessments are demonstrably guided by the mitigation hierarchy of 'avoid-mitigate-compensate'.

The policy also includes reference to international⁴ and national nature conservation designations. Developments which have the potential to impact on an international site should be supported by a Habitat Regulations Assessment. Where developments are likely to have an adverse effect in the integrity of an international sites necessary avoidance or mitigation should be secured.

Planning permission will only be granted within the zone of influence of a nationally designated site where the development would not have an adverse impact on the designated site, with exceptions made where the benefit clearly outweighs the impact on the feature and mitigation and / or compensation are secured to offset likely impacts.

- **Policy 21: The Local Ecological Network**

This policy refers to protecting and enhancing the Borough's Local Ecological Network of local designated sites, irreplaceable habitats, Priority habitats and other areas of local biodiversity value.

⁴ It is assumed that this include European sites such as Special Protected Areas and Special Areas of Conservation, as well as Ramsar sites (an international designation)

- **Policy 22: Recreation Disturbance on International Sites**

This policy states that planning permission will be granted for new dwellings and/or overnight accommodation that avoids and/or mitigates the likely significant effect on the Solent SPA and Ramsar sites from recreational disturbance. This mitigation can be provided through either: a financial contribution towards the delivery of the Bird Aware Solent Strategy or a developer-provided package of measures associated with the proposed development supported by evidence that it will avoid or mitigate any likely significant effect; or a combination of these measures.

- **Policy 23: Water Quality Effects on International Sites**

This policy states that applications for new dwellings and/or net gain in overnight accommodation which would cause a likely significant effect on internationally designated sites will need to provide a nutrient budget. Planning permission will only be granted if a mitigation package is provided which will avoid an adverse effect on the internationally designated sites. This mitigation can be provided through either: a financial contribution towards the Council's strategic mitigation package or a developer-provided package of measures supported by evidence that it will avoid or mitigate any likely significant effect on the Solent's internationally designated sites; or a combination of these measures.

- **Policy 24: Protected and Notable Species**

This policy states that where there is a reasonable likelihood of protected or notable species occurring and being harmed or negatively affected by development, planning permission will only be granted where:

- An assessment of potential impacts has been carried out by a suitably qualified ecologist using recognised appropriate assessment methods and are to be guided by the mitigation hierarchy of 'avoid-mitigate-compensate'; and
- A mitigation, compensation and enhancement strategy is provided and approved.

All development must incorporate enhancement features for protected and notable species. At least one integral or externally mounted feature for cavity nesting bird species (to be integrated Swift bricks wherever possible) and one integral or externally mounted bat roosting feature (to be integrated bat bricks wherever possible) must be included for each new dwelling or residential unit of five metres height or greater. For commercial structures of five metres height or greater, one such feature must be included for every 50m² of floor space.

The policy also specifically references Bechstein's bat.

▪ **Policy 25: Solent Wader and Brent Goose Strategy Sites**

This policy states that development with the potential to impact Solent Wader and Brent Goose Strategy sites will only be granted planning permission where:

- Development proposals are assessed in accordance with the Habitats Regulations. Such proposals will need to provide evidence to inform a Habitats Regulations Assessment (HRA) and must assess potential impacts alone and in combination with other plans or projects;
- Impact assessments are informed by robust data, using existing SWBGS records and/or bespoke field surveys as required; and
- If demonstrated to be necessary to avoid an adverse effect, an avoidance and mitigation package in accordance with the Solent Wader and Brent Goose Strategy is provided and secured in perpetuity by legal agreement.

3.0 METHODS

3.1 Introduction

This section details the methods employed as part of the Ecological Impact Assessment. 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 Influence⁵), 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, field survey and bat surveys) have been defined in the relevant sections below. These distances are determined based on the professional judgement of the ecologist leading the assessment, taking into account the characteristics of the site subject to assessment, its surroundings and the nature and scope of the proposals (if known when the appraisal was undertaken). Determination of the Zone of Influence is an iterative process and will be regularly reviewed and amended as the project evolves.

3.3 Scoping

The scoping exercise should be viewed in the context of the activities associated with the wedding venue being restricted to the south-east corner of the site, rather than occurring across the entire red line. **Table 2** sets out the Important Ecological Features that were considered at the field survey stage, and whether they were scoped in or out of the assessment following the findings of the field survey. Any features scoped in are considered to have potential to fall within the Zone of Influence of the site and the ecological effects, mitigation and compensation associated with these features, as well as opportunities to provide enhancements are subsequently considered. Ecological features scoped out are not considered further in the report.

⁵ 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.

Table 2: Scoping Exercise

Important Ecological Features	Initial Zone of Influence	Scoped In / Out?	Reason for Scoping Decision
Habitats	Wedding and Events Venue Area	Scoped In	The Tournerbury Woods Estate has been surveyed for consistency with the previous ecological reports. Habitat is present within the wedding and events venue area.
Bats (Roosting)	Woods Cottage	Scoped In	Woods Cottage is outside the red line boundary of the site with its use being intended to remain for accommodation purposes only. Woods Cottage was previously assessed as supporting a low status day roost of common pipistrelle and soprano pipistrelle (Hampshire Ecological Services, 2020b). There has been no change to the status of the building and therefore updating surveys were undertaken to reassess the status of the roosts in Woods Cottage.
	Marque and log cabin with decking	Scoped Out	These structures were assessed as being of negligible suitability to roosting bats, as no PRFs were identified upon their structures.
	Trees within Wedding and Events Venue Area	Scoped Out	Trees within the wedding and events venue area were assessed as being of negligible suitability to roosting bats, as no PRFs were identified.
Bats (Foraging and Commuting)	Wedding and Events Venue Area	Scoped In	The woodland provides a linear habitat feature that bats are likely to use for foraging and commuting. The grassland and scattered trees provide a foraging resource of invertebrate prey. These habitats also provide connectivity with off-site habitats in the wider landscape including Chichester Harbour.
Otter	Wedding and Events Venue Area	Scoped Out	The majority of the site is unsuitable for otter however, there is potential for the species to forage and commute along the foreshore. However, given the presence of unsuitable habitats they would be unlikely to cross the main events area. There is no impediment to otter crossing any other part the site at any time. The previous Ecological Assessment concluded that the impact on otter would be negligible (Hampshire Ecological Services, 2020a). The status of the site has not changed since this date and therefore this assessment is still considered valid. Otter are not considered further in this report.
Badger	Wedding and Events Venue Area	Scoped In	Woodland and grassland within the wedding and events venue area provides opportunities for badger. Although badgers are not known to be present locally.
Hazel Dormouse	Wedding and Events Venue Area	Scoped Out	The woodland provides suitable habitat for hazel dormouse. However, Tournerbury Wood is an isolated woodland surrounded by arable land and marine habitats, with no connectivity to further areas of habitat, reducing the likelihood of colonisation by the species. Hazel dormouse live at low densities (c.2 adults per hectare of woodland). Given the small size of the woodland and lack of

			connectivity with other areas of suitable habitat, it is unlikely to support a viable population. As such, hazel dormouse is considered likely absent from the site and therefore the species is not considered further in this report.
Water Vole	Wedding and Events Venue Area	Scoped Out	There are no watercourses or associated riparian habitats present on or immediately adjacent to the site. The intertidal habitat and the associated brackish waterbodies are not suitable for water vole due to the daily fluctuations in water levels. As such, the habitat on site is unsuitable for water vole and therefore the species is not considered further in this report.
Breeding Birds	Wedding and Events Venue Area	Scoped In	The woodland, scattered trees and grassland within the wedding and events venue area have the potential to support breeding birds.
Wintering Birds	Wedding and Events Venue Area Saltmarsh habitat	Scoped In	The woodland within the wedding and events venue area has the potential to support wintering woodland birds. The saltmarsh habitat contributes to the wider habitat of Chichester harbour and has suitability to support small numbers of waders and wildfowl.
Reptiles	Wedding and Events Venue Area	Scoped Out	The majority of the events area is within an area of regularly managed modified grassland, which is considered to be unsuitable for reptiles due to the lack of cover and risk of predation. The parking area is an area of shaded, formerly bare ground in open woodland close to the buildings. The habitats within the events area provide no substantial cover for the reptiles. As no habitat is to be removed, the previous Ecological Assessment concluded there would be no impact on reptiles, should they be present (Hampshire Ecological Services, 2020a). The status of the site has not changed since this date and therefore this assessment is still considered valid. This species group is not considered further in this report.
Great Crested Newt	Wedding and Events Venue Area	Scoped Out	There is suitability for breeding great crested newt within the small ponds in South Wood as well as the two temporary water bodies. A larger ornamental pond within the centre of the site could also offer suitability for breeding great crested newt although it is heavily used by waterfowl which reduces the likelihood. Suitable terrestrial habitat within the site includes woodland, mixed scrub and tussocky grassland. However, the majority of the events area is within an area of regularly managed modified grassland, which is considered to be sub-optimal terrestrial habitat for great crested newt. The parking area is

			an area of woodland containing minimal understorey with bare ground recorded. The habitats within the events area provide no substantial cover for the species. As the ponds are all to be retained and no terrestrial habitat is to be removed, the previous Ecological Assessment concluded there would be no impact on great crested newt, should they be present (Hampshire Ecological Services, 2020a). The status of the site has not changed since this date and therefore this assessment is still considered valid. Great crested newt are not considered further in this report.
Invertebrates	Wedding and Events Venue Area	Scoped Out	The wedding and events venue area offers suitable habitat for supporting invertebrates in the form of woodland, scattered trees and grassland. The understorey of the woodland contains log piles and decaying wood which may support a community of saproxylic species. Saproxylic species include a high number of rare and scarce Coleoptera and Hymenoptera in particular and could include Species of Principal Importance stag beetle (Kirby, P., 2001). However, as no terrestrial habitat is to be removed, there will be no impact on invertebrates. This species group is not considered further in this report.
Other Relevant Species	Wedding and Events Venue Area	Scoped Out	The wedding and events venue area offers suitable habitat for common toad and European hedgehog in the form of woodland and grassland. Within the wedding and events venue area the habitats are of sub-optimal suitability for supporting European hedgehog and common toad in its terrestrial phase due to a lack of cover and hence increased risk of predation. The modified grassland is regularly mown and of a short sward. Additionally, the adjacent woodland contained minimal understorey with bare ground recorded at the time of the field survey. No vegetation is to be removed, therefore any other relevant species present will be unaffected by the proposals. This species group is not considered further in 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 previous ecological survey work undertaken at the site.

3.4.1 Multi-Agency Geographic Information for the Countryside

The Multi-Agency Geographic Information for the Countryside (MAGIC) database (DEFRA, 2025) was reviewed on 5th June 2025 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 (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).

A suite of previous ecological survey work has been undertaken at the site. John Wenman Ecological Consultancy previously prepared a Phase 1 Habitat Survey in 2013 (John Wenman Ecological Consultancy, 2013), followed by a National Vegetation Classification (NVC) survey in 2014 (John Wenman Ecological Consultancy, 2014) and

an update to the Phase 1 Habitat survey in May 2018 (John Wenman Ecological Consultancy, 2018). Subsequently, various ecological surveys were undertaken and a number of reports prepared by Hampshire Ecological Services including a breeding bird survey in 2014 (Hampshire Ecological Services, 2015) and heronry surveys in 2014 and 2019 (Hampshire Ecological Services, 2019). An Ecological Impact Assessment (Hampshire Ecological Services, 2020a) and Bat Survey Report (Hampshire Ecological Services, 2020b) were also prepared by Hampshire Ecological Services in 2020. The results of these reports have been referred to, where relevant.

3.5 Field Survey

3.5.1 Survey Methods

The field survey followed a modified version of UK Habitat Classification (UKHab) methodology (UKHab Ltd, 2023) and included a search for evidence of, and an assessment of the site's suitability to support, protected and notable species as recommended by CIEEM (CIEEM, 2017). The field survey covered all accessible areas of the site, including boundary features. Habitats described in Section 4.0, have been mapped (**Map 2**), photographs and target notes provided, where relevant.

The UKHab Survey Application, developed using the digital survey platform Coreo was used to map habitats in the field, collect the field survey data and photograph the site.

UKHab Survey

An assessment was made of all habitats within the site, which were classified based on the standardised UKHab survey methodology (UKHab Ltd, 2023). The UKHab classification system comprises two major parts, a hierarchical Primary Habitat system and a list of Secondary Codes. The classification of Primary Habitats is hierarchical with five levels.

It should be noted that not all habitats will be classified to Level 5, for example modified grassland is classified at Level 3 and no Level 4 or Level 5 habitat is applicable. In addition, where Level 4 or 5 habitats are considered to be present on site there may be a requirement for further surveys by a specialist botanist to confirm or classify these habitat types.

Where Biodiversity Net Gain Metric habitats are not classified under any of the hierarchical levels within the UKHab methodology the relevant secondary codes definitions have been used to identify these habitats.

During the field survey notes and photographs were taken in order to evidence the surveyor's classification of each habitat type.

Any invasive species⁶ encountered as an incidental result of the survey were recorded.

Notable Species Appraisal

A preliminary appraisal of the site's suitability to support legally protected and notable species was carried out. Specific methods for species/species groups considered during the appraisal are provided in **Appendix 1**.

3.5.2 Survey Details

The field survey was carried out by Lucy Bartlett, Senior Ecologist of ECOSA on 1st May 2025. The weather conditions were with sunny approximately 5% cloud cover, an ambient temperature of 14-23°C and no wind to a light breeze.

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

3.5.3 Field Survey 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.

3.6 Bat Survey

3.6.1 Survey Methods

Bat Emergence Survey

As Woods Cottage was assessed as supporting a low status day roost of common pipistrelle and soprano pipistrelle during the previous bat survey work (Hampshire Ecological Services, 2020b), in accordance with current best practice guidelines (Collins, 2023) roost characterisation surveys were undertaken. The status of roosts has been based on standard terminology as detailed in **Appendix 2**.

The dusk emergence surveys commenced approximately 15 minutes before sunset until approximately two hours after sunset.

The surveys were carried out by two experienced ECOSA surveyors, positioned at previously identified vantage points around the building (**Map 3**). These vantage point

⁶ Plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

locations allowed a sufficient coverage of the Potential Roosting Features identified on the building impacted by the proposals.

During the surveys surveyors recorded the time, species, location and direction of flight for each bat encountered, with particular attention paid to establishing bat access/egress locations to any roosts within the building.

During the bat emergence surveys the surveyors was equipped with Batlogger M bat detectors and a single Night Vision Aid (NVA). The NVA kit comprised; a Sony A7s (MK1) camera which has been modified to capture infrared light, a Batbox Baton bat detector and two rayTEC VAR2-i8-1 Long Range Infra-Red Illuminator lamps. The bat box baton was attached to the Sony A7s to provide a 'bat detector' soundtrack on the video recording.

Video recordings made with the NVA camera were analysed using a combination of manual and automated review. Automated analysis was provided by Wildlife Imaging Systems (WIS) which utilises an algorithm to automatically analyse bat survey footage. This identifies parts of the footage containing potential bat emergence or re-entry activity. The summary output produced by WIS comprises a number of images which represent each 30-second segment of the source NVA footage. Manual review was then undertaken to determine whether bat activity occurred in each timeframe using VLC Media Player. VLC is subsequently used to extract audio clips for analysis Using Kaleidoscope Pro® (Version 5.1.9G) in-order to identify the bat to a species or genus.

Recordings made with the detectors were later analysed using BatExplorer (Version 2.2.6.0). This program is designed to analyse bat call data by identifying key call characteristics such as call shape, call length, call 'distance' (i.e. the time period between two consecutive calls) and peak frequency to confirm the identity of any species encountered.

Bat Transect Survey

Bat transect surveys were undertaken in line with current best practice guidelines (Collins, 2023). Given that the site has been assessed as having high suitability for supporting foraging and commuting bats a single survey visit was undertaken in spring, summer and autumn 2025 to allow an assessment of the status and importance of foraging/commuting bats at the site to be made.

A team of two surveyors carried out the transect surveys with the use of Night Vision Aids (NVAs). The surveys began at sunset with a vantage point survey to observe for bats in flight to give an indication of the direction of bat roosts in the area. The vantage point locations lasted at least 30 minutes and up to an hour. The surveyors then walked a pre-determined transect route (**Map 4**). Deviations from the transect route were made

according to live observations. The transect route ensured that the surveyors visited key areas of foraging and commuting habitat within the site, such as mature hedgerows, woodland edge and watercourses as well as less suitable habitats.

The walked component of the transects surveys commenced no earlier than 30 minutes after sunset and lasted for two to three hours depending on the level of bat activity recorded.

At the end of the transect surveys, data was downloaded and then analysed using BatExplorer (Version 2.1.9.1). This program is designed to analyse bat call data by identifying key call characteristics such as call shape, call length, call 'distance' (i.e. the time period between two consecutive calls) and peak frequency,

The species calls were subsequently checked manually by a suitably qualified ecologist using the spectrogram feature of BatExplorer to verify their identities. Where suitable recordings were obtained, bats were identified to species level. For some groups, notably long-eared bat species⁷ and *Myotis*⁸ bat species, specific identification was not always possible.

The GPS feature of the Batlogger M allows the location of the surveyor at the time of each bat call registration to be recorded. This data is exported to BatExplorer and used to create a 'heat map' of activity at the site for each bat species recorded.

The GPS feature shows the location of the surveyor when the registration was recorded, not the location of the bat. Where bats were heard but not seen it has been assumed that they are flying in the vicinity of the surveyor. Where bats were seen some distance from the surveyor the locations of these bats were noted.

Bat Automated Detector Survey

In addition to the transect surveys automated detector surveys were undertaken in line with current best practice guidelines (Collins, 2023). Two Wildlife Acoustics Song Meter 4 (SM4 FS) detectors with SMM-U2 microphones were deployed at the site for five consecutive nights in between May and September 2025.

The automated detectors were secured in suitable habitat with the microphone positioned to face towards the nearest open space. The devices were programmed to

7 There are two species of long-eared bat, the brown long-eared bat *Plecotus auritus* and the grey long-eared bat *Plecotus austriacus*. These species can only be separated by examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the two species shall be referred to in this report as long-eared bat. The brown long-eared bat is the commonest of the two species typically being found roosting within large roof voids although small voids and trees are also utilised. The grey long-eared bat is rare and confined to southern England and like the brown long-eared typically roosts in roof voids.

8 There are seven species of *Myotis* bats in Britain. *Myotis* bats are very difficult to identify specifically, this can generally only be done by examination of physical features and Phylogenetic Analysis Identification of bat droppings. Many of these bats are common and will utilise buildings for roosting often occupying small and inaccessible voids. For the purpose of this report all species shall be referred to as *Myotis* bats unless a specific identification has been possible.

record between 30 minutes before sunset, until 30 minutes after sunrise the following morning on each night they were deployed. The settings utilised on the automated detectors are provided in **Appendix 3**.

The detectors will be deployed at the same location during each survey period in order to allow a determination of the levels of activity at the site in each survey period. The locations at which the automated detectors were deployed are provided in **Map 5**.

At the end of each automated survey period, the remote bat detectors were retrieved from the site, data was downloaded and then analysed using Kaleidoscope Pro® (Version 5.1.9G). This program is designed to analyse large volumes of bat call data using an automated classifier (Bats of Europe Version 5.1.0). More information on the settings used for the conversion process are provided in **Appendix 3**.

The species calls were subsequently checked manually by a suitably qualified ecologist using the Kaleidoscope software to verify their identities. Sonobat® (v2.9.7) was used to confirm the species identity for ambiguous bat calls. Where suitable recordings were obtained, bats were identified to species level. For some groups, notably long-eared bat species⁷ and *Myotis*⁸ bat species, specific identification was not always possible.

The data was then exported to Microsoft Excel for detailed analysis (i.e. counts of bat registrations) of various parameters.

The number of registrations recorded is not a measure of the number of bats present on site; the number of registrations provides a quantitative assessment of the level of bat activity at a particular location (i.e. the greater the number of registrations, the greater the level of bat activity). The data cannot differentiate between, for example, a single bat passing the detector 10 times or 10 bats passing the detector on a single occasion. The detectors were programmed to count each two second call as a single bat pass.

In order to standardise the number of bat calls recorded the data was then used to calculate an “Activity Index” for various different parameters to be assessed. This involved dividing the number of registrations by the number of nights which detectors were deployed. This data is then represented as number of registrations per night.

3.6.2 Survey Details

Bat Emergence Survey

Three bat emergence surveys were undertaken during 2025. **Table 3** provides details of the emergence surveys.

Table 3: Bat emergence survey details

Survey Date	Survey Type	Survey Timings	Weather Conditions	Sunset/ Sunrise Time
15 th May 2025	Emergence	Start: 20:31 End: 22:35	General conditions: Overcast, dry Start temp: 16°C End temp: 14°C Cloud Cover: 100% Wind Speed: Calm	20:46
19 th June 2025	Emergence	Start: 21:05 End: 23:20	General conditions: Clear, dry Start temp: 24°C End temp: 21°C Cloud Cover: 20 - 0% Wind Speed: Calm	21:20
6 th August 2025	Emergence	Start: 20:25 End: 22:40	General conditions: Overcast, dry Start temp: 19°C End temp: 18°C Cloud Cover: 90 - 20% Wind Speed: Calm	20:40

The bat emergence survey was coordinated by Lucy Bartlett, Senior Ecologist of ECOSA (Natural England Bat Licence 2021-52263-CLS-CLS) assisted by suitably qualified and experienced ECOSA surveyors.

Bat Transect Survey

Three bat transect surveys were undertaken during 2025, with one undertaken in each season of the bat-active period. **Table 4** provides details of the survey.

Table 4: Bat transect survey details

Survey Date	Survey Type	Duration	Weather Conditions	Sunset/ Sunrise Time
10 th April 2025	Dusk	19:50 – 21:53	11 - 8°C, dry, 5 - 0% cloud cover and no wind	19:51
11 th June 2025	Dusk	21:16 – 23:30	19 - 18°C, dry, 5 – 10% cloud cover, and a light breeze	21:16
3 rd September 2025	Dusk	19:44 – 21:44	20 – 18°C, overcast and dry, 40 – 0% cloud cover, and a strong breeze	19:44

The bat transect surveys were coordinated by Lucy Bartlett, Senior Ecologist of ECOSA (Natural England Bat Licence 2021-52263-CLS-CLS), assisted by suitably qualified and experienced ECOSA surveyors.

The detector programming and data analysis was conducted by Ryan Brazendale, Assistant Ecologist of ECOSA.

Bat Automated Detector Survey

The automated detector surveys were undertaken throughout the 2025 active-bat season, between May and September, with a total of 25 nights of recording undertaken.

Table 5 provides details of each recording period.

Table 5: Automated detector survey details

Survey Period	Date	Weather Conditions ⁹				Sunset	Sunrise
		Temperature (°C)		Wind (km/h)	Precipitation (mm)		
		High	Low				
May 2025	21 st	17	11	6	0	20:57	05:09
	22 nd	18	6	5	0	20:59	05:07
	23 rd	17	7	14	0	21:00	05:06
	24 th	20	15	17	0	21:01	05:05
	25 th	19	14	21	0	21:03	05:04
June 2025	21 st	25	16	9	0	21:24	04:52
	22 nd	19	15	20	0	21:24	04:52
	23 rd	21	16	13	0	21:24	04:52
July 2025	16 th	25	19	5	0	21:10	05:10
	17 th	23	17	5	0	21:09	05:12
	18 th	23	17	2	0	21:07	05:11
	19 th	21	17	6	0	21:06	05:14
	20 th	20	15	7	0	21:05	05:15
August 2025	18 th	19	15	7	0	20:21	05:59
	19 th	21	16	17	0	20:19	06:01
	20 th	16	15	13	0	20:17	06:02
	21 st	20	14	6	0	20:15	06:04
	22 nd	17	10	11	0	20:13	06:06
September 2025	15 th	16	13	19	0	19:21	06:43
	16 th	16	15	13	0	19:19	06:45
	17 th	17	18	19	0	19:21	06:46
	18 th	18	14	17	0	19:15	06:48
	19 th	18	12	22	0	19:13	06:49

⁹ Weather data is sourced from online weather data (Weather Underground, 2018)

The automated detectors were deployed by a suitably experienced ECOSA ecologist. The detector programming and data analysis was conducted by Ryan Brazendale, Assistant Ecologist of ECOSA.

3.6.3 Survey Limitations

During the internal inspection of Woods Cottage, at least one active wasp nest was recorded within the roof void. The roof void was therefore not fully surveyed for the presence of roosting bats. Bat droppings were recorded within the void, confirming presence of roosting bats, and therefore this limitation is not considered to be significant.

Automated detectors will not be deployed each month between April and October as recommended within the Bat Conservation Trust guidelines. The previous ecological work undertaken at the site did not include automated detector surveys (Hampshire Ecological Services, 2020a; Hampshire Ecological Services, 2020b). Given that a total of three transect survey visits have been undertaken coupled with automated detectors surveys within the peak bat activity season, between May and September, it is considered that a robust assessment of the usage of the site by foraging and commuting bats can be made. Furthermore, a baseline has already been established and the bat surveys being undertaken at the site are updating surveys. Tristan Norton, Havant Borough Council Principal Ecologist, is content with a general picture of bat activity to be determined.

Some bat species, e.g. long-eared bats *Plecotus* species¹⁰, generally emerge from their roosts in total darkness and do not produce strong echolocations, and therefore these bats can be difficult to observe and record during bat surveys, leading to under-recording.

The quality of both hand-held and automated bat detector recordings is based, to a large extent, on the proximity of a bat to the detector's microphone. Obstructions such as vegetation or environmental variables such as rainfall and wind noise from vegetation will all influence the quality of sound reaching the microphone and thus some bat echolocation recordings are of insufficient quality for specific identification. Bats routinely alter their echolocations in relation to behaviour and their environment. It is not always possible to make a robust identification of every bat recording.

¹⁰ There are two species of long-eared bat, the brown long-eared bat *Plecotus auritus* and the grey long-eared bat *Plecotus austriacus*. These species can only be separated by examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the two species shall be referred to in this report as long-eared bat. The brown long-eared bat is the commonest of the two species typically being found roosting within large roof voids although small voids and trees are also utilised. The grey long-eared bat is rare and confined to southern England and like the brown long-eared typically roosts in roof voids.

Due to equipment failure, the automated detector in location 2 only recorded three nights of activity. To allow for a location-to-location comparison of species and activity, the data recorded on the same days were analysed from location 1.

3.7 Criteria used to Assess Ecological Value

The evaluation criteria used in this report are based on ECOSA's professional judgement and publicly available publications, survey data and other sources as referenced in the main text. The evaluation is based on a sliding scale of importance as follows; international and European, national, regional, county, local and site. There are a wide range of characteristics which contribute to the importance of ecological features, and these may justify an increase or reduction in the value of an ecological feature. Where deviations occur, these will be explained in the evaluation section of this report (Section 4.0). Current published relevant guidance, including information sources such as A Nature Conservation Review (Ratcliffe, 1977) and Guidelines for Ecological Impact Assessment in the United Kingdom (CIEEM, 2018) have also been used to inform the assessment.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Introduction

This section details the results of the Ecological Impact Assessment 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 findings of the field survey and subsequent protected species surveys. This section also provides an assessment of the ecological value of ecological features present at the site.

4.2 Statutory Designated Sites

4.2.1 Baseline Ecological Conditions

There are four statutory designated sites of nature conservation interest situated within one kilometre of the site boundary (**Map 6**). These are:

- Chichester and Langstone Harbours (Ramsar site) – Located within the site and designated due to the presence of intertidal mudflats, saltmarsh and reedbeds. In addition, the site contains notable wintering waterfowl.
- Chichester and Langstone Harbours (SPA) – Located within the site and designated due to supporting Annex I species including important assemblages of breeding and overwintering birds.
- Chichester Harbour (SSSI) – Located within the site and designated due to a large estuarine basin in which at low water extensive mud and sandflats are exposed. The site is designated as a unit of the Chichester Harbour SSSI named Tournerbury Plantation (003) and is designated for supporting semi-natural broadleaved woodland associated with the harbour, which is considered important for breeding birds.
- Solent Maritime (SAC) - Located immediately south of the site and designated for Annex I habitats including estuaries, cord grass *Spartina* species swards and Atlantic salt meadows. In addition, the site contains the Annex II species Desmoulin's whorl snail *Vertigo moulinsiana*.

Further details of the statutory designations listed above are provided in **Appendix 4**.

Further information on sites designated for nature conservation are provided in **Appendix 5**.

4.2.2 Evaluation

The site is designated as a unit of the Chichester Harbour SSSI. The site is noted within the SSSI designation as follows:

"Semi-natural broadleaved woodland associated with the harbour is important for breeding birds and supports two heronries. Oak is the major tree species, usually with hazel coppice, as at Old Park Wood, although Tournerbury Wood has well-spaced oaks with the occasional beech, holly and yew with a fairly dense ground flora of bramble and bracken."

Unit 003 Tourner Bury Plantation of the Chichester Harbour SSSI states the following:

"Tournerbury Woods is one of two blocks of broadleaved woodland included in Chichester Harbour SSSI. It is noted for its large, mature oak trees and it is considered to be of special interest in supporting a notable assemblage of breeding birds, including grey heron. Tournerbury Woods are not mapped as Ancient Woodland but the northern section of the wood has features of long-established woodland such as carpeting bluebell. The canopy is largely made up by impressive oak trees which are likely to be in excess of 250 years old. There are two blocks of broadleaved woodland included in Chichester Harbour SSSI, Tournerbury Woods and Old Park Wood. These are referred to in the SSSI citation as being of special interest in supporting oak woodland with importance for their breeding bird assemblages, including the presence of heronries. At the time of designation the broadleaved woodland included in the SSSI was considered to be of special nature conservation interest for the following reasons: At the time of designation the broadleaved woodland included in the SSSI was considered to be of special nature conservation interest for the following reasons:

- *The woodlands support good examples of broadleaved woodland of Peterken stand types 6C lowland hazel-sessile oak and 6D lowland birch-pedunculate oak, both of which types were subsequently incorporated in National Vegetation Classification type W10;."*
- *The woodlands contribute supporting habitat for an outstanding assemblage of breeding birds, some of which are woodland specialists, including grey heron, woodcock, tawny owl, greater-spotted woodpecker, nuthatch, long-tailed tit, marsh tit and treecreeper."*

The northern area of the Tournerbury Woods Estate, 'The Bury', is the only part of the estate with habitat for which the SSSI was designated for NVC type W10 *Quercus robur–Pteridium aquilinum–Rubus fruticosus* woodland. It has been suggested that the heronry was a qualifying feature for the inclusion of the wider Tournerbury Woods Estate in the Chichester Harbour SSSI. However, the heronry is not listed among the 30 notified features of the SSSI.

Chichester and Langstone Harbours Ramsar site is designated at the international level and therefore, of international value. Chichester and Langstone Harbours SPA and

Solent Maritime SAC are of European value, whilst Chichester Harbour SSSI is of national value.

4.3 Habitats

4.3.1 Baseline Ecological Conditions

Desktop Study Results

Consultation with MAGIC identified a parcel of the Habitat of Principal Importance lowland mixed deciduous woodland which forms the majority of the site. Consultation with MAGIC also identified parcels of the Habitat of Principal Importance coastal saltmarsh within the south-west of the site and also immediately to the south-east. Additionally, a parcel of the Habitat of Principal Importance intertidal mudflats is located immediately south the site boundary and coastal floodplain grazing marsh is adjacent to the north-east of the site.

Field Survey Results

Habitats within the site are shown on the Baseline Habitats Map (**Map 2**), and details of how each habitat has been classified based on the UKHab five-level hierarchical system, with relevant secondary codes, are provided in **Appendix 6**. Habitats are described in general terms using standard UKHab survey terminology. The main habitats recorded on site during the field survey were as follows:

Other neutral grassland

Areas of other neutral grassland are present to the west of Woods Cottage (**Figure 1** and **Figure 2**). Evidence of rabbit was recorded within the most eastern grassland area. Grassland species recorded include smooth meadow grass *Poa pratensis*, common bent *Agrostis capillaris*, red fescue *Festuca rubra*, cock's-foot *Dactylis glomerata* and Yorkshire fog *Holcus lanatus* with herbaceous species recorded such as white clover *Trifolium repens*, yarrow *Achillea millefolium*, daisy *Bellis perennis* and creeping buttercup *Ranunculus repens*.



Figure 1: Other neutral grassland viewed to the north



Figure 2: Other neutral grassland viewed to the west

An area of other neutral grassland is also present in the centre of the plantation woodland (**Figure 3** and **Figure 4**). The grassland was recently mown at the time of survey. The sward comprised perennial rye-grass *Lolium perenne* with occasional patches of meadow foxtail *Alopecurus pratensis*, Yorkshire fog and smooth meadow-grass. Occasional broad-leaved herbs recorded include creeping buttercup and white clover.



Figure 3: Other neutral grassland viewed to the north



Figure 4: Other neutral grassland viewed to the south-east

Modified grassland

Areas of regularly mown modified grassland are present in the south-east corner of the site between the marquee and a log cabin with decking (**Figure 5** and **Figure 6**) and also adjacent to Woods Cottage (**Figure 7**), which were dominated by perennial rye grass interspersed with occasional Yorkshire fog, white clover and dandelion *Taraxacum officinale* aggregate. Scattered trees are present comprising pedunculate oak *Quercus robur*.



Figure 5: Modified grassland viewed to the south



Figure 6: Modified grassland viewed to the west



Figure 7: Modified grassland viewed to the east

An area of grassland in the far south-east corner of the site was less managed (**Figure 8**). The grassland was dominated by perennial rye grass interspersed with occasional Yorkshire fog. Herbaceous species recorded include white clover, broad-leaved dock *Rumex obtusifolius*, dandelion and soft rush *Juncus effusus*. A number of scattered trees are present including silver birch *Betula pendula*, yew *Taxus baccata*, pedunculate oak and willow *Salix* species.



Figure 8: Modified grassland viewed to the east

Lowland mixed deciduous woodland

The Bury at the northern end of the site is a broadleaved semi-natural woodland (**Figure 9** and **Figure 10**) within Saxon earthworks and is understood to be ancient. The woodland has an pedunculate oak dominated canopy with occasional holly *Ilex aquifolium*, beech *Fagus sylvatica*, hazel *Corylus avellana* and yew. Silver birch is prominent in places where the oak canopy is more open, particularly in the centre of The Bury. It is understood that the silver birch stands established after mature oak tree were blown over in the October 1987 storm.

Ground flora species were dominated by bluebell *Hyacinthoides non-scripta*, bracken *Pteridium aquilinum*, bramble *Rubus fruticosus* aggregate, dog's mercury *Mercurialis perennis* and cleavers *Galium aparine*. There is evidence of deer browsing within the woodland. The vegetation on the open paths/rides through the woodland is grass-

dominated with species such as Yorkshire fog, common bent, creeping bent *Agrostis stolonifera* and rough meadow grass *Poa trivialis* and herbaceous plants such as lesser celandine *Ficaria verna*, Herb Robert *Geranium robertianum*, Lords-and-ladies, broad-leaved dock, primrose *Primula vulgaris*, garlic mustard *Alliaria petiolata*, common chickweed *Stellaria media*, creeping buttercup and foxglove *Digitalis purpurea*.



Figure 9: The Bury viewed to the east



Figure 10: The Bury viewed to the east

Other woodland; broadleaved

The site comprises areas of former plantation and secondary woodland at Woods Field and South Wood which border the more recent plantation woodland of North and South Plantations. The plantation woodland was planted in the late 19th century established on former open ground.

South Wood (**Figure 11** and **Figure 12**) is a secondary broadleaved woodland dominated by ash *Fraxinus excelsior* to the east and by sycamore *Acer pseudoplatanus* to the west. Silver birch, aspen *Populus tremula*, hawthorn *Crataegus monogyna*, pedunculate oak and goat willow *Salix caprea* were also recorded. The ground flora species recorded include bramble, honeysuckle *Lonicera periclymenum*, bluebell, wood false-brome *Brachypodium sylvaticum*, Lords-and-Ladies, pendulous sedge *Carex pendula*, remote sedge *Carex remota* and soft rush. The vegetation on the open paths/ride along the north of the woodland comprises dog's mercury, bluebell, cleavers, ground ivy *Glechoma hederacea*, wood spurge *Euphorbia amygdaloides*, wood speedwell *Veronica montana*, broad-leaved dock and bramble. The invasive rhododendron *Rhododendron ponticum* was also recorded in one location along the path/ride that separates South Wood from South Plantation. This area of woodland has a number of small ponds creating small open areas amongst the otherwise relatively dense understorey.



Figure 11: South Wood viewed to the west



Figure 12: South Wood viewed to the west

Woods Field(**Figure 13** and **Figure 14**) is a secondary broadleaved woodland, located at the north edge of the plantation, comprising a mixture of mature pedunculate oak and younger trees including silver birch, ash, hawthorn, sycamore, aspen and holly. The ground flora was dominated by ivy *Hedera helix* with bracken, bramble, common nettle *Urtica dioica*, primrose, bluebell, dog's mercury, herb Robert, lesser celandine, common chickweed, garlic mustard, broad-leaved dock and common dog violet *Viola riviniana* also recorded.



Figure 13: Woods Field viewed to the south



Figure 14: Woods Field ride

South Plantation (**Figure 15** and **Figure 16**) is a broadleaved plantation woodland recorded as supporting ash, silver birch, beech, pedunculate oak, cherry *Prunus* species and poplar *Populus* species. Corsican pine *Pinus nigra* was also recorded along the access track leading to Woods Cottage. Ground flora species recorded include wood false-brome, common bent, dog's mercury, pendulous sedge, cleavers, bluebell, wood spurge, bramble, holly, European gorse *Ulex europaeus* and bracken. Rhododendron was also recorded in a number of locations along the path/ride adjacent to South Wood with the plant being well dispersed. The species was originally planted along the western edge of the plantation and therefore this species has expanded further east within the woodland. A game pen is present within the woodland.



Figure 15: South Plantation viewed to the north



Figure 16: South Plantation viewed to the north

North Plantation (**Figure 17** and **Figure 18**) is a broadleaved plantation woodland dominated by aspen with thickets of silver birch present at the eastern side of the plantation. Sycamore and yew were also recorded. The understory was dominated by dense bramble with European gorse and bracken also present. Ground flora species recorded include wood false-brome, common bent, dog's mercury, pendulous sedge, soft rush, lesser celandine, primrose, common nettle, bluebell, dog violet, wood rush *Luzula* species and wood speedwell. A game pen is present within the woodland.



Figure 17: North plantation viewed to the south



Figure 18: North plantation viewed to the south

An additional area of plantation woodland is located within the east of the site including within the event area (**Figure 19** and **Figure 20**). Species recorded include yew, pedunculate oak, beech, European larch *Larix decidua*, Corsican pine and holm oak *Quercus ilex*. There is minimal understorey with species mainly confined to hazel, hawthorn, bramble and holly. Ground flora species were also minimal, but bluebell was recorded. An area of bare ground used for car parking is present within the woodland. A Fire pit and festoon lighting are also present.



Figure 19: Plantation woodland viewed to the south



Figure 20: Plantation woodland viewed to the west

Mixed Scrub

An area of mixed scrub is located within the south of the site (**Figure 21** and **Figure 22**). The scrub is dominated by willow *Salix* species, blackthorn *Prunus spinosa* and wild privet *Ligustrum vulgare* with occasional pedunculate oak, silver birch, bramble and dog rose *Rosa canina*. The ground flora contained stinking iris *Iris foetidissima*, false fox sedge *Carex otrubae*, common ragwort *Senecio jacobaea*, common nettle, teasel *Dipsacus fullonum* and false-wood brome.



Figure 21: Mixed scrub viewed to the west



Figure 22: Mixed scrub viewed to the west

Developed land; sealed surface

Areas of developed land; sealed surface are located within the site in association with the wedding and events venue including a marquee (**Figure 23**), a log cabin with decking (**Figure 24**) and a gazebo. A detached house called Woods Cottage is present. A detailed assessment of Woods Cottage is present in Paragraph 4.4.1.



Figure 23: Northern elevation of marquee



Figure 24: Southern elevation of log cabin with decking

Artificial unvegetated; unsealed surface

Areas of artificial unvegetated; unsealed surface are located within the site in association with the access tracks and an area used for car parking near to the main site for the wedding and events venue (**Figure 25**). An additional area is present within the west of the site (**Figure 26**).



Figure 25: Artificial unvegetated; unsealed surface used for car parking



Figure 26: Artificial unvegetated; unsealed surface within the west of the site

Temporary water bodies

Two temporary waterbodies likely holding water for fewer than six months a year are present within South Plantation and South Wood (**Figure 27** and **Figure 28**).



Figure 27: Temporary waterbody within South Plantation



Figure 28: Temporary waterbody within South Wood

Ponds (non priority habitat)

Two ponds are located within South Wood, creating small open areas amongst the dense understory. This includes Tournerbury brickworks well (**Figure 29**). The other ponds recorded in the previous Phase 1 Habitat Survey (John Wenman Ecological Consultancy, 2018) were recorded as dry during the survey with willow growth present.

A brackish pond is located in the south-east of the site which connects to a ditch (**Figure 30**).



Figure 29: Tournerbury brickworks well within South Wood



Figure 30: Brackish pond which connects to a ditch

There is also a pond on the edge of the adjacent mudflats which has a brackish water influence (**Figure 31**).



Figure 31: Brackish pond on the edge of adjacent mudflats

Ornamental pond

A single ornamental pond is located within the centre of the site (**Figure 32** and **Figure 33**). The pond is heavily disturbed by waterfowl and no submerged or emergent vegetation was recorded. The immediately surrounding area was recorded as supporting soft rush and willow *Salix* species.



Figure 32: Ornamental pond viewed to the east **Figure 33:** Ornamental pond viewed to the west

Saltmarsh

An area of saltmarsh habitat is present within the south of the site (**Figure 34** and **Figure 35**). This habitat grades into broadleaved woodland. Species recorded include sea couch *Elymus athericus*, glasswort *Salicornia europaea*, sea lavender *Limonium vulgare*, sea purslane *Halimione portulacoides*, sea club-rush *Scirpus maritimus*, greater sea-spurrey *Spergularia media* and spear-shaped orache *Atriplex prostrata*. The northern section of saltmarsh mainly consists of sea club-rush and sea couch.



Figure 34: Saltmarsh viewed to the north-west



Figure 35: Saltmarsh viewed to the north-east

Line of Trees

A single line of trees is located to the west of Woods Cottage (**Figure 36** and **Figure 1**). Tree species recorded include pedunculate oak, hawthorn *Crataegus monogyna* and yew *Taxus baccata* with an understorey of holly and bramble.



Figure 36: Saltmarsh viewed to the north-west

Ditches

A brackish drainage ditch is located within the south-eastern corner of the site (**Figure 37**).



Figure 37: Ditch

4.3.2 Evaluation

No material change in habitats was recorded at the site between the survey work undertaken in 2018 and subsequent update undertaken in 2025.

The desktop study identified the majority of the site forming a parcel of the Habitat of Principal Importance lowland mixed deciduous woodland. However, the field survey undertaken recorded this habitat only in association with the woodland named the Bury within the north-eastern corner of the site. The remaining areas were recorded as other woodland; broadleaved, other neutral grassland, modified grassland and artificial unvegetated; unsealed surface, all of which are not Habitats of Principal Importance.

The lowland mixed deciduous woodland within The Bury is the only part of the estate with habitat for which the SSSI was designated for NVC type W10 *Quercus robur*–*Pteridium aquilinum*–*Rubus fruticosus* woodland. Given this factor, the lowland mixed deciduous woodland is assessed of being of national importance.

Consultation with MAGIC also identified a parcel of the Habitat of Principal Importance and irreplaceable habitat coastal saltmarsh within the south-west of the site. The saltmarsh is assessed as being of local importance. However, the plant communities supported are typical of intertidal land within the harbour and therefore form a small composition of the habitats of importance.

All other on-site habitats are common and widespread in the local area and are therefore only of site value.

4.4 Bats

4.4.1 Baseline Ecological Conditions

Desktop Study Results

Consultation with MAGIC returned two granted EPSM licences in respect of bats within two kilometres of the site boundary. The nearest of these licences is located approximately 300 metres south of the site and was granted in 2017 for the destruction of a resting place of common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus*. The other EPSM licence is located approximately 1.3 kilometres north-west of the site and was granted in 2018 for the destruction of a resting place of brown long-eared bat *Plecotus auritus*, common pipistrelle and soprano pipistrelle.

Evidence of roosting bats was recorded in 2020 within Woods Cottage during the internal/external survey (Hampshire Ecological Services, 2020b). Bat roost characterisation surveys were subsequently undertaken in 2020. Peak counts of nine soprano pipistrelle, two common pipistrelle and one pipistrelle *Pipistrellus* species were recorded emerging (Hampshire Ecological Services, 2020b). Woods Cottage was

therefore assessed as supporting a low status day roost of common pipistrelle and soprano pipistrelle.

Bat transect surveys were also undertaken between June and October 2020 (Hampshire Ecological Services, 2020b). Common pipistrelle, soprano pipistrelle and serotine *Eptesicus serotinus* were recorded commuting and foraging within the site, particularly along the woodland edge at the south-east, south-west and north boundaries.

Field Survey Results

Building Assessment

A total of three buildings were identified during the field survey, with the results of the building assessment provided in **Table 6**.

A single building (Woods Cottage) was assessed as supporting a confirmed roost. The building is not a classic cool/stable hibernation site, but the PRFs could be used by individual hibernating bats.

Tree Assessment

A number of trees within the site were found to support potential bat roosting features such as cracks and cavities. However, given the large number of trees present within the site, it was not possible to fully inspect each tree for bat roosting suitability during the field survey undertaken.

Foraging and Commuting Habitat

The woodland provides a linear habitat feature that bats are likely to use for foraging and commuting. The grassland and scattered trees provide a foraging resource of invertebrate prey. These habitats also provide connectivity with off-site habitats in the wider landscape including Chichester Harbour. Therefore, the site is assessed as being of high suitability for foraging and commuting bats.

Table 6: 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
Woods Cottage	 Figure 38: Northern and western elevations of Woods Cottage  Figure 39: Southern elevation of Woods Cottage	Woods Cottage is a two storey detached house of brick and rendered construction with a pitched slate tile roof (Figure 38 and Figure 39). There is a balcony present on the western elevation above the garage. A wooden clad dormer is present on the northern elevation and wooden bargeboards are present. A single roof void is present, measuring approximately 10 metres by four metres and up to 1.5 metres height (Figure 40). The roof is lined with bitumen roofing felt and the floor is lined with fibreglass insulation.	Gaps are present beneath the slate tile roof on north-western and north-eastern corners. Tears in roofing felt are present below the eaves on both the north-western and north-eastern corners with additional tears in the roofing felt beneath the eaves on the eastern gable end (Figure 41). Gaps are also present beneath the eaves and wooden bargeboard on northern elevation potentially leading to cavities. Additional gaps are present beneath wooden bargeboards on the western gable end (Figure 42). The building is not a classic cool/stable hibernation site, but the PRFs could be used by individual hibernating bats.	A small number of pipistrelle droppings were recorded on the balcony below the western gable end (Figure 42). Pipistrelle droppings were also recorded within the roof void.	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
	 Figure 40: Roof void  Figure 41: Example tears in roof felt  Figure 42: Gaps at western gable end				

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Marquee	 Figure 43: Northern elevation of marquee	The structure is a marquee (Figure 43).	No suitable roosting features recorded. The building is considered unsuitable for roosting bats.	No evidence of roosting bats was recorded during the survey.	Negligible
Log cabin with decking	 Figure 44: Southern elevation  Figure 45: Northern elevation	The structure is an area of decking on a raised platform with a canopy (Figure 44 and Figure 45) with a wooden shed present beneath on western end.	No suitable roosting features recorded. The building is considered unsuitable for roosting bats.	No evidence of roosting bats was recorded during the survey.	Negligible

Bat Emergence Survey Results

Four soprano pipistrelle were recorded emerging from egress points upon both the eastern and western gable ends of Woods Cottage. The surveys recorded at least four species of bat foraging and commuting in the area: common pipistrelle, soprano pipistrelle, *Myotis* bat species and serotine.

Table 7 provides details of the species, numbers and locations of bats recorded roosting and foraging/commuting during the emergence surveys. Locations of bat emergences are shown in **Map 3**.

Table 7: Bat Emergence

Visit 1 - Survey Details	
Survey Date:	15 th May 2025
Structures Surveyed:	Woods Cottage
Survey Type:	Dusk Emergence Survey
Time of Sunset:	20:46
General Bat Activity	
No emergences were recorded during the survey. However, foraging common pipistrelle and soprano pipistrelle were recorded in the vicinity of Woods Cottage.	

Visit 2 - Survey Details	
Survey Date:	19 th June 2025
Structures Surveyed:	Woods Cottage
Survey Type:	Dusk Emergence Survey
Time of Sunset:	21:20
General Bat Activity	
No emergences were recorded during the survey. However, foraging common pipistrelle and soprano pipistrelle were recorded in the vicinity of Woods Cottage.	

Visit 3 - Survey Details				
Survey Date:		6 th August 2025		
Structures Surveyed:		Woods Cottage		
Survey Type:		Dusk Emergence Survey		
Time of Sunset:		20:40		
Recorded Bat Roosts				
Map Ref.	Species	Number of bats	Emergence Time	Roosting/Access Feature
A	Soprano pipistrelle	1	20:44	Beneath the eaves at the apex of the eastern gable end.
B(1)		1	20:49	Below the eaves upon the apex of the western gable end.
B(2)		1	20:50	A gap beneath a roof tile at the apex of the western gable end.
C		1	20:51	A gap beneath a roof tile upon the northern extent of the western gable end.
General Bat Activity				
Four emergences were recorded during the survey; three from the western gable end (Figure 47 and Figure 48) and one from the eastern (Figure 46). Additionally, extensive foraging behaviour by common pipistrelle and soprano pipistrelle was observed throughout the survey. A serotine was also recorded foraging in the vicinity of Woods Cottage, although more sporadically than that recorded of common pipistrelle and soprano pipistrelle.				



Figure 46: Access feature A, at the apex of the eastern gable end



Figure 47: Access features B(1) and B(2), upon the western gable end



Figure 48: Access feature C, upon the western gable end

Bat Transect Survey Results

Three bat transect surveys were undertaken during 2025, during which time a minimum of five species of bat were recorded within the site including common pipistrelle, soprano pipistrelle, *Myotis* bat species, long-eared bat and serotine. The wedding and events venue lighting was operational during the surveys. The locations of the bat activity recorded are provided on **Map 4** with a summary of the findings provided in **Table 8**.

Table 8: Bat activity recorded during transect survey

Survey Date	General Bat Activity at the Site
10 th April 2025	Common pipistrelle were recorded foraging within woodland and over adjacent ponds north of the site. Common pipistrelle, soprano pipistrelle and <i>Myotis</i> bat species observed foraging continuously under the tree canopy within the woodland. Bat activity dropped with the temperature as the evening passed.
11 th June 2025	Common and soprano pipistrelle were recorded foraging continuously throughout the woodland across the site and also within the grassland to the east of the site boundary and directly west of Woods Cottage. Serotine and <i>Myotis</i> bat species were also recorded foraging sporadically within the woodland.
3 rd September 2025	High levels of common and soprano pipistrelle foraging were recorded throughout the woodland across the site, particularly upon the woodland boundaries with surrounding grassland fields. Serotine and <i>Myotis</i> bat species were also recorded foraging sporadically within the woodland. One registration of long-eared bat was recorded within the Bury.

Bat Automated Detector Survey Results

The automated bat detector survey results recorded a total of 46,550 bat registrations of at least eight species including barbastelle *Barbastella barbastellus*, common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle *Pipistrellus nathusii*, *Pipistrellus* bat species *Pipistrellus species*, long-eared bat species, *Myotis* bat species, serotine, noctule *Nyctalus noctula*, and *Nyctalus* bat species ¹¹*Nyctalus species*.

Activity by Species

Table 9 shows the number of registrations and proportion of recorded bat activity at the site by species. Common pipistrelle was the most frequently recorded species at 29,211 registrations attributed to 62.75% of all registrations recorded. Soprano pipistrelle was the second most frequently recorded with 32.29% of all registrations. Where pipistrellus bat species are recorded in **Table 9** this comprises pipistrelle social

¹¹ Where the calls of the noctule and Leisler's bat *Nyctalus leisleri* cannot be reliably be separated, they are referred to as "*Nyctalus* bat species".

calls which are difficult to allocate to species level without associated echolocation calls.

Table 9: Number of registrations and proportion of bat activity from each species

Species	No. of Registrations	% Registrations
Long-eared bat species	207	0.44%
Soprano pipistrelle	15,030	32.29%
Common pipistrelle	29,211	62.75%
Myotis bat species	554	1.19%
Serotine	385	0.83%
Barbastelle	23	0.05%
Noctule	28	0.06%
Nathusius' pipistrelle	11	0.02%
Pipistrellus bat species	1,087	2.34%
Nyctalus bat species	14	0.03%
Grand Total	46,550	100.00%

Activity Levels at Locations

Table 10 shows the number of registrations recorded at each individual location throughout the survey period. The same species assemblage was recorded at each detector location. Location 2 produced the highest number of bat recordings with notably higher levels of common pipistrelle recorded.

Table 10: Activity Recorded at Each Location

Months	Species	No. Registrations per Location		Grand Total
		1	2	
May	Common pipistrelle	3,957	6,744	10,701
	Soprano pipistrelle	2,031	1,703	3,734
	Serotine	27	14	41
	Barbastelle	1	6	7
	Long-eared bat species	1	1	2
	<i>Myotis</i> bat species	19	33	52
	<i>Pipistrellus</i> bat species	2	1	3
May Total		6,038	8,502	14,540
June	Common pipistrelle	406	6,008	6,414
	Soprano pipistrelle	318	1,069	1,387
	Serotine	1	11	12
	Long-eared bat species	0	6	6
	<i>Myotis</i> bat species	8	36	44
	<i>Nyctalus</i> bat species	0	6	6
June Total		733	7,136	7,869
July	Common pipistrelle	1,807	3,461	5,268
	Noctule	0	11	11
	Soprano pipistrelle	1,564	2,027	3,591
	Serotine	6	132	138
	Long-eared bat species	1	22	23
	<i>Myotis</i> bat species	45	181	226
	<i>Nyctalus</i> bat species	0	1	1
	<i>Pipistrellus</i> bat species	4	1	5
July Total		3,427	5,836	9,263
August	Common pipistrelle	602	1674	2,276
	Noctule	0	3	3
	Soprano pipistrelle	895	1,513	2,408
	Serotine	1	187	188

	Nathusius' pipistrelle	0	1	1
	Barbastelle	0	11	11
	Long-eared bat species	1	152	153
	<i>Myotis</i> bat species	27	96	123
	<i>Pipistrellus</i> bat species	64	262	326
August Total		1,590	3,899	5,489
September	Common pipistrelle	936	3,616	4,552
	Noctule	11	3	14
	Soprano pipistrelle	1,921	1,989	3,910
	Serotine	0	6	6
	Nathusius' pipistrelle	4	6	10
	Barbastelle	0	5	5
	Long-eared bat species	0	23	23
	<i>Myotis</i> bat species	30	79	109
	<i>Nyctalus</i> bat species	7	0	7
	<i>Pipistrellus</i> bat species	540	213	753
September Total		3,449	5,940	9,389
Grand Total		15,237	31,313	46,550

4.4.2 Evaluation

Roosting Bats

The bat emergence surveys undertaken throughout 2025 have identified the presence of a low status day roost of soprano pipistrelle within Woods Cottage. While the bat emergence surveys undertaken in 2025 did not record any emergences of common pipistrelle, there is a historic record of a common pipistrelle roost within the building. Since bat emergence surveys only record a snapshot of activity, Woods Cottage is therefore still assessed as supporting a low status day roost of common pipistrelle.

Day roosts are considered to be of low status in comparison to maternity or hibernating roosts (Wray, et al., 2010). As both soprano pipistrelle and common pipistrelle are common and widespread in the county (The Mammal Society, 2016), and males have been shown to roost singly or in small groups in a variety of habitats during the summer (Lundberg, K. and Gerrell, R., 1986), day roosts of the species are of low conservation value.

There are also areas of woodland and scattered trees within the site, which are likely to provide opportunities for roosting bats.

Foraging and Commuting Bats

Bat surveys undertaken recorded at least six species of bat foraging and commuting at the site. **Table 11** shows the geographic level of value of foraging and commuting habitat at the site.

Table 11: Value of the site to bat species/species complexes

Species	Foraging and Commuting Value
Barbastelle	Local
Common pipistrelle	Site
Soprano pipistrelle	Site
Nathusius' pipistrelle	Site
<i>Pipistrellus</i> bat species	Site
Long-eared bat species	Site
<i>Myotis</i> bat species	Site
Serotine	Site
Noctule	Site
<i>Nyctalus</i> bat species	Site

The Annex II species barbastelle was recorded infrequently across the automated detector survey and is likely to represent individual bats utilising the site. Barbastelle is uncommon in Hampshire (The Mammal Society, 2015). Whilst this is a rare species, they were rarely recorded during the surveys and are likely to only occasionally pass through the site. Whilst their presence is relatively more notable it is not considered that this would be of county value and is assessed as being of local value.

Common pipistrelle, soprano pipistrelle and brown long-eared bat are common and widespread across the county (Mammal Society, 2015; Hampshire Biodiversity Information Centre, 2021). In Hampshire grey long-eared bat is a rare species with the majority of records of the county located on the Isle of Wight (Mammal Society, 2015). Given the lack of records from the local area it is assumed that the long-eared bat records are highly likely to be of brown long-eared bat.

Serotine are also widespread across the county (Mammal Society, 2015; Hampshire Biodiversity Information Centre, 2021).

There are seven species of *Myotis* bats in Britain, six of these occur in Hampshire. *Myotis* bats are very difficult to identify specifically, this can generally only be done by examination of physical features and Phylogenetic Analysis Identification of bat droppings. However, given the habitats present it is considered that the *Myotis* bat species recorded are likely to be one of the more common species such as Natterer's bat or Daubenton's bat and not the rarer *Myotis* species Bechstein's bat *Myotis bechsteinii* and Alcaethoe bat *Myotis alcathoe*. Indeed these rarer *Myotis* species have irregular pattern of occurrence in the vicinity of the site (Mammal Society, 2015; Hampshire Biodiversity Information Centre, 2021).

4.5 Badger

4.5.1 Baseline Ecological Conditions

Desktop Study Results

During the Updated Phase 1 Habitat Survey undertaken by John Wenman Ecological Consultancy (John Wenman Ecological Consultancy, 2018), mammal pathways and mammal burrow entrances were recorded within The Bury. No further information was provided.

The Ecological Impact Assessment completed by Hampshire Ecological Services did not carry out any further survey works in relation to badger (Hampshire Ecological Services, 2020a). The status of the habitats on site have not changed since the initial assessment was undertaken and therefore no further survey works are recommended for badger.

Field Survey Results

No evidence of badger was recorded on site during the field survey or during previous ecological surveys. Neither has the site owner seen or been aware of badger activity in 50 years of being present on site. If badger are present in the wider area, the woodland could offer suitable habitat for sett establishment. The woodland and grassland within the wedding and events venue area are suitable for foraging and commuting badger. However, badger is considered absent from site at present.

4.5.2 Evaluation

Although badger are common and widespread throughout Hampshire, no evidence of badger was recorded on site during the field survey. Therefore, site evaluation is not appropriate for this species.

4.6 Birds

4.6.1 Baseline Ecological Conditions

Desktop Study Results

The Bury supports a small heronry, which is noted within the Chichester Harbour SSSI designation. It has been suggested that the heronry was a qualifying feature for the inclusion of the wider Tournerbury Woods Estate in the Chichester Harbour SSSI. However, the heronry is not listed among the 30 notified features of the SSSI.

Heronry surveys were undertaken in 2015 and 2019 (Hampshire Ecological Services, 2019). The majority of nests were occupied by grey heron *Ardea cinerea* with a single nest recorded being occupied by little egret. The number of grey heron nests decreased between the two surveys, the heronry is believed to have originated from a larger colony formerly present on Thorney Island (Eyre, 2015). It was concluded that being a small secondary colony, it is likely to be subject to natural fluctuations in population size.

Within the designation, Tournerbury Plantation has been notified as being important for breeding birds, however this was undertaken without any breeding bird survey data being collated for the site. A breeding bird survey was undertaken in 2014 which recorded small numbers of common woodland birds and low numbers of wetland species including grey heron, little egret and moorhen *Gallinula chloropus*. The value of the site for this species group was assessed to be relatively low (Hampshire Ecological Services, 2015).

The site forms part of the wider Chichester and Langstone Harbours Ramsar site and SPA as well as the Chichester Harbour SSSI. Chichester and Langstone Harbours SPA is designated on account of populations of breeding little tern *Sterna albifrons* and sandwich tern *Sterna sandvicensis* and over-wintering birds associated with the exposed estuarine sand and mudflats including including bar-tailed godwit *Limosa lapponica*, little egret *Egretta garzetta*, black-tailed godwit *Limosa limosa islandica*, dark-bellied brent goose *Branta bernicla bernicla*, dunlin *Calidris alpina alpina*, grey plover *Pluvialis squatarola*, redshank *Tringa tetanus* and ringed plover. Additionally, the SPA is designated on account of supporting passage little egret and ringed plover *Charadrius hiaticula*. Chichester and Langstone Harbours Ramsar site is designated on account of populations of international importance of over-wintering birds including dark-bellied brent goose, common shelduck *Tadorna tadorna*, grey plover and dunlin.

The Ecological Impact Assessment completed by Hampshire Ecological Services did not carry out any further survey works in relation to wintering birds (Hampshire Ecological Services, 2020a). The status of the habitats on site have not changed since

the initial assessment was undertaken and therefore no further survey works are recommended for wintering birds.

While the Ecological Impact Assessment completed by Hampshire Ecological Services did carry out breeding bird and heronry surveys (Hampshire Ecological Services, 2020a), the status of the habitats on site have not changed since the initial assessment was undertaken. The previous Ecological Impact Assessment determined the site to have low value for this species group and therefore no further survey works are recommended for breeding birds.

Field Survey Results

Birds recorded during the field survey included blackbird *Turdus merula*, mallard *Anas platyrhynchos*, little egret, robin *Erithacus rubecula* and woodpigeon *Columba palumbus*.

The wedding and events area contains woodland, scattered trees and grassland which have the potential to support breeding birds. The lowland mixed deciduous woodland (The Bury) continues to provide supporting habitat for nesting grey heron and little egret. A specific updating heronry survey wasn't undertaken but given the habitats haven't changed and the numbers fluctuate over time it's been assumed it's likely still present even though nothing was recorded as an incidental result of the field survey.

The saltmarsh habitat contributes to the wider habitat of Chichester harbour and has suitability to support small numbers of waders and wildfowl.

4.6.2 Evaluation

Breeding Birds

The birds breeding on site recorded during the previous surveys undertaken were common or fairly common within Hampshire and the surrounding area. No significant numbers or flocks of notable species were recorded during the breeding bird surveys previously undertaken. The site is therefore assessed as being of local value for breeding birds.

Wintering Birds

There are large areas of suitable habitat in the land surrounding the site for wintering birds. Overall, the wedding and events venue is considered to be of site value for wintering woodland birds. The adjacent saltmarsh habitat being assessed as having local value as a result of suitability to support a small number of overwintering birds.

5.0 ASSESSMENT OF ECOLOGICAL EFFECTS AND MITIGATION/COMPENSATION/ENHANCEMENT MEASURES

5.1 Introduction

This section assesses the ecological effects of the proposed development scheme on the identified ecological features as identified in Section 4.0. Methods for addressing potential impacts on ecological features have been approached in accordance with the mitigation hierarchy¹² with avoidance of impacts prioritised where possible. Where significant adverse effects cannot be avoided other forms of mitigation are prioritised over compensation. Enhancement measures have been detailed, where relevant, in order to not only minimise the impacts on biodiversity but also to provide enhancement in accordance with Paragraph 170 of the NPPF (Paragraph 2.2.1). It is anticipated that mitigation, compensation and enhancement measures will be secured through the planning process.

5.2 Scheme Design

The proposals comprise the redetermination of the retrospective planning application for a wedding and events venue. The proposals comprise a change of land use and retention of a marquee, log cabin with decking and gazebo. It also includes use of land as a campsite in association with events and other temporary structures including trailer toilet facilities sited adjacent to the marquee, additional pop-up gazebos used by caterers and third-party suppliers and bouncy castles/other inflatables.

The potential ecological impacts and effects of these proposals, in the absence of mitigation, are described for each ecological feature below. For each ecological feature, measures to mitigate and/or compensate for significant effects are described.

5.3 Designated Sites

5.3.1 Potential Impacts and Effects

As the site is within the boundary of the Chichester and Langstone Harbours SPA and Ramsar Site and adjacent to the Solent Maritime SAC, an updated Shadow Appropriate Assessment will be produced to support the redetermination of the retrospective planning application.

The previously prepared Shadow Appropriate Assessment identified a number of potential impacts on the Chichester and Langstone Harbours SPA and Ramsar Site and adjacent to the Solent Maritime SAC (Holbury Consultancy Services, 2025).

¹² 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'.

Please refer to this document for further information. In summary, impacts within proximity to the SPA/Ramsar will include:

- Sound disturbance to wintering birds using the foreshore for the purposes of feeding;
- Recreational and visitor disturbance to wintering birds using the foreshore to feed; and
- Changes to the nitrogen budget associated with the removal of foul from the site.

No habitat is due to be removed and therefore there will be no impact on the habitats for which Chichester Harbour SSSI has been designated. The northern area of the Tournerbury Woods Estate is the only part of the estate with habitat for which the SSSI was designated for: W10 *Quercus robur*–*Pteridium aquilinum*–*Rubus fruticosus* woodland. This is outside of the footprint of the development (the wedding and events venue area). Therefore, there will be no direct impact on the SSSI.

5.3.2 Mitigation Measures

An updated Shadow Appropriate Assessment has been prepared that anticipates no adverse effects on the integrity of the Solent Maritime SAC or Chichester and Langstone Harbours SPA and Ramsar Site (Holbury Consultancy Services, 2025). For further information on the mitigation measures please refer to the Shadow Appropriate Assessment (Holbury Consultancy Services, 2025).

The previously consented retrospective planning permission for the change of use of land as a wedding and events venue (reference: APP/23/00076), had a Visitor Management Strategy listed as a condition of consent. Within the strategy, a number of mitigation measures were included to mitigate the risk of disturbance to wintering birds including:

- No access to the foreshore and adjacent Harbour Lawn between 1st November and 31st March;
- Rope barrier and signage to be installed along the Harbour Lawn/foreshore edge during all events between 1st November and 31st March;
- All dogs brought onto site for events to be kept on short leads;
- Ban on fireworks at all events; and
- Noise levels at the foreshore from amplified music during the over wintering waterfowl season (30th November to 30th March) will not exceed 69dBA.

The above mitigation measures are still considered valid. An updated Shadow Appropriate Assessment has been produced to support the redetermination of the retrospective planning application and this document should be referred to (Holbury Consultancy Services, 2025).

5.3.3 Significance of Residual Effects

Following recommendations for mitigation no residual effects are anticipated.

5.3.4 Compensation

No compensation measures are considered necessary for designated sites.

5.3.5 Enhancement

No enhancement measures are considered necessary for designated sites.

5.4 Habitats

5.4.1 Potential Impacts and Effects

The proposed continued use of the site for weddings and events will not have a direct impact on habitats. Access into the site on event days will be via an existing track along the northern boundary of Woods Field. The events area is within an area of regularly managed modified grassland and therefore any impacts are considered to be negligible. The parking area is an area of shaded, formerly bare ground in open woodland close to the buildings and whilst it prevents any potential regeneration of the woodland, it is considered unlikely to have any adverse impact on the overall ecological value of the wooded habitats at Tournerbury.

5.4.2 Enhancement

No enhancement measures are considered necessary for habitats. The rhododendron will be managed as part of the objectives associated with the Chichester Harbour SSSI designation.

5.5 Bats

5.5.1 Potential Impacts and Effects

No impacts will occur at Woods Cottage. The building will continue to be used occasionally for wedding guests. Lighting will have been present on site throughout its past use particularly near Woods Cottage. Pre-existing security lighting is present on Woods Cottage and lighting is also already present within the main event area within the marquee and log cabin with decking. There are also a number of directional lights facing the Victorian-style gazebo and tracks and festoon lighting is also present.

No additional new lighting is proposed as part of the redetermination of the retrospective planning application. The bat activity surveys undertaken in 2025

recorded at least six species of bats foraging and commuting across the site compared to only three species of bats during 2020. This suggests that any lighting that has been introduced in the interim in association with the use of the site as a wedding and event venue has not had an impact on the bat assemblage at the site. Should any new lighting be introduced to the site, mitigation options as described within the Bats and Artificial Lighting in the UK report will be followed (Institution of Lighting Professionals, Bat Conservation Trust, 2023).

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 7**.

5.5.2 Enhancement

The site will be enhanced for roosting bats with at least ten tree mounted woodcrete / woodstone bat boxes erected in association with the previously granted consent (APP/23/00076) as detailed within the previous Bat Survey Report (Hampshire Ecological Services, 2020b). The bat boxes were not installed before the judicial review proceedings and therefore these should be implemented as originally planned.

5.6 Badger

5.6.1 Potential Impacts and Effects

The previous Ecological Assessment concluded that the impact on badger would be negligible (Hampshire Ecological Services, 2020a). The status of the site has not changed since this date and therefore this assessment is still considered valid and therefore impacts on badger are considered highly unlikely.

5.6.2 Enhancement

No enhancements are recommended in relation to badger.

5.7 Birds

5.7.1 Potential Impacts and Effects

No vegetation is to be removed and as such there should be no direct impacts on breeding birds.

Grey heron and little egret have continued to breed at the site despite the ongoing wedding and events. The heronry and little egret nest are outside of the events area and will therefore continue to be retained and not impacted. The estate will be accessed on event days via an existing access track along the northern boundary of Woods Field, which will avoid driving past the heronry.

There is the potential for disturbance impacts to nesting birds in proximity to the events area. The previous Ecological Assessment concluded that the impact on nesting birds would not be significant (Hampshire Ecological Services, 2020a). The status of the site has not changed since this date and therefore this assessment is still considered valid.

As discussed in Paragraph 5.3.1, there is potential events to result in disturbance of SPA/Ramsar bird species.

All birds, their nests, eggs and young are legally protected, with certain exceptions, under the Wildlife and Countryside Act 1981 (as amended). Refer to **Appendix 7** for details.

5.7.2 Mitigation Measures

Disturbance impacts of SPA/Ramsar bird species will be addressed through bespoke measures to be detailed within the Updating Shadow Appropriate Assessment. These measures were discussed within the previously prepared Shadow Appropriate Assessment (Holbury Consultancy Services, 2025).

5.7.3 Significance of Residual Effects

Following recommendations for mitigation no residual effects are anticipated.

5.7.4 Compensation

No compensation measures are considered necessary for breeding and wintering birds.

5.7.5 Enhancement

No enhancement measures are considered necessary for breeding or wintering birds. The site has already been enhanced for breeding birds with at least six bird boxes erected in association with the previously granted consent (APP/23/00076) as detailed within the previous Ecological Assessment Report (Hampshire Ecological Services, 2020a). These were installed before the judicial review proceedings.

6.0 CONCLUSION

6.1 Conclusion

No material change in habitats was recorded at the site between the survey work undertaken in 2018 and subsequent update undertaken in 2025.

Woods Cottage supports low status day roosts of soprano pipistrelle and common pipistrelle. The wedding and events area site also supports foraging and commuting bats. In addition, the wedding and events area contains habitat for breeding birds and woodland wintering birds.

Adverse impacts on designated sites and wintering birds have been identified. Mitigation measures in relation to designated sites and wintering birds are considered further in a shadow Habitats Regulations Assessment (Holbury Consultancy Services, 2025).

Since there has been largely no material change in the habitats recorded between 2018 and 2025, the ecological impact assessments submitted in support of the previously consented retrospective planning application are still considered to be valid.

The proposals will conform to all local planning policy in relation to ecology including and the NPPF (see Section 2.0).

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Map 1 Site Location Plan



**TOURNERBURY WOODS,
TOURNERBURY LANE, HAYLING
ISLAND, HAMPSHIRE**

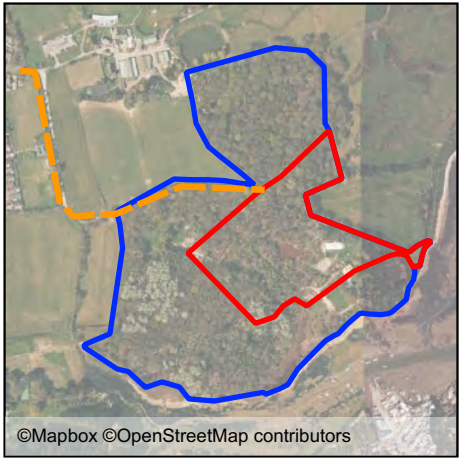
ECOLOGICAL IMPACT ASSESSMENT

Map 1 - Site Location Plan

Client:	Tournerbury Woods Estate
Date:	October 2025
Status:	Draft

KEY

-  Red Line Boundary
-  Survey Boundary
-  Access Road



Scale at A4 1:10,000
0 100 200 300 400 m



Prepared by: KM	Date: 110425
Last amended by: BL	Date: 151025

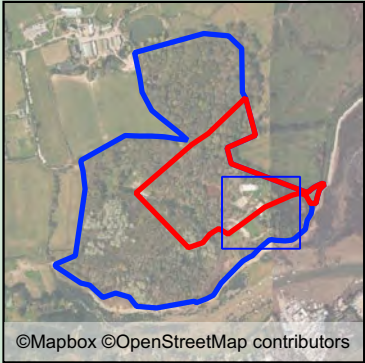


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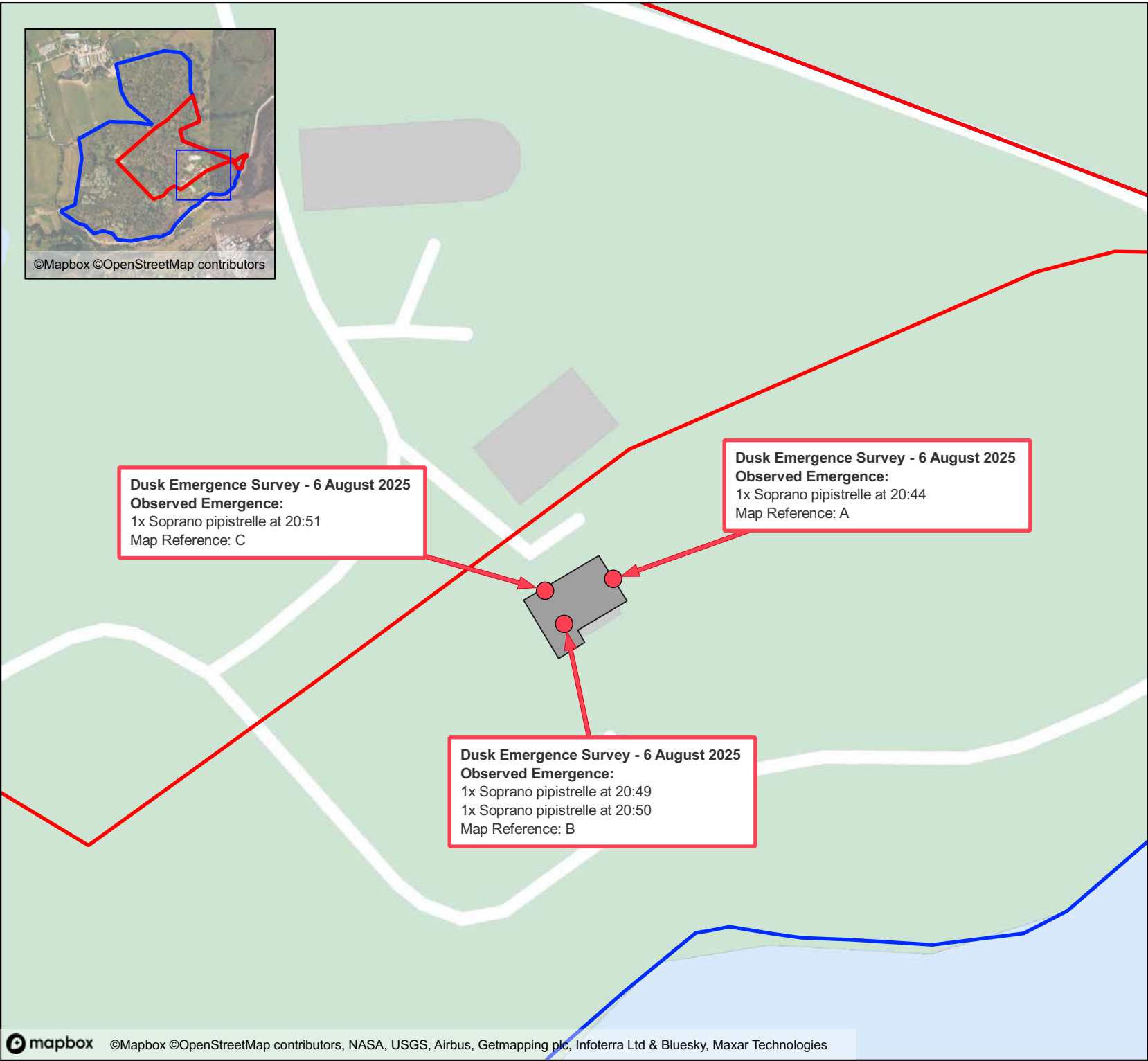
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Map 2 Baseline Habitats Map

Map 3 Bat Emergence Survey



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**TOURNERBURY WOODS,
TOURNERBURY LANE, HAYLING
ISLAND, HAMPSHIRE**

ECOLOGICAL IMPACT ASSESSMENT

Map 3 - Bat Emergence Survey

Client:	Tournerbury Woods Estate
Date:	October 2025
Status:	Draft

KEY

-  Site Boundary
-  Survey Boundary
-  Building
-  Emergence Point

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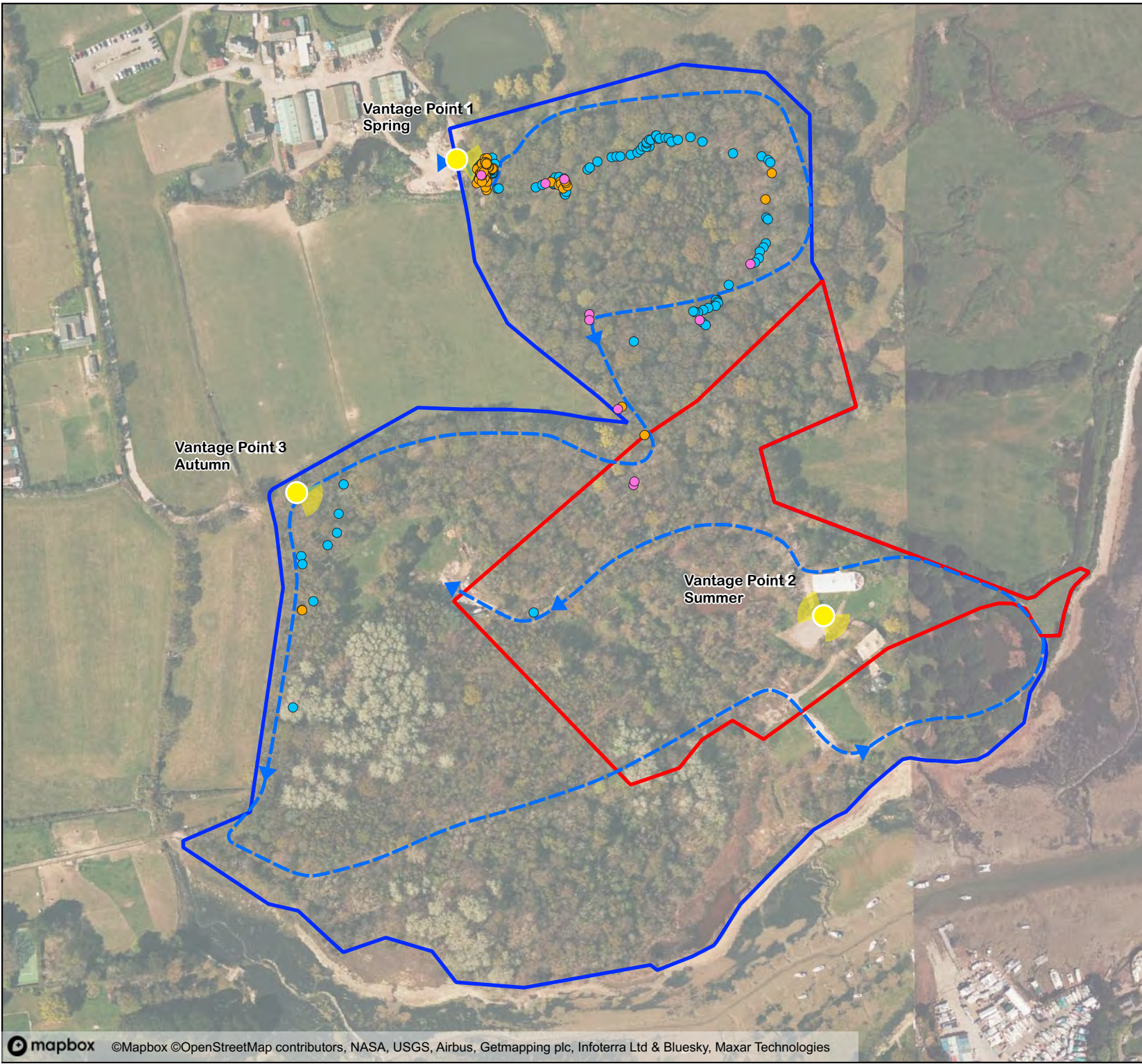


Prepared by: KM	Date: 110425
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Map 4 Bat Transect Survey



TOURNERBURY WOODS, TOURNERBURY LANE, HAYLING ISLAND, HAMPSHIRE

ECOLOGICAL IMPACT ASSESSMENT

Map 4a - Bat Transect Survey (Spring)

Client:	Tournerbury Woods Estate
Date:	October 2025
Status:	Draft

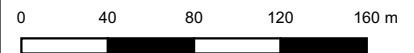
KEY

- Site Boundary
- Survey Boundary
- Transect Route
- Vantage Point

Bat Transect Survey (Spring)

- Myotis bat species
- Soprano pipistrelle
- Common pipistrelle

Scale at A4 1:3,500



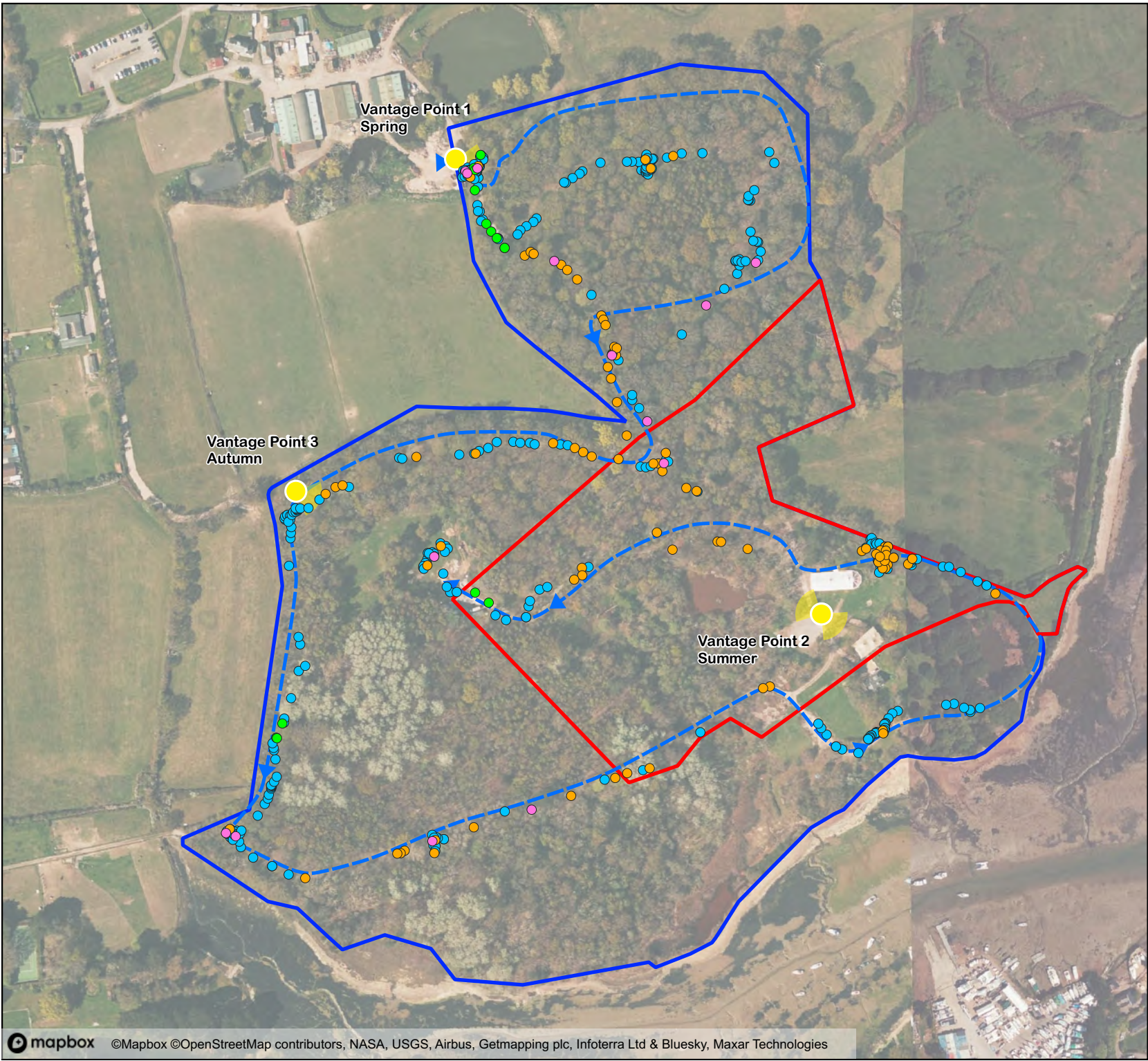
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**TOURNERBURY WOODS,
TOURNERBURY LANE, HAYLING
ISLAND, HAMPSHIRE**

ECOLOGICAL IMPACT ASSESSMENT

Map 4b - Bat Transect Survey (Summer)

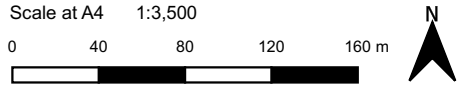
Client:	Tournerbury Woods Estate
Date:	October 2025
Status:	Draft

KEY

- Site Boundary
- Survey Boundary
- Transect Route
- Vantage Point

Bat Transect Survey (Summer)

- Myotis bat species
- Serotine
- Soprano pipistrelle
- Common pipistrelle

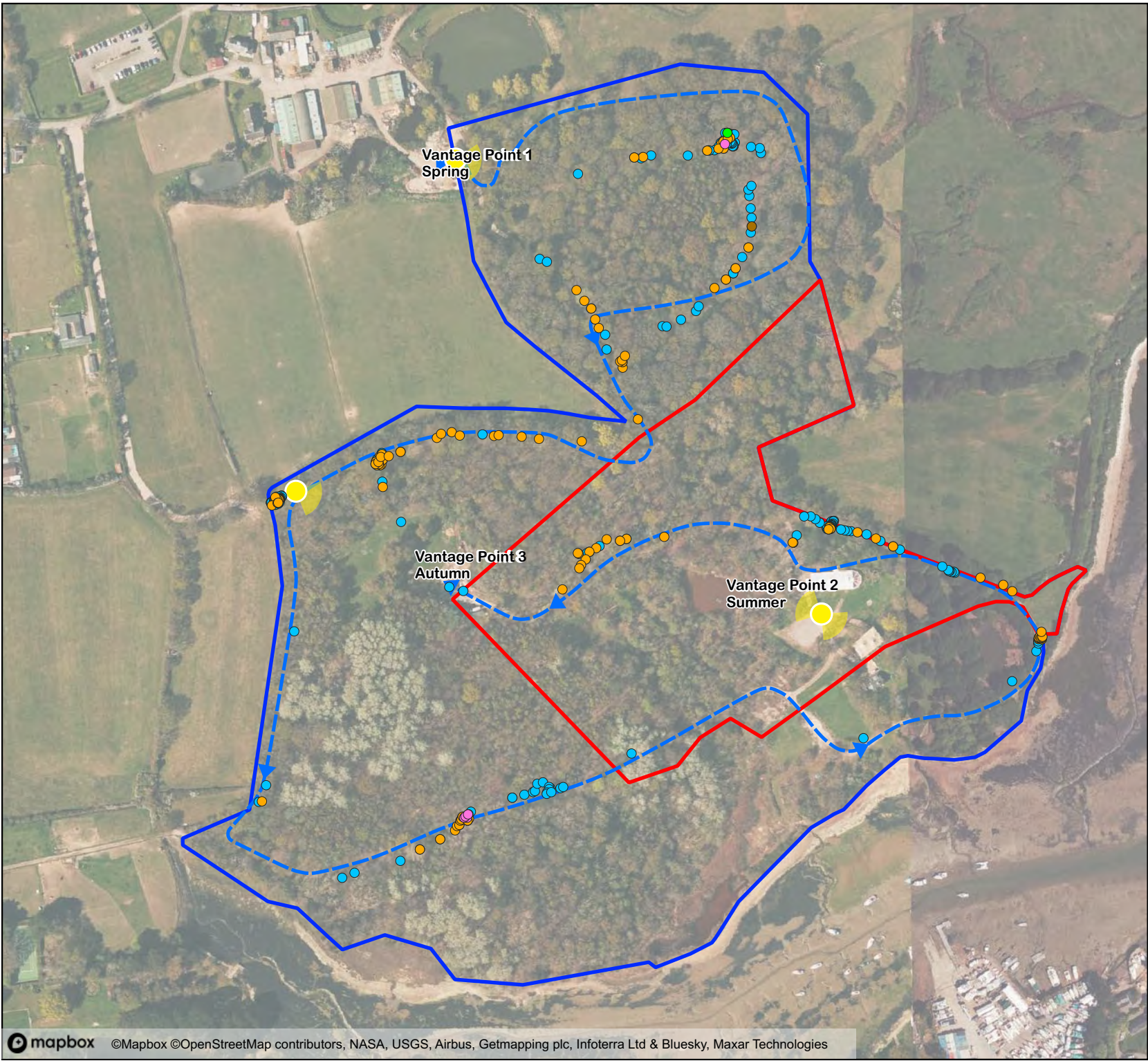


Prepared by: KM	Date: 110425
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**TOURNERBURY WOODS,
TOURNERBURY LANE, HAYLING
ISLAND, HAMPSHIRE**

ECOLOGICAL IMPACT ASSESSMENT

Map 4c - Bat Transect Survey (Autumn)

Client:	Tournerbury Woods Estate
Date:	October 2025
Status:	Draft

KEY

- Site Boundary
- Survey Boundary
- Transect Route
- Vantage Point

Bat Transect Survey (Autumn)

- Long-eared bat
- Myotis bat species
- Serotine
- Soprano pipistrelle
- Common pipistrelle



Prepared by: KM	Date: 110425
Last amended by: BL	Date: 151025

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Map 5 Bat Automated Detector Survey



TOURNERBURY WOODS, TOURNERBURY LANE, HAYLING ISLAND, HAMPSHIRE

ECOLOGICAL IMPACT ASSESSMENT

Map 5 - Automated Bat Detector Survey

Client:	Tournerbury Woods Estate
Date:	October 2025
Status:	Draft

KEY

- Site Boundary
- Survey Boundary
- Bat Automated Detector Survey

Scale at A4 1:3,500

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Prepared by: KM	Date: 110425
Last amended by: BL	Date: 151025

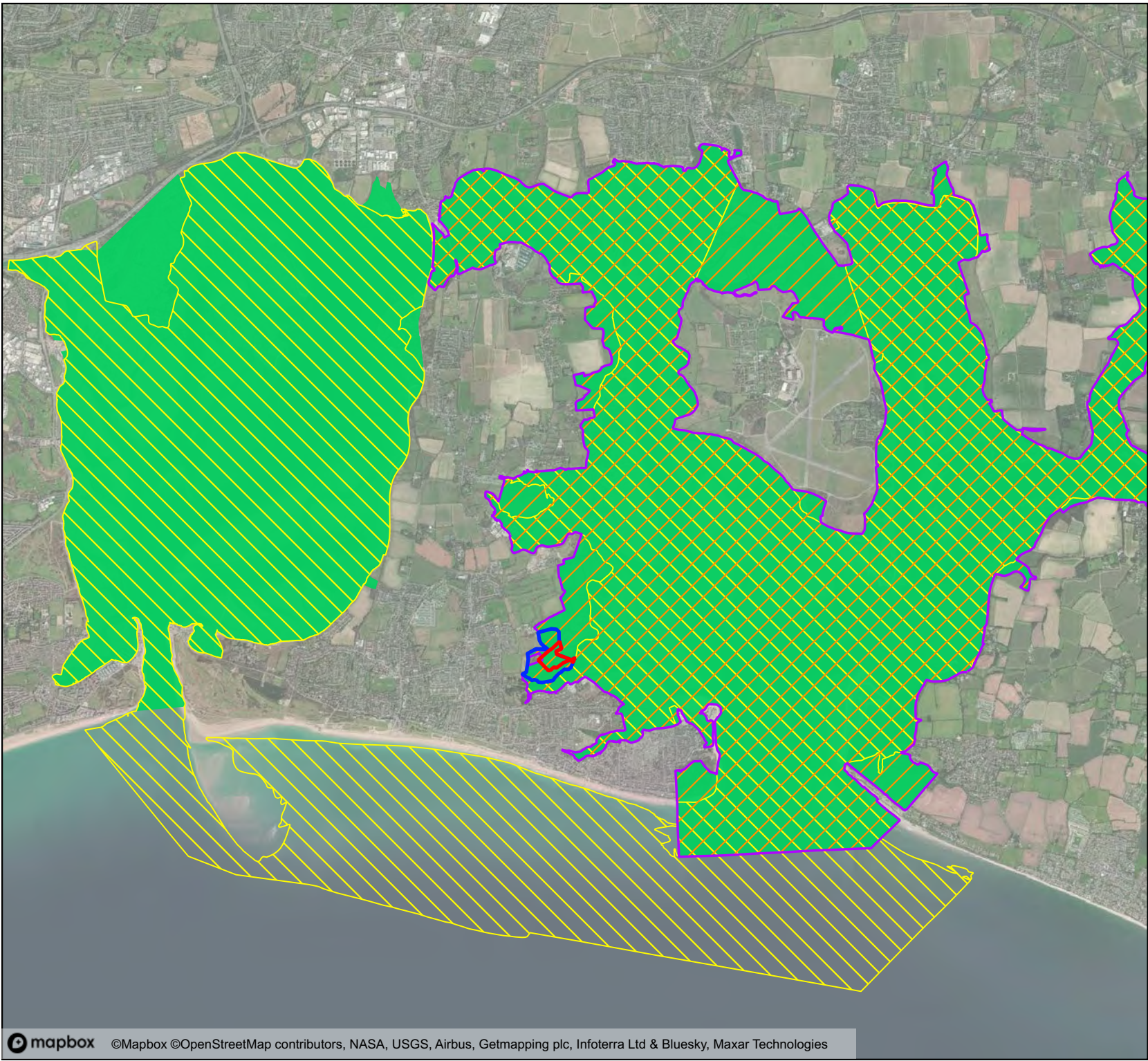
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Map 6 Location of Statutory Designated Sites



**TOURNERBURY WOODS,
TOURNERBURY LANE, HAYLING
ISLAND, HAMPSHIRE**

ECOLOGICAL IMPACT ASSESSMENT

**Map 6 - Location of Statutory Designated
Sites**

Client:	Tournerbury Woods Estate
Date:	October 2025
Status:	Draft

- KEY**
-  Site Boundary
 -  Survey Boundary
 -  Chichester Harbour SSSI
 -  Solent Maritime SAC
 -  Chichester and Langstone Harbours SPA
 -  Chichester and Langstone Harbours Ramsar Site

Scale at A4 1:60,000
0 500 1,000 1,500 2,000 m



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Appendix 1 Protected and Notable Species Appraisal Methods

Bats

The survey conformed to current Bat Conservation Trust guidelines (Collins, 2023). 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 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 potential for the site to support roosting, foraging and commuting bat is based on a four-point scale as detailed in **Appendix 8**.

Otter

The otter appraisal was based on an assessment of the suitability of the habitat present within the site to support otter by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), proximity of the site to freshwater and potential important feeding resources (such as fisheries), presence of habitat features which could provide opportunities for resting places and/or holts (such as tunnels, hollows at the base of trees and presence of dense, undisturbed habitat). During the survey attention was paid to the presence of evidence such as spraints, feeding remains, footprints and slides.

Badger

The survey involved a detailed investigation of the site to identify evidence of badger residence, foraging or territorial activity. Particular emphasis was placed on locating badger setts, paths, and signs of territorial activity such as latrine sites both on-site and within immediately adjacent areas where access was possible.

Hazel Dormouse

The appraisal for the potential of the site to support hazel dormouse was based on an assessment of habitat features that may indicate that the species is present. This includes the presence of key food sources such as hazel and bramble, or plants used as nesting material such as honeysuckle and clematis. Additionally, the species requires a continuum of food supply so that habitat structure, diversity and connectivity to adjacent areas of woodland/scrub are important features in determining the potential presence of hazel dormouse.

Water Vole

The water vole appraisal was based on an assessment of the suitability of the habitat present within the site to support water vole by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), bank structure and the bank side vegetation. Water voles generally require sloping banks in which to burrow and well-developed

bank side vegetation to provide shelter and food. During the survey attention was paid to the presence of burrows, latrines, feeding remains, trails and footprints.

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 potential for the site to support wintering farmland bird species, waders and wildfowl.

Reptiles

The reptile appraisal was based on an assessment of the suitability of the habitat present within the site to support a population of reptiles. Reptiles particularly favour scrub and rough grassland interfaces and the presence of these is a good indication that reptiles may be present on-site. In addition, reptiles may utilise features such as bare ground for basking, tussocky grassland for shelter and compost heaps and rubble piles for breeding and/or hibernating.

Great Crested Newt

The appraisal of the site to support great crested newt included establishing the presence of suitable aquatic habitats such as ponds, lakes or other waterbodies within or adjacent to the site and the presence of suitable terrestrial habitat. Waterbodies that are densely shaded, highly eutrophic or that contain fish are likely to be less suitable for this species. The suitability of on-site ponds and terrestrial habitat is considered in relation to the presence of ponds within the wider area and their suitability to be used as a network.

Invertebrates

An assessment was made of the site for its potential value to support diverse communities of invertebrates. The assessment was based on the presence of habitat features which may support important invertebrate communities. These features include, for example, an abundance of dead wood, the presence of diverse plant communities, varied woodland structure, sunny woodland edges with a diverse flora, waterbodies and water courses and areas of free draining soil exposures. During the field survey there was no attempt made to identify species present as this is a more specialist area of ecological assessment reserved for targeted surveys.

Other Relevant Species

An assessment was made of site suitability for other notable species such as more rarely encountered protected species, Species of Principal Importance for the Conservation of diversity in England notified under Section 41 of the NERC Act 2006 and as listed in the England

Biodiversity List, and Local Biodiversity Action Plan (LBAP) species¹³, specific to the study region.

Invasive Species

During the field survey any incidental records of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded. However, it should be considered that the survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

¹³ LBAPs identify local priorities for biodiversity conservation by translating national targets for species into effective action at the local level and identifying targets for species important to the local area.

Appendix 2 Assessment Criteria for Roosting Bats

Roost types have been defined in accordance with Natural England and Bat Conservation Trust guidelines. Definitions are set out in **Table 12**.

Table 12: Bat roost types as defined by Natural England and the Bat Conservation Trust

Roost Type	Definition
Day Roost	A place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
Night Roost	A place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
Feeding Roost	A place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
Transitional/Occasional Roost	Used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
Swarming Site	Where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites.
Mating Sites	Where mating takes place from late summer and can continue through winter.
Maternity Roost	Where female bats give birth and raise their young to independence.
Hibernation Roost	Where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.
Satellite Roost	An alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Appendix 3 Automated Detector Settings

Automated Detector Settings

Automated detectors can be calibrated in a number of different settings which can result in the potential variations in the way that bat calls are recorded. **Table 13** details the standard settings used by ECOSA during automated detector surveys undertaken.

Table 13: Standard automated detector settings

Option	Basic Setup
Settings - Audio	
Sample rate	192000Khz
Channels	Mono L (left)
Compression	WAV
Gain Left	+0.00
Gain Right	+0.00
Settings - Audio Advanced	
Dig High Pass Filter (HPF) Left	Fs/12
Dig High Pass Filter (HPF) Right	Off
Digital Low Pass Filter (LPF) Left	Off
Digital Low Pass Filter (LPF) Right	Off
Trig Lvl Left	12SNR
Trig Lvl Right	Off
Trg Win Left	2.0s
Trg Win Right	2.0s
Trg Max Length	2s
Bits (Div Ratio)	16
Nap Trg Lvl	Off

Data Conversion Settings

In order to analyse the data efficiently the raw .wav files recorded on the automated detector are subsequently converted to zero crossing (.zc) files which are subject to automated classification by Wildlife Acoustics Kaleidoscope Pro. During the conversion process the data is filtered to remove noise files in line with Wildlife Acoustics recommended setting as provided in **Table 14**.

Table 14: Noise file filtering settings

Option	Basic Setup
Signal of Interest – Frequency	8 – 120 kHz
Signal of Interest – Call Length	2 - 500ms
Signal of Interest – Minimum Number of Calls	2
Advanced Signal Enhancement	On

All filtered noise files are kept and subsequently assessed for bat calls in order to ensure that no bat calls have been incorrectly classified as noise. The “Advanced Signal Enhancement” setting discards files which Kaleidoscope assessed as being insufficient quality. Any discarded files are subsequently not stored by Kaleidoscope and therefore, not subject to analysis by an ecologist.

Appendix 4 Statutory Designated Sites within the Desktop Study Area

Details of statutory designated sites within the desktop study area, as listed in Paragraph 4.2.1, are provided in **Table 15**.

Table 15: Statutory Designated Sites Located Within the Desktop Study Area

Site Name	Chichester and Langstone Harbours
Site Designation	Ramsar site
Approximate Relative Location	Within the site
Reasons for Designation:	
The site is designated under Ramsar Criterion 1, 5 and 6. Criterion 1 – Two large estuarine basins linked by the channel which divides Hayling Island from the main Hampshire coastline. The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes. Criterion 5 – Assemblages of international importance: 76480 waterfowl, count in winter (5 year peak mean 1998/99 – 2002/2003) Criterion 6 – species/populations occurring at levels of international importance. Qualifying species/populations (as identified at designation) Species with peak counts in spring/autumn: - Ringed plover <i>Charadrius hiaticula</i>; - Black-tailed godwit <i>Limosa limosa islandica</i>; and - Common redshank <i>Tringa totanus totanus</i>. Species with peak counts in winter: - Dark-bellied brent goose <i>Branta bernicla bernicla</i>; - Common shelduck <i>Tadorna tadorna</i>; - Grey plover <i>Pluvialis squatarola</i>; - Dunlin <i>Calidris alpina alpina</i>. Species/populations identified subsequent to designation for possible future consideration under criterion 6: - Little tern <i>Sterna albifrons albifrons</i>.	

Site Name	Chichester and Langstone Harbours
Site Designation	SPA
Approximate Relative Location	Within the site
Reasons for Designation:	
The site qualifies for supporting the following Annex I species: Breeding - Little tern <i>Sterna albifrons</i>, 100 pairs representing up to 4.2% of the breeding population in Great Britain; and - Sandwich tern <i>Sterna sandvicensis</i>, 158 pairs representing up to 1.1% of the breeding population in Great Britain.	

On passage

- Little egret *Egretta garzetta*, 137 individuals representing up to 17.1% of the population in Great Britain.

Over winter

- Bar-tailed godwit *Limosa lapponica*, 1,692 individuals representing up to 3.2% of the wintering population in Great Britain; and
- Little egret *Egretta garzetta*, 100 individuals representing up to 20.0% of the wintering population in Great Britain.

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

On passage

- Ringed plover *Charadrius hiaticula*, 2,471 individuals representing up to 4.9% of the Europe/Northern Africa - wintering population.

Over winter

- Black-tailed godwit *Limosa limosa islandica*, 1,003 individuals representing up to 1.4% of the wintering Iceland - breeding population;
- Dark-bellied brent goose *Branta bernicla bernicla*, 17,119 individuals representing up to 5.7% of the wintering Western Siberia/Western Europe population;
- Dunlin *Calidris alpina alpina*, 44,294 individuals representing up to 3.2% of the wintering Northern Siberia/Europe/Western Africa population;
- Grey plover *Pluvialis squatarola*, 3,825 individuals representing up to 2.5% of the wintering Eastern Atlantic - wintering population;
- Redshank *Tringa totanus*, 1,788 individuals representing up to 1.2% of the wintering Eastern Atlantic - wintering population; and
- Ringed plover *Charadrius hiaticula*, 846 individuals representing up to 1.7% of the wintering Europe/Northern Africa - wintering population.

The site qualifies by regularly supporting in excess of 20,000 individual waterfowl over winter.

Site Name	Solent Maritime
Site Designation	SAC
Approximate Relative Location	Immediately south of the site
Reasons for Designation:	
Annex I habitats that are a primary reason for selection of this site: ▪ Estuaries; ▪ Spartina swards (<i>Spartinion maritima</i>); and ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>). Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: ▪ 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; and ▪ Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes).	

Annex II species present as a qualifying feature, but not a primary reason for site selection:

- Desmoulin's whorl snail *Vertigo moulinsiana*.

Site Name	Chichester Harbour
Site Designation	SSSI
Approximate Relative Location	Within the site
Reasons for Designation:	
Chichester Harbour is a large estuarine basin in which at low water extensive mud and sandflats are exposed, drained by channels which unite to make a common exit to the sea. The site is of particular significance for wintering wildfowl and waders and also breeding birds both within the Harbour and in the surrounding permanent pasture fields and woodlands. There is a wide range of habitats which have important plant communities. The intertidal area is fragmented in the upper reaches of the harbour by intruding tongues of land giving a very long and varied coastline. The harbour exhibits a wide range of intertidal and associated terrestrial habitats and with the neighbouring Langstone and Portsmouth Harbours is unusual in providing a large volume of sheltered saline water fed by a few streams of only low volume. The extensive intertidal mudflats are the feeding grounds, at the relevant times of year for internationally important numbers of ringed plover <i>Charadrius hiaticula</i>, grey plover <i>Pluvialis squatarola</i>, redshank <i>Tringa totanus</i>, black-tailed godwit <i>Limosa limosa</i>, dunlin <i>Calidris alpina</i>, sanderling <i>Calidris alba</i>, curlew <i>Numenius arquata</i> and greenshank <i>Tringa nebularia</i> (the latter two in autumn particularly). Bar-tailed godwit numbers are of European importance. Amongst the wildfowl, shelduck <i>Tadorna tadorna</i>, teal <i>Anas crecca</i> and dark-bellied brent goose <i>Branta bernicla</i> numbers are of international importance with 5% of the world population of the latter. The unimproved permanent pasture behind the sea wall provides alternative feeding sites for the geese and major high tide wader roosts. Some of this pasture is floristically rich being a red fescue <i>Festuca rubra</i> sward with scarce species such as green-winged orchid <i>Orchis morio</i> and adder's tongue fern <i>Ophioglossum vulgatum</i>.	

Appendix 5 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 6 Baseline Habitats

Table 16: Summary of Baseline Habitats

Habitat Ref.	1
Level 1	Terrestrial
Level 2	Grassland (g)
Level 3	Neutral grassland (g3)
Level 4	Other neutral grassland (g3c)
Level 5	N/A
Secondary Codes	Mown (106), line of trees ()
	
Species List	
Smooth meadow grass <i>Poa pratensis</i>, common bent <i>Agrostis capillaris</i>, red fescue <i>Festuca rubra</i> and Yorkshire fog <i>Holcus lanatus</i> white clover <i>Trifolium repens</i>, yarrow <i>Achillea millefolium</i>, common mouse-ear <i>Cerastium fontanum</i>, self-heal <i>Prunella vulgaris</i>, bristly ox-tongue <i>Picris echioides</i>, dove's-foot crane's-bill <i>Geranium molle</i>, common ragwort <i>Senecio jacobaea</i>. pineapple weed <i>Matricaria discoidea</i>, dandelion <i>Taraxacum officinale</i> aggregate, daffodil <i>Narcissus</i> species, spear thistle <i>Cirsium vulgare</i>, creeping cinquefoil <i>Potentilla reptans</i>, Lords-and-ladies <i>Arum maculatum</i>, bluebell <i>Hyacinthoides non-scripta</i> and primrose <i>Primula vulgaris</i>. A line of trees is present along the north-western boundary of the grassland, separating the grassland from the hardstanding associated with Woods Cottage. The tree line comprised pedunculate oak <i>Quercus robur</i>, hawthorn <i>Crataegus monogyna</i> and yew <i>Taxus baccata</i> with an understory of holly <i>Ilex aquifolium</i> and bramble <i>Rubus fruticosus</i> aggregate. Ground floral species comprised bluebell <i>Hyacinthoides non-scripta</i>, pendulous sedge <i>Carex pendula</i>, broad-leaved dock <i>Rumex obtusifolius</i>, common nettle <i>Urtica dioica</i>, primrose <i>Primula vulgaris</i>, Yorkshire fog <i>Holcus lanatus</i>, periwinkle <i>Vincia</i> species, dandelion <i>Taraxacum officinale</i> aggregate and daffodil <i>Narcissus</i> species.	

Habitat Ref.	2
Level 1	Terrestrial
Level 2	Grassland (g)
Level 3	Neutral grassland (g3)
Level 4	Other neutral grassland (g3c)
Level 5	N/A
Secondary Codes	N/A
	
Species List	
Smooth meadow grass <i>Poa pratensis</i>, common bent <i>Agrostis capillaris</i>, red fescue <i>Festuca rubra</i>, cock's-foot <i>Dactylis glomerata</i>, Yorkshire fog <i>Holcus lanatus</i>, creeping buttercup <i>Ranunculus repens</i>, daisy <i>Bellis perennis</i>, common mouse-ear <i>Cerastium fontanum</i>, self-heal <i>Prunella vulgaris</i>, bristly ox-tongue <i>Picris echioides</i>, dove's-foot crane's-bill <i>Geranium molle</i>, common ragwort <i>Senecio jacobaea</i>, pineapple weed <i>Matricaria discoidea</i>, pendulous sedge <i>Carex pendula</i>, soft rush <i>Juncus effusus</i>, broad-leaved dock <i>Rumex obtusifolius</i>, spotted medick <i>Medicago arabica</i>, teasel <i>Dipsacus fullonum</i>, daffodil <i>Narcissus</i> species, bramble <i>Rubus fruticosus</i> aggregate and vetch <i>Vicia</i> species.	

Habitat Ref.	3
Level 1	Terrestrial
Level 2	Grassland (g)
Level 3	Neutral grassland (g3)
Level 4	Other neutral grassland (g3c)
Level 5	N/A
Secondary Codes	Scattered trees (32)
	
Species List	
Smooth meadow grass <i>Poa pratensis</i>, common bent <i>Agrostis capillaris</i>, red fescue <i>Festuca rubra</i>, Yorkshire fog <i>Holcus lanatus</i>, common mouse-ear <i>Cerastium fontanum</i>, self-heal <i>Prunella vulgaris</i>, bristly ox-tongue <i>Picris echioides</i>, dove's-foot crane's-bill <i>Geranium molle</i>, common ragwort <i>Senecio jacobaea</i> and pineapple weed <i>Matricaria discoidea</i>.	

Habitat Ref.	4
Level 1	Terrestrial
Level 2	Grassland (g)
Level 3	Neutral grassland (g3)
Level 4	Other neutral grassland (g3c)
Level 5	N/A
Secondary Codes	N/A
	
Species List	
Common bent <i>Agrostis capillaris</i>, Yorkshire fog <i>Holcus lanatus</i>, cock's-foot <i>Dactylis glomerata</i>, soft rush <i>Juncus effusus</i>, creeping buttercup <i>Ranunculus repens</i>, daffodil <i>Narcissus</i> species, dove's-foot crane's-bill <i>Geranium molle</i>, daisy <i>Bellis perennis</i>, pendulous sedge <i>Carex pendula</i>, bristly ox-tongue <i>Picris echinoides</i>, broad-leaved dock <i>Rumex obtusifolius</i>, spotted medick <i>Medicago arabica</i>, teasel <i>Dipsacus fullonum</i>, bramble <i>Rubus fruticosus</i> aggregate and vetch <i>Vicia</i> species.	

Habitat Ref.	5
Level 1	Terrestrial
Level 2	Grassland (g)
Level 3	Neutral grassland (g3)
Level 4	Other neutral grassland (g3c)
Level 5	N/A
Secondary Codes	N/A
	
Species List	
Perennial rye-grass <i>Lolium perenne</i> meadow foxtail <i>Alopecurus pratensis</i>, Yorkshire fog <i>Holcus lanatus</i>, smooth meadow-grass <i>Poa pratensis</i>, scarlet pimpernel <i>Anagallis arvensis</i>, common mouse-ear <i>Cerastium fontanum</i>, common cudweed <i>Filago vulgaris</i>, common bird's-foot-trefoil <i>Lotus corniculatus</i>, creeping buttercup <i>Ranunculus repens</i>, common chickweed <i>Stellaria media</i>, white clover <i>Trifolium repens</i> and thyme-leaved speedwell <i>Veronica serpyllifolia</i>.	

Habitat Ref.	1
Level 1	Terrestrial
Level 2	Grassland (g)
Level 3	Modified grassland (g4)
Level 4	N/A
Level 5	N/A
Secondary Codes	Scattered trees (32), regularly mown (108)
	
Species List	
Perennial rye grass <i>Lolium perenne</i>, Yorkshire fog <i>Holcus lanatus</i>, white clover <i>Trifolium repens</i>, dandelion <i>Taraxacum officinale</i> aggregate, fat hen <i>Chenopodium album</i>, dove's-foot crane's-bill <i>Geranium molle</i>, comfrey <i>Symphytum</i> species, daisy <i>Bellis perennis</i>, creeping cinquefoil <i>Potentilla reptans</i>, yarrow <i>Achillea millefolium</i> and spear thistle <i>Cirsium vulgare</i>. Scattered trees included pedunculate oak <i>Quercus robur</i>.	

Habitat Ref.	2
Level 1	Terrestrial
Level 2	Grassland (g)
Level 3	Modified grassland (g4)
Level 4	N/A
Level 5	N/A
Secondary Codes	Scattered scrub (10), scattered trees (32),
Species List	
Perennial rye grass <i>Lolium perenne</i>, Yorkshire fog <i>Holcus lanatus</i>, red fescue <i>Festuca rubra</i>, white clover <i>Trifolium repens</i>, broad-leaved dock <i>Rumex obtusifolius</i>, dandelion <i>Taraxacum officinale</i> aggregate, soft rush <i>Juncus effusus</i>, fat hen <i>Chenopodium album</i>, dove's-foot crane's-bill <i>Geranium molle</i>, comfrey <i>Symphytum</i> species, spear thistle <i>Cirsium vulgare</i>, bluebell <i>Hyacinthoides non-scripta</i>, European gorse <i>Ulex europaeus</i>, common nettle <i>Urtica dioica</i>, Lords-and-ladies <i>Arum maculatum</i>, bristly oxtongue <i>Picris echinoides</i>, daisy <i>Bellis perennis</i>, primrose <i>Primula vulgaris</i>, creeping cinquefoil <i>Potentilla reptans</i>, birds foot trefoil <i>Lotus corniculatus</i>, yarrow <i>Achillea millefolium</i>, forget me not <i>Myosotis</i> species, borage <i>Borago officinalis</i>, red dead nettle <i>Lamium purpureum</i>, field madder <i>Sherardia arvensis</i> and daffodil <i>Narcissus</i> species.	

Scattered trees included silver birch *Betula pendula*, yew *Taxus baccata*, pedunculate oak *Quercus robur* and willow *Salix* species.

Habitat Ref.	The Bury
Level 1	Terrestrial
Level 2	Woodland and forest (w)
Level 3	Broadleaved and mixed woodland (w1)
Level 4	Lowland mixed deciduous woodland (w1f)
Level 5	N/A
Secondary Codes	Semi-natural woodland (30), ancient woodland site (28)
	
Species List	
Pedunculate oak <i>Quercus robur</i>, holly <i>Ilex aquifolium</i>, beech <i>Fagus sylvatica</i>, hazel <i>Corylus avellana</i>, yew <i>Taxus baccata</i>, silver birch <i>Betula pendula</i>, bluebell <i>Hyacinthoides non-scripta</i>, bracken <i>Pteridium aquilinum</i>, bramble <i>Rubus fruticosus</i> aggregate, dog's mercury <i>Mercurialis perennis</i>, cleavers <i>Galium aparine</i>, Yorkshire fog <i>Holcus lanatus</i>, common bent <i>Agrostis capillaris</i>, creeping bent <i>Agrostis stolonifera</i>, rough meadow grass <i>Poa trivialis</i>, lesser celandine <i>Ficaria verna</i>, Herb Robert <i>Geranium robertianum</i>, Lords-and-ladies <i>Arum maculatum</i>, broad-leaved dock <i>Rumex obtusifolius</i>, primrose <i>Primula vulgaris</i>, garlic mustard <i>Alliaria petiolata</i>, common chickweed <i>Stellaria media</i>, creeping buttercup <i>Ranunculus repens</i> and foxglove <i>Digitalis purpurea</i>.	

Habitat Ref.	South Wood
Level 1	Terrestrial
Level 2	Woodland and forest (w)
Level 3	Broadleaved and mixed woodland (w1)
Level 4	Other broadleaved woodland (w1g)
Level 5	N/A
Secondary Codes	Secondary woodland (31)
	
Species List	
Ash <i>Fraxinus excelsior</i>, sycamore <i>Acer pseudoplatanus</i>, silver birch <i>Fagus sylvatica</i>, aspen <i>Populus tremula</i>, hawthorn <i>Crataegus monogyna</i>, pedunculate oak <i>Quercus robur</i>, goat willow <i>Salix caprea</i>, bramble <i>Rubus fruticosus</i> aggregate, honeysuckle <i>Lonicera periclymenum</i>, bluebell <i>Hyacinthoides</i>	

non-scripta, wood false-brome *Brachypodium sylvaticum*, Lords-and-Ladies *Arum maculatum*, pendulous sedge *Carex pendula*, remote sedge *Carex remota*, soft rush *Juncus effusus*, dog's mercury *Mercurialis perennis*, cleavers *Galium aparine*, ground ivy *Glechoma hederacea*, wood spurge *Euphorbia amygdaloides*, wood speedwell *Veronica montana* and broad-leaved dock *Rumex obtusifolius*.

The invasive rhododendron *Rhododendron ponticum* was also recorded in one location along the path/ride that separates South Wood from South Plantation.

Habitat Ref.	Woods Field	
Level 1	Terrestrial	
Level 2	Woodland and forest (w)	
Level 3	Broadleaved and mixed woodland (w1)	
Level 4	Other broadleaved woodland (w1g)	
Level 5	N/A	
Secondary Codes	Secondary woodland (31)	
		
Species List		
Pedunculate oak <i>Quercus robur</i> silver birch <i>Fagus sylvatica</i>, ash <i>Fraxinus excelsior</i>, hawthorn <i>Crataegus monogyna</i>, sycamore <i>Acer pseudoplatanus</i>, aspen <i>Populus tremula</i>, holly <i>Ilex aquifolium</i>, ivy <i>Hedera helix</i> with bracken <i>Pteridium aquilinum</i>, bramble <i>Rubus fruticosus</i> aggregate, common nettle <i>Urtica dioica</i>, primrose <i>Primula vulgaris</i>, bluebell <i>Hyacinthoides non-scripta</i>, dog's mercury <i>Mercurialis perennis</i>, herb Robert <i>Geranium robertianum</i>, lesser celandine <i>Ficaria verna</i>, common chickweed <i>Stellaria media</i>, garlic mustard <i>Alliaria petiolata</i>, broad-leaved dock <i>Rumex obtusifolius</i> and dog violet <i>Viola riviniana</i>.		

Habitat Ref.	South Plantation
Level 1	Terrestrial
Level 2	Woodland and forest (w)
Level 3	Broadleaved and mixed woodland (w1)
Level 4	Other broadleaved woodland (w1g)
Level 5	N/A
Secondary Codes	Plantation (29)
Species List	
Ash <i>Fraxinus excelsior</i> , silver birch <i>Fagus sylvatica</i> , beech <i>Fagus sylvatica</i> , pedunculate oak <i>Quercus robur</i> , cherry <i>Prunus</i> species, poplar <i>Populus</i> species, Corsican pine <i>Pinus nigra</i> , wood false-brome <i>Brachypodium sylvaticum</i> , common bent <i>Agrostis capillaris</i> , dog's mercury <i>Mercurialis perennis</i> , pendulous sedge <i>Carex pendula</i> , cleavers <i>Galium aparine</i> , bluebell <i>Hyacinthoides non-scripta</i> , wood spurge <i>Euphorbia amygdaloides</i> , bramble <i>Rubus fruticosus</i> aggregate, holly <i>Ilex aquifolium</i> , European gorse <i>Ulex europaeus</i> and bracken <i>Pteridium aquilinum</i> .	
Rhododendron was also recorded in a number of locations along the path/ride adjacent to South Wood.	

Habitat Ref.	North Plantation	
Level 1	Terrestrial	
Level 2	Woodland and forest (w)	
Level 3	Broadleaved and mixed woodland (w1)	
Level 4	Other broadleaved woodland (w1g)	
Level 5	N/A	
Secondary Codes	Plantation (29)	
		
Species List		
Aspen <i>Populus tremula</i> , silver birch <i>Fagus sylvatica</i> , sycamore <i>Acer pseudoplatanus</i> , yew <i>Taxus baccata</i> , bramble <i>Rubus fruticosus</i> aggregate, European gorse <i>Ulex europaeus</i> , bracken <i>Pteridium aquilinum</i> , wood false-brome <i>Brachypodium sylvaticum</i> , common bent <i>Agrostis capillaris</i> , dog's mercury <i>Mercurialis perennis</i> , pendulous sedge <i>Carex pendula</i> , soft rush <i>Juncus effusus</i> , lesser celandine <i>Ficaria verna</i> , primrose <i>Primula vulgaris</i> , common nettle <i>Urtica dioica</i> , bluebell <i>Hyacinthoides non-scripta</i> , dog violet <i>Viola riviniana</i> , wood rush <i>Luzula</i> species and wood speedwell <i>Veronica montana</i> .		

Habitat Ref.	Plantation Woodland within the event area
Level 1	Terrestrial
Level 2	Woodland and forest (w)
Level 3	Broadleaved and mixed woodland (w1)
Level 4	Other broadleaved woodland (w1g)
Level 5	N/A
Secondary Codes	Plantation (29)
	
Species List	
Yew <i>Taxus baccata</i>, pedunculate oak <i>Quercus robur</i>, beech <i>Fagus sylvatica</i>, European larch <i>Larix decidua</i>, Corsican pine <i>Pinus nigra</i>, holm oak <i>Quercus ilex</i>, hazel <i>Corylus avellana</i>, hawthorn <i>Crataegus monogyna</i>, bramble <i>Rubus fruticosus</i> aggregate, holly <i>Ilex aquifolium</i> and bluebell <i>Hyacinthoides non-scripta</i>.	

Habitat Ref.	N/A
Level 1	Terrestrial
Level 2	Heathland and shrub (h)
Level 3	Dense scrub (h3)
Level 4	Mixed scrub (h3h)
Level 5	N/A
Secondary Codes	N/A
	
Species List	
Willow <i>Salix</i> species, blackthorn <i>Prunus spinosa</i>, wild privet <i>Ligustrum vulgare</i>, pedunculate oak <i>Quercus robur</i>, silver birch <i>Fagus sylvatica</i>, bramble <i>Rubus fruticosus</i> aggregate, dog rose <i>Rosa canina</i>, stinking iris <i>Iris foetidissima</i>, false fox sedge <i>Carex otrubae</i>, common ragwort <i>Senecio jacobaea</i>, common nettle <i>Urtica dioica</i>, teasel <i>Dipsacus fullonum</i> and wood false-brome <i>Brachypodium sylvaticum</i>.	

Appendix 7 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.

Species and Habitats of Principal Importance in England

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The England Biodiversity List is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. There are currently 943 species of principal importance and 41 habitats of principal importance included on the England Biodiversity List.

Schedule 9 Invasive Species

Rhododendron is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This makes it illegal to plant or otherwise cause the species to grow in the wild. It is also classed as a 'controlled waste' under the Environmental Protection Act 1990 (EPA). As such it must be disposed of safely at a licensed landfill site according to the EPA (Duty of Care) Regulations 1991.

Appendix 8 Appraisal Criteria for Bats

The criteria used to assess the suitability of trees for roosting potential is based on industry guidelines and outlined in **Table 17**¹⁴.

Table 17: Criteria used to Categorise the Potential Suitability of PRFs for Bats

Suitability	Description of roosting suitability
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size of lack of suitable surrounding habitat
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony
FAR	Further assessment required to establish if roosts are present in the tree
NONE	No PRFs in the tree

The criteria used to assess the suitability of foraging/commuting habitat for bats is based on industry guidelines and outlined in **Table 18**¹⁴.

Table 18: Criteria used to Assess Suitability of Foraging/Commuting Habitat for Bats

Suitability	Description of Potential Flight-paths and Foraging Habitat
High	Continuous, high quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths 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	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths 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	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated 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 (not in a parkland situation) or a patch of scrub.
Negligible ¹⁵	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.

¹⁴ Table adapted from (Collins, 2023)

¹⁵ Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant' This category may be used where there are places that a bat could roost or foraging (due to one attribute), but is unlikely they actually would (due to another attribute).