



**Greywell, Station Hill,
Bursledon,
SO31 8AA**

Preliminary Ecological Appraisal

Report Number: 0726

Issue Number: 02

Date of Issue: 28th November 2024

Prepared by: Angus Layton

Reviewed by: Davog McCloskey

Peach Ecology
9 Elizabeth Road
Wilton
Wiltshire
England
SP2 0JH

COPYRIGHT: Peach Ecology disclaims any responsibility to the Client and others in respect of any matters outside the scope of this document. This document has been prepared with all reasonable skill, care and diligence, within the terms of the Contract with the Client. The report has been prepared for the exclusive use of the Client and Peach Ecology accepts no responsibility of whatever nature to third parties to whom this report, or any part thereof, may be made known. Any advice, opinions, or recommendations within this document should be read and relied upon only in the context of the document as a whole and do not, in any way, purport to include any manner of legal advice or opinion. No part of this document may be reproduced without the prior written approval of Peach Ecology.

Contents

	Page
1.0 Summary	1
2.0 Introduction	2
3.0 Methodology	3
4.0 Results and Analysis	4
5.0 Requirements and Recommendations	11

Appendices

Appendix A: Site location

Appendix B: Existing site plan

Appendix C: Proposals

Appendix D: Protected sites, habitats and species data from MAGiC database

Appendix E: Mitigation and Enhancements

Appendix F: Protected species legislation

1.0 Summary

The amendments to the approved planning application L/24/97193 include alterations to the small single-story roof on the north of the main dwelling and the roof of the existing outbuilding in order to extend it.

During an initial inspection, several potential roosting features for bats were identified on the outbuilding but no external signs of bats were noted. The outbuilding was deemed to have moderate suitability for roosting bats, the small single-story roof on the northern side of the main dwelling had several loose tiles and was deemed to have low suitability for roosting bats. A Sycamore tree was also regarded as having features suitable for roosting bats and a climbing inspection was undertaken using an endoscope. Two bat emergence surveys took place on site covering the buildings and tree and these found no evidence of roosting bats. To compensate the loss of potential roosting features, two bat boxes will be placed on mature trees onsite and two ridge access tiles will be included on the new extension.

No ponds were noted within 250m of the proposals and the garden is currently mown too short to provide habitat for reptiles. Providing the garden is maintained in its current state, no vegetation clearance will be necessary to complete the works.

Removal of the Sycamore tree will occur outside the bird nesting season and two integrated swift boxes will be included in the new extension. New tree and hedge planting will take place to create a new dark corridor and to compensate for the loss of the Sycamore.

2.0 Introduction

Background

- 2.1 Peach Ecology was commissioned in May 2024 carry out a Preliminary Ecological Assessment of the proposed development at Greywell, Station Hill, Bursledon, SO31 8AA, central Grid Reference: SU 4885 0950 (Appendix A), laid out as shown in Appendix B. This report will be submitted to Eastleigh Council for permission to amend the planning application L/24/97193 (Appendix C).
- 2.2 This report describes the existing ecology on site based on the findings of an initial site visit, protected species and habitats data searches and a review of local and national policies.

Description of site and surrounding area

- 2.3 The residential property is a large, detached dwelling in the village of Bursledon. The building and its walls are listed in the Old Bursledon Conservation Area. The site has the main dwelling surrounded by an expanse of gravel and an outbuilding to the west. Beyond this is a large area of closely mown lawn with several individual senior and mature trees. The site sits just 150m, over a trainline, west of the river hamble, surrounded by small areas of broadleaf woodland, agricultural land and tidal areas.

Brief

- 2.4 To carry out an Ecological Assessment of the site and inform the clients of any ecological implications associated with the current proposals.

3.0 Methodology

Desk Study

- 3.1 This involved gathering ecological data relating to statutory nature conservation sites from within 2km, the results of which are shown in Appendix D. A search was undertaken using Multi-Agency Geographic Information for the Countryside (MAGIC), a DEFRA run website, to check for European Protected Species licences nearby. Ordnance Survey maps and aerial images were assessed to check for other relevant data on notable habitats and species nearby including ponds and wildlife corridors where the site connects into the surrounding area.

Site Assessment

- 3.2 The site was originally assessed on the 4th May 2024 by Gus Layton and Davog McCloskey. The initial survey employed techniques based on standard Phase I Habitat Survey (JNCC) methodology and the CIEEM Guidelines for Ecological Impact Assessment (ECIA: CIEEM, 2016). Habitat types on and adjacent to the site were identified according to standard habitat definitions (UKHabs). The collection of botanical information focused on the dominant and key indicator species for each habitat type. The site survey included an assessment of the habitats immediately adjacent to the site, where possible, to look at the value of the site within the local landscape and to see whether these sites supported protected species. Indicative methodologies for the most likely protected and notable species that could occur on site and be impacted by the proposals are set out below.

Bats

- 3.3 Buildings and trees within the footprint of the site and any areas potentially impacted by the proposals were inspected in accordance with current survey guidance (BCT, 2016) for potential access points and roosting features which could support bats. Trees were checked for ivy cover, crevices and rotten sections from ground level and a ladder and binoculars where necessary. On the 4th May the Sycamore to be removed was climbed using an endoscope to check for signs of bats. Buildings were checked internally and externally for any signs of roosting bats or bat activity including droppings, insect feeding remains, worn entrances and staining.
- 3.4 Two bat emergence surveys took place, at dusk. The surveys started at least 15 minutes before sunset and continued until 1.5 hours after. Between 3-4 surveyors were present at each survey and they were equipped with a Elekon Bat Logger M bat detector/recorder and Infra-red cameras and lights or thermal imaging camera. Details on the environmental conditions were taken at the time of survey. Angus Layton and/or Davog McCloskey were present at all of the surveys along with experienced surveyors; Chloe Dalglish and Einin McCloskey.

Birds

- 3.5 Any habitat features, for example, scrub, trees, hedgerows and buildings which could potentially be used by nesting birds, were surveyed and any nesting activity was noted.

4.0 Results and Discussion

Desk study

- 4.1 There are seven statutory designated sites and six granted European protected species licences within 2km. This is an indication that the local area has ecological value and the surrounding habitat offers foraging, commuting and roosting opportunities for protected species and other wildlife.
- **Holly Hill Woodland Park LNR** (1.50km SE) – Holly Hill Woodland Park is a historic parkland covering some 35 hectares. It is in south Hampshire and stretches from Barnes Lane, Sarisbury Green to the River Hamble. The site has two distinctive areas - Winnards Copse with its more formal landscape, lakes and ornamental exotic species and Cawtes Copse with its mix of native woodland species, some of which is ancient semi-natural woodland.
 - **Manor Farm LNR** (1.31km NE) - is a 144.1-hectare (356-acre) country park which runs along the west bank of the River Hamble between the villages of Botley and Bursledon in Hampshire. The site includes historic buildings that link to the heritage of the site and the original museum including a forge, wheelwrights, farmhouse and Victorian schoolhouse.[10] The ancient duckpond and the neighbouring St Bartholomew's Church also form part of the location.
 - **Hook With Warsash LNR** (1.51km SSE) - Hook-with-Warsash comprises wetland and grazed pasture LNR, wooded valley, common and parkland, and adjoining farmland and paddocks and is bordered by Southampton Water to the south and the River Hamble to the west.
 - **Mercury Marshes LNR SSSI** (1.58km S) - Situated along the western bank of the River Hamble, Mercury Marshes is a Local Nature Reserve and a Site of Special Scientific Interest. The site consists of woodland, reedbed and intertidal mud, creeks and islands. Reedbed covers the majority of the site with patches of willow carr existing along the path edges. The intertidal area is dominated by saltmarsh vegetation such as sea purslane, cord grass, sea aster and glasswort.
 - **Solent & Southampton Water Ramsar, SAC, SPA** (0.37km SSE) - The Solent encompasses a major estuarine system on the south coast of England with four coastal plain estuaries and four bar-built estuaries. Sediment habitats within the estuaries include extensive estuarine flats, often with intertidal areas supporting eelgrass and green algae, sand and shingle spits, and natural shoreline transitions. Unusual features include the presence of very rare sponges in the Yar estuary and a sandy 'reef' of the polychaete *Sabellaria spinulosa* on the steep eastern side of the entrance to Chichester Harbour.
 - **Lee-on-The Solent to Itchen Estuary SSSI** - The site extends along the eastern shore of Southampton Water from Lee-on-the-Solent to the mid-Itchen estuary and includes the lower estuary of the Hamble. It comprises extensive intertidal muds with a littoral fringe of vegetated shingle, saltmarsh, reedbed, marshy grasslands and deciduous woodland on alluvium, valley gravels, and Bracklesham Beds. It is of international importance for over-wintering dark-bellied geese, and of national importance for three species of wildfowl (great-crested grebe, teal and wigeon) and five species of wader (black-tailed godwit, dunlin, grey plover, ringed plover, redshank). It supports an outstanding assemblage of nationally scarce coastal plants.
 - **Lincegrove and Hackett's Marshes LNR, SSSI** (0.34km SE) - Mature saltmarsh on the west bank of the River Hamble estuary. The marshes are elevated to about HWMST and dissected by complex patterns of drainage creeks, their outer (river) margin terminating in 1–1.5 metre cliffs which are now eroding. The saltmarsh vegetation is dominated by sea purslane and common cord-grass, the latter species

having invaded the marsh during the present century. Saltmarsh grass, sea lavender, thrift, sea aster and sea club-rush form a mixed community on the higher marsh levels and at the landward margin, the marshes grade either to a sea couch or reed zone. Reed invasion is thought to have followed cessation of grazing on the marshes earlier this century. Structurally the marshes are one of the best examples of mature saltmarsh on the south coast.

- 4.2 Table 1 below provides a summary of the bat licences within 2km, this shows the value of the local area to roosting bats.

Case reference of granted application	Species on the licence	Licence Start Date	Licence End Date	Breeding site?	Resting place?
2014-2574-EPS-MIT	C-PIP	02/09/2014	30/03/2020	N	Y
2019-40805-EPS-MIT	BLE C-PIP S-PIP	01/09/2019	01/09/2029	Y	N
2019-41753-EPS-MIT	C-PIP	01/08/2019	31/08/2025	N	N
2017-28698-EPS-MIT	C-PIP	19/04/2017	30/04/2019	N	N
2017-31720-EPS-MIT	C-PIP	10/10/2017	30/10/2018	N	N
2016-26416-EPS-MIT	BLE C-PIP S-PIP	23/11/2016	23/11/2016	N	N

Table 1: A summary of the protected species licences granted withing 2km of the site.

- 4.3 Due to the relatively small scale and extent of the proposals it is unlikely that the development will impact upon any site of importance to nature conservation. It is important however that the proposals follow appropriate pollution prevention and drainage guidelines. The habitats and flora associated with waterways and ground water are sensitive to changes cumulatively from different impacts locally so every development should consider and mitigate for their own impact with regards drainage and pollution.
- 4.4 The local area is known to have a rich bat assemblage so it is likely that bats use the site to some degree to navigate, commute through and forage around. The boundaries, all need to be protected from light spillage associated with any external lighting on buildings or roads as these areas have high value for commuting and foraging bats – a light plan will need to be agreed as a condition of planning if external lighting is proposed. The surrounding trees and hedgerow are currently dark and it is important that these dark corridors are maintained.

Site Assessment

- 4.5 Surrounding the site is gravel. To the north, west and south a garden starts, comprising of poor modified grassland with senior and veteran oak and sycamore. Beyond the site are areas of woodland, the river Hamble and agricultural land, all offering good foraging opportunities for bats.
- 4.6 The outbuilding has many lifted/missing tiles and gaps in brickwork or mortar that could provide access and roosting features for bats (Photo 1). Internally (Photo 2), the building is divided in two. The eastern half is used as a shed and the roof is boarded. No signs of bats were noted during the survey, though due to the internal construction it is unlikely that evidence would be visible. The western half of the building is used to store garden equipment. The roof has no lining below the clay tiles and so opportunities for crevice dwelling species is limited. No signs of bats were noted in this half of the building either. This building is deemed to have medium suitability for roosting bats and will require two emergence surveys to determine presence/absence.



Photo 1: The four aspects of the outbuilding showing lifted tiles and gaps along the roof line



Photo 2: Internal views of the roof of each half of the outbuilding

- 4.7 The small area of roof on the main dwelling effected by the proposals (Photo 3) also has several lifted tiles that provide roosting opportunities to crevice dwelling species. There is also a small void that is inaccessible so there could be signs of bats that are not visible and overlooked. Due to the limited height and other available roosting opportunities adjacent, this area has low suitability for roosting bats and will require a single emergence survey to confirm absence.



Photo 3: Two views of the small single-story roof, showing lifted tiles and small gaps

- 4.8 Just to the south of the outbuilding is a mature sycamore (Photo 4), set to be removed as part of the proposals. During the original visit, this tree was inspected by climbing with an endoscope. Several potential roosting features were noted, including Woodpecker, wounds and pruning scars. The tree was then included as part of the emergence survey as it was deemed to have potential for a maternity roost (PRF-M). The tree will have a final check before it is felled.

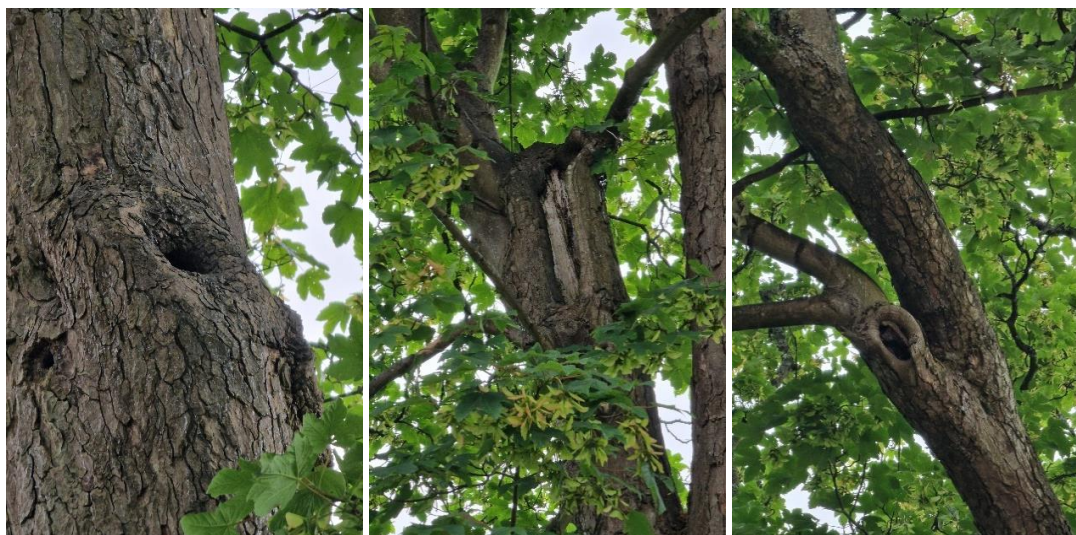


Photo 4: A collection of pictures of PRF's on the Sycamore planned for removal

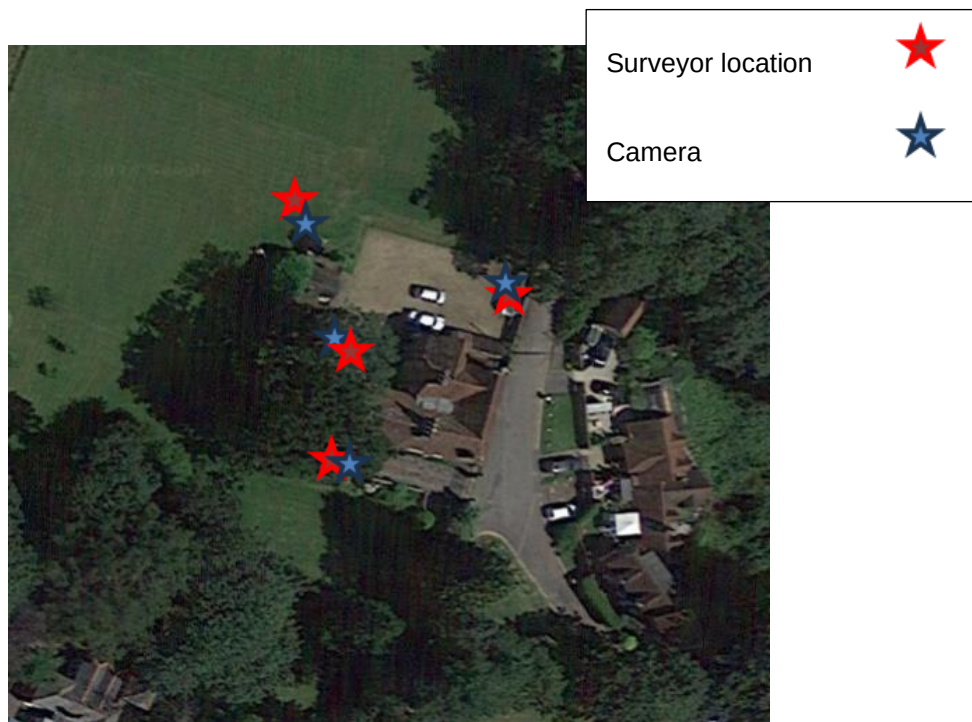
Phase 2 Bat Surveys

- 4.9 Two emergence surveys took place in 2024 each survey position separated by at least 3 weeks and in good conditions (Table 2). Between 3-4 surveyors were present for each survey, backed up with an IR or thermal camera, and positioned to give good coverage of the buildings and tree.

Survey Date	Survey type	Surveyors	Equipment used	Duration	Weather	Sunset /sunrise time
30 th July 2024	Dusk	DM, AL, CD, EM	Elekon X 4 Infra-Red Camera and Lights X 2, Thermal Camera X 2	2039 - 2224	10% cloud cover, wind force 1, no rain, 26°C at start of survey and 22°C at end	2054
19 th August 2024	Dusk	DM, CD, EM	Elekon X 2 Infra-Red Camera and Lights X 2	2003 - 2148	20% cloud cover, wind force 2, no rain, 22°C at start of survey and 20°C at end	2018

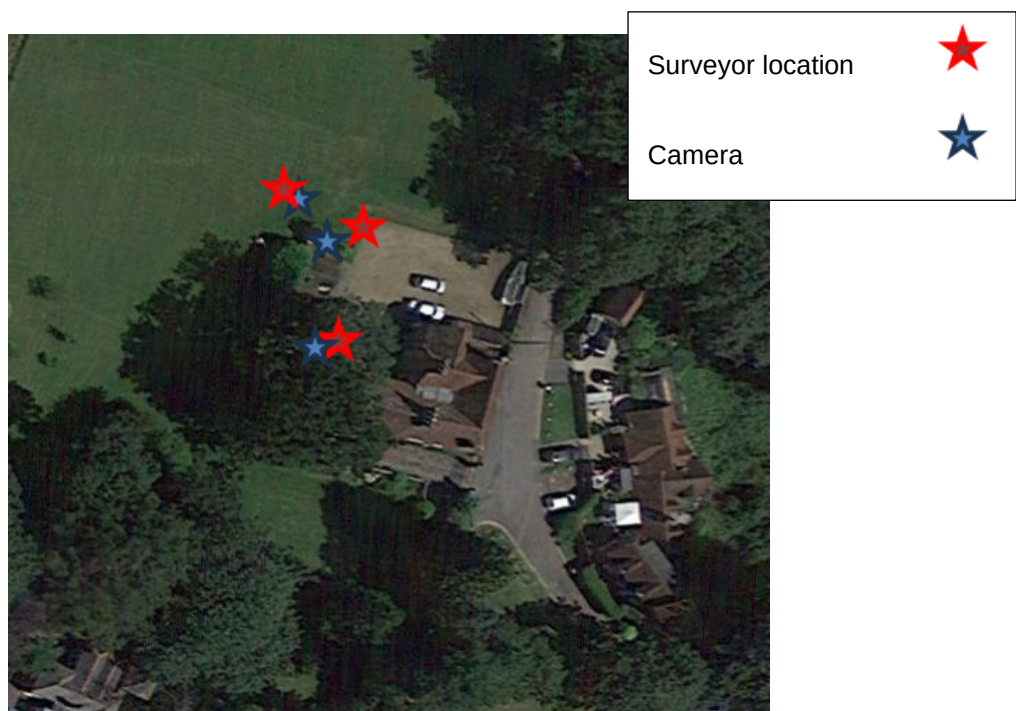
Table 2: Phase 2 bat survey details

- 4.10 The first survey (Plan 1) covered the small area of roof deemed to have low potential, the outbuilding and the adjacent Sycamore.
- 4.11 Both Pipistrelle species were first recorded at 2055 and were continuously foraging around the site till the end of the survey. The first bats were noted as arriving from the south of the site. During the survey a Noctule was foraging over the site between 2107 – 2113 and 2139 – 2143. Serotines also used the site for foraging between 2148 – 2155, 2110 – 2111 and 2117 – 2220. A Myotis bat was recorded briefly commuting and foraging through the site from the southwest to the northeast at 2207.
- 4.12 No emergences were noted by the surveyors during the survey and none were reported during review of the camera footage. It is highly unlikely that Noctules roost nearby as they prefer woodlands and typically emerge before sunset. Similarly it is also unlikely that Serotine or Myotis are roosting on site or nearby, given the timings of the Serotine passes and only two recordings of the Myotis.



Plan 1: Shows the position of each surveyor and their camera for the 1st survey

- 4.13 The second survey covered the outbuilding and adjacent sycamore tree (Plan 2).
- 4.14 Pipistrelle species were first recorded at 2006 and were continuously foraging around the site from 2027 till the end of the survey. The bats initially entered the site from the northeast. During the survey a Noctule was recorded foraging and commuting between 2107 – 2109 and a single Myotis pass was recorded at 2122.



Plan 2: Shows the position of each surveyor and their camera for the 2nd survey

- 4.15 No emergencies were noted during either survey or during review of the IR/Thermal footage. The second survey provided more evidence that it is highly unlikely that either Noctules, Serotines or Myotis are roosting onsite. It is possible that Pipistrelle species are roosting on site in an area unaffected by the proposals such as in the main building or in a nearby tree.
- 4.16 The proposals do not include any increase in external lighting. If external lighting is required a Lighting Plan that adheres to BCT guidelines will be required.
- 4.17 The proposed changes to the garden, including a wildlife area and new native hedgerow planting will benefit the species found to be foraging and commuting through the site.
- 4.18 It is very unlikely that the proposals will affect the local bat population during construction or once completed. To replace the potential roosting features in the Sycamore, two bat boxes should be placed as high as possible with a southern aspect in a mature retained tree onsite. To replace the potential roosting features onsite, the proposals should include two bat tiles, and any roof lining should be done with bitumen 1f felt.

5.0 Requirements and Recommendations

Bats

- 5.1 Two bat tiles will be included along the ridge line of the existing outbuilding (**Appendix E**).
- 5.2 Two bat boxes will be placed high in a retained mature tree onsite with a southerly aspect (**Appendix E**).
- 5.3 The proposals do not include any increase in external lighting. If external lighting is required a Lighting Plan that adheres to BCT guidelines will be required. A lighting plan will be produced in accordance with the Bat Conservation Trust *Guidance Note 08/23: Bats and Artificial Lighting at Night*. External lighting will be strictly directed away from the boundary vegetation and will be kept to below 1 lux within at least 2m from the mature trees and existing building.
- 5.4 Any roof lining will be 1f Bitumen felt or a breathable roof membraned with a anti-snagging certificate.
- 5.5 A final site check will be undertaken prior to construction. This will include a final tree climbing check of the Sycamore to be removed using a licensed surveyor and endoscope.
- 5.6 Additional trees and shrubs will be planted in the garden to create a new dark wildlife corridor in this area. This will include the planting of a new native hedgerow and a row of trees along the northern boundary of the site.

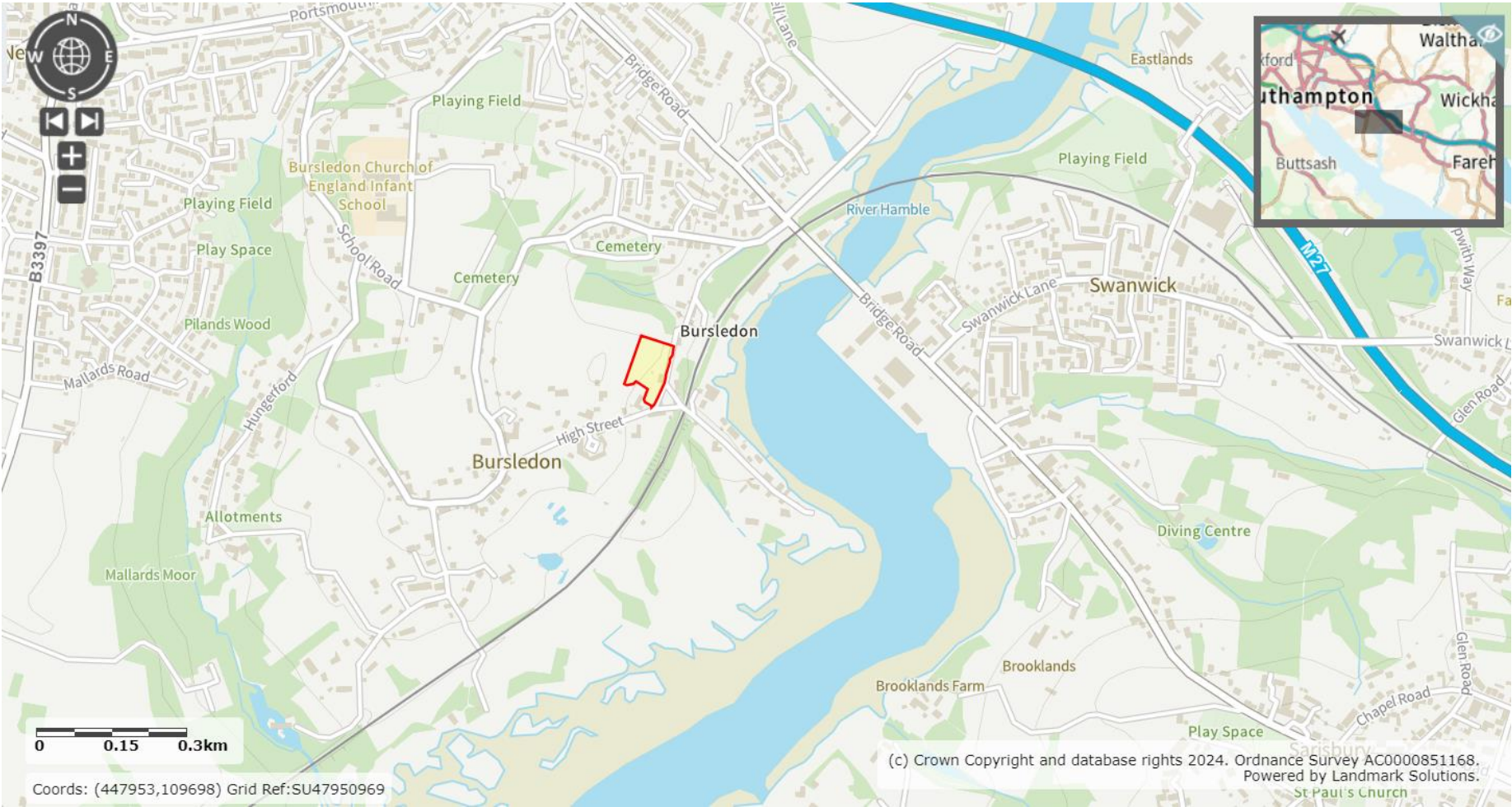
Birds

- 5.7 Two integrated swift boxes will be included in the new garage located as high as possible.
- 5.8 Vegetation clearance will occur outside bird nesting season which occurs from March to August inclusive, unless it is overseen and checked by an ecologist

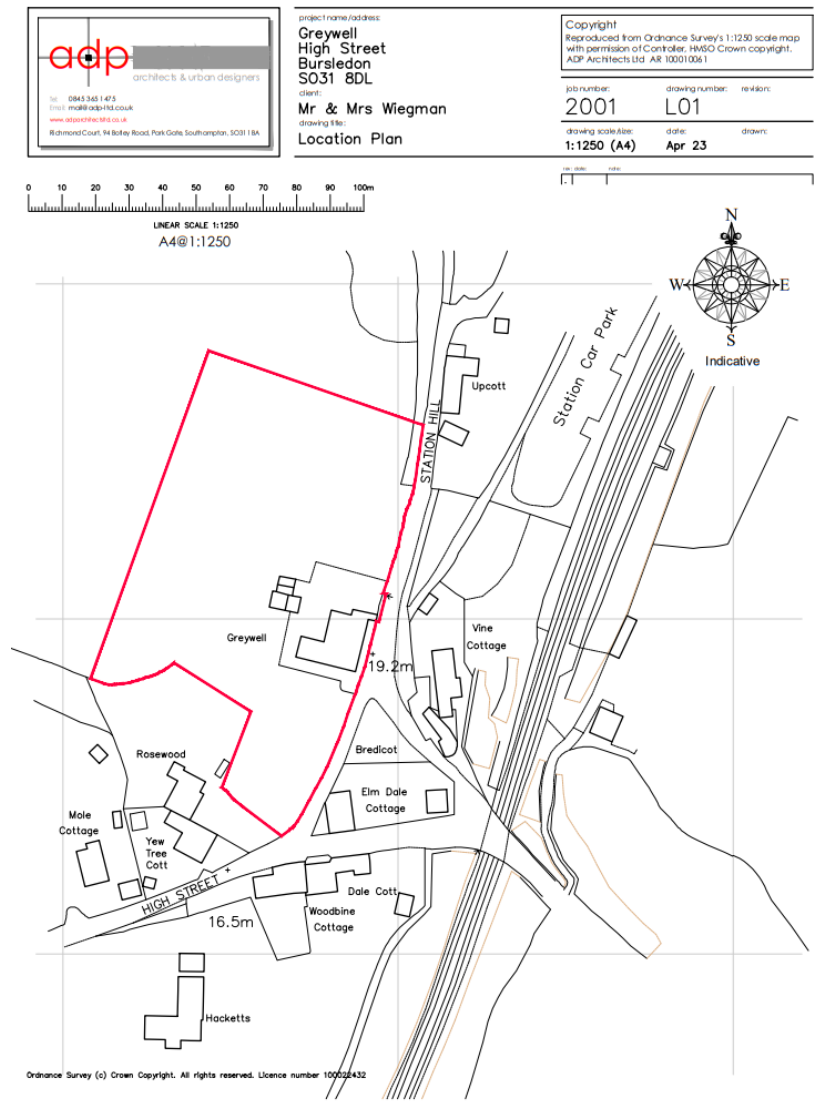
Pollution prevention and drainage

- 5.9 It is important that the proposals follow appropriate pollution prevention guidelines (PPG 6) and drainage guidelines (Defra guidelines for Sustainable Urban Drainage) to protect habitats connected hydrologically.

Appendix A: Site location



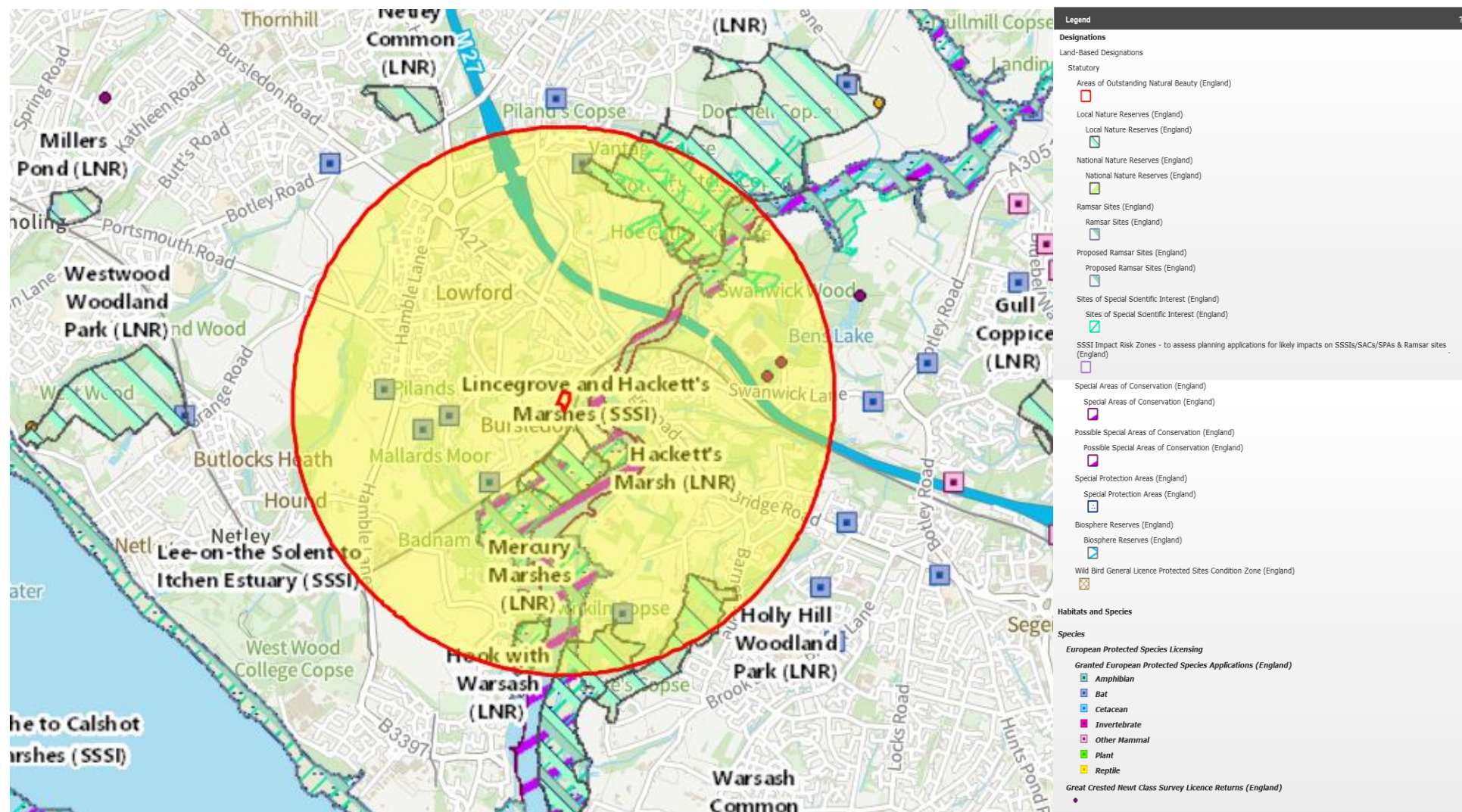
Appendix B: Existing site plan



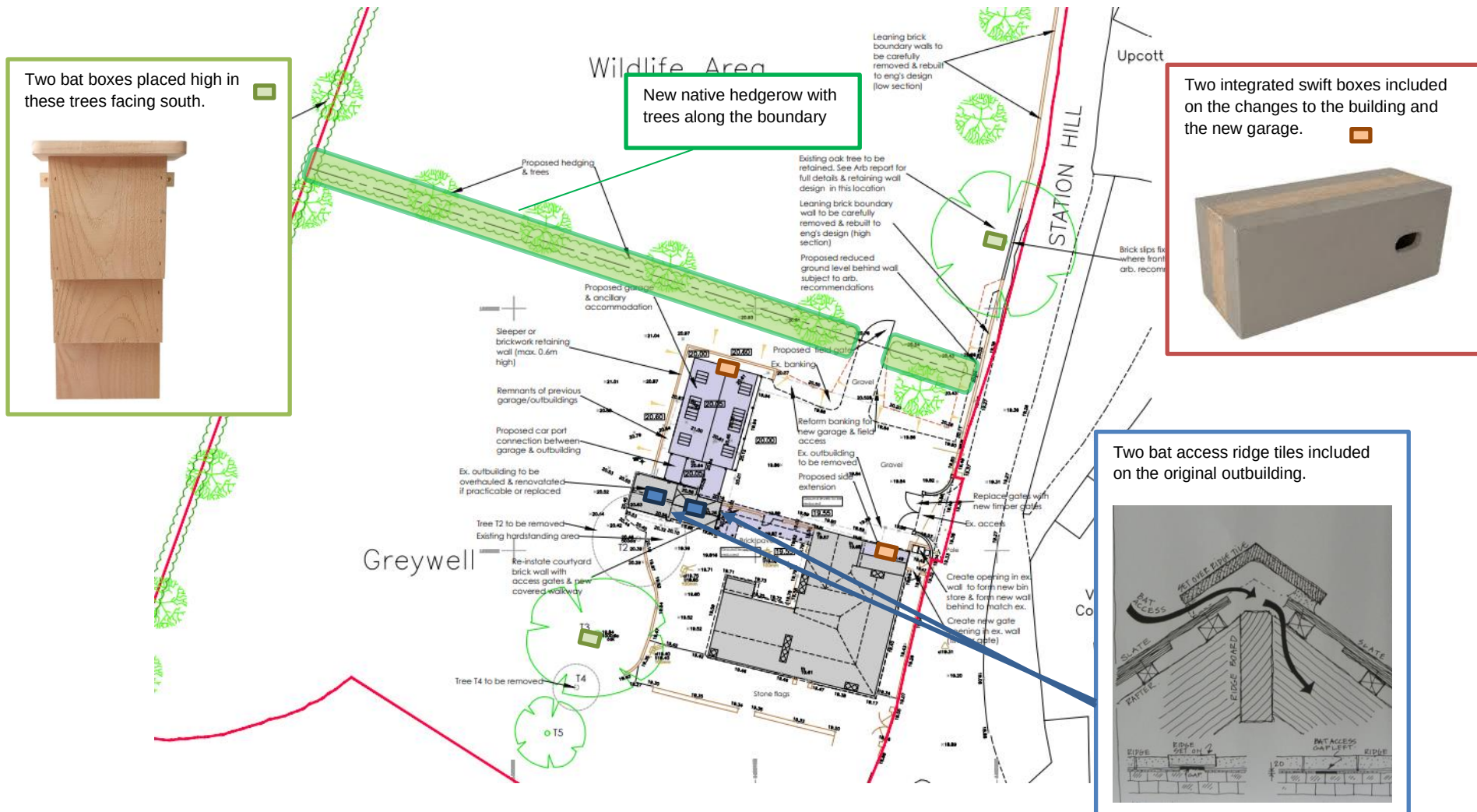
Appendix C: Proposals



Appendix D: Protected sites, habitats and species data from MAGiC database



Appendix E: Mitigation and Enhancements



Appendix F: Protected species legislation

European Protected Species

Bats

These 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 2010*. They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations. These make it an offence, *inter alia*, 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; or
- damage or destroy a breeding site or resting place of any such animal; or
- 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*);
- 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 favorable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

Nationally Protected Species

Breeding Birds

With certain exceptions¹, 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, *inter alia*, 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.

¹ Some species, such as game birds, are exempt in certain circumstances