

Ramcrest, Lowford Hill, Bursledon, Southampton, Hampshire, SO31 8ER

Preliminary Roost Assessment Report

April 2021

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Preliminary Roost Assessment Report**Ramcrest, Lowford Hill, Bursledon, Southampton, Hampshire, SO31 8ER****for****Mr & Mrs Hare**

Reference: Ramcrest, Bursledon	
Revision	Issue date:
0	22/04/21

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This report represents sound industry practice; reports and recommends correctly, truthfully and objectively; is appropriate given the local site conditions, scope of works proposed and resources allocated to us by the client; and avoids invalid, biased, and exaggerated statements.

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EXECUTIVE SUMMARY

1. This report provides information from an initial bat survey carried out by Hampshire Ecological Services Ltd for Mr & Mrs Hare in connection with a proposal to extend and renovate the existing building at Ramcrest, Lowford Hill, Bursledon, Southampton, Hampshire, SO31 8ER (approximate Ordnance Survey Grid Reference SU478101). The location of the site is shown in *Figures 1 and 2* and a plan of the site is shown in *Figure 3* (see *Section 6*).
2. An internal and external survey of the building was carried out by licensed bat ecologist Nicola Pyle MCIEEM on the 8th April 2021.
3. The site consists of a bungalow with a converted loft room and a lower-ground floor extension on the south elevation. There are bushes and ornamental vegetation in the front garden and the rear garden is hardstanding with ornamental planting (bushes) on the east and south boundaries. Full details of the building are given in *Table 4.2.1*, in *Section 4.2*. Due to the lack of suitable roosting features, the building has negligible bat roost suitability.
4. No bats or evidence of bats was found. Therefore, the proposed works may commence without further survey or constraints regarding bats (subject to any planning constraints).
5. The hedges and bushes around the boundaries provide some limited bat foraging habitat in the immediate vicinity of the building. These connect to a network of hedges and tree-lines through the neighbouring gardens and into the wider area. These in turn connect the site to areas of high quality foraging habitat in the wider landscape such as nearby ancient woodland and nearby waterways. The connectivity around the edges of the site (the bushes) will be retained and as such no impact to commuting and foraging bats (and hence bat populations in the local area) is anticipated.
6. Changes in lighting can affect foraging and commuting bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto retained vegetation (particularly the bushes), and security lights should operate on a timer, to avoid any negative impact on bats.
7. The building and bushes provide suitable habitat for nesting birds. The destruction of active bird nests is prohibited under the *Wildlife and Countryside Act 1981* (as amended). Any affected vegetation with the potential to support nesting birds should be cut to near ground level (approximately 30cm) outside the bird breeding season (which is late February to August inclusive). If this is not possible, and vegetation has to be removed during the nesting season, it should be checked for nests (by an ecologist) immediately prior to works. If any active nests are found a 5m buffer zone should be established around them and be temporarily fenced off to prevent plant or personnel disturbing the nest until the end of the breeding bird season (or until the nest is no longer in use). The roof and ceiling works should take place outside the breeding bird season (which is late February to August inclusive). If this is not possible, and work has to

take place during the nesting season, it should be checked for nests (by an ecologist) immediately prior to works. If any active nests are found they must be retained and work must be delayed in that area until the young have fledged and left the nest.

8. One non-native invasive plant species listed on *Schedule 9* of the *Wildlife and Countryside Act 1981* (as amended) was recorded on the site (see *Figure 3* in *Section 6*). To comply with the law, the *Schedule 9* species *Crocasmia × crocosmiiflora* (Montbretia) will be controlled and eradicated so not to cause the plant to spread on this or other sites as a result of earth moving, soil/rubble removal or other operations. This will prevent machinery, tools or boots accidentally carrying them off site. Further information on the removal of this species is given in *Section 5.6.4*.
9. It is a requirement under national and local planning policy to provide ecological enhancements to sites requiring planning permission in order to provide a net gain in biodiversity. It is proposed that the enhancements to provide net gain will be in the form of new bat roost provision, lighting measures (for bats and other wildlife), removal of the *Schedule 9* plant species and new bird nesting provision. The following enhancements are proposed:
 - The new extensions will be enhanced for bats using at least one integrated bat box such as a Habibat™ Bat Box or similar, which provides a cavity that is incorporated into the external build structure to offer roosting space for bats;
 - The site will be enhanced for birds as follows:
 - One or more swift boxes, such as Istock Eco-habitat or similar, will be installed on/into the exterior of the building. Swift boxes can be supplied and installed by Hampshire Swifts <https://www.hampshireswifts.co.uk> and a new soffit design is also available, this box is also suitable for other species such as sparrows; and
 - Two or more woodstone bird nest boxes, such as a Vivara Pro Seville 32mm/28mm Woodstone Nest Box, suitable for blue tits, coal tits and great tits.
 - The non-native invasive plant species listed on *Schedule 9* of the *Wildlife and Countryside Act 1981* (as amended) *Crocasmia × crocosmiiflora* (Montbretia) will be removed. Two main options exist; mechanical removal and chemical treatment. The options depend on the timescale of the works (see *Section 5.6.4*).
10. The proposed enhancement measures are shown in *Figure 4* in *Section 6*.
11. Other enhancements for wildlife that the owners of the site may choose to employ are given in *Appendix C*. However, these are not proposed as enhancements for the purposes of the planning application, but only for information purposes.
12. This survey data is valid for a maximum of 12 months. Bats frequently move around and adopt new roosting sites, therefore if more than 12 months elapses it may be advisable to conduct further survey work to obtain up-to-date information, thereby ensuring protected species compliance.

13. According to the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk), the site is neither designated nor immediately adjacent to any designated areas of nature conservation. However, there are three nationally and three internationally designated sites within 2km and 5km, respectively. None of these will be directly affected by this small-scale development and all links will be maintained.

14. The site is within 5km of Solent & Southampton Water SPA (c.1,433m south) and Solent Maritime SAC (c.1,433m south). The SPA is designated due to some of the species of birds it provides habitat for and the SAC is designated due to the type of habitat it includes. As a result of its proximity, the impacts of these works on the SPA and SAC must be considered. The works will cause an increase to the building size but not to the number of people occupying the building, as the house is a residential property and is staying under the same ownership. Therefore, there will be no increase in the recreational pressure, or pollution, on the internationally designated sites.

15. There have been five bat European Protected Species (EPS) licences granted within 2km of the site, with the closest c.678m south-west of the site. Due to their close proximity, it is likely that the bats using the site foraging or commuting are part of the same meta-population.

2 INTRODUCTION

2.1 General

This report provides information from an initial bat survey carried out by Hampshire Ecological Services Ltd for Mr & Mrs Hare in connection with a proposal to extend and renovate the building at Ramcrest, Lowford Hill, Bursledon, Southampton, Hampshire, SO31 8ER (approximate Ordnance Survey Grid Reference SU478101). The location of the site is shown in *Figures 1 and 2 in Section 6*.

2.2 Site description

The site consists of a bungalow with a converted loft room and a lower-ground floor extension on the south elevation. There are bushes and vegetation in the front garden while the garden rear is hardstanding with ornamental planting on the east and south boundaries. The building surveyed is shown on the building plan in *Figure 3 in Section 6*.

The site is on the south side of Lowford Hill, near the centre of Bursledon. The immediate surroundings consist of residential housing in all directions. In the wider landscape Bursledon extends in all directions in a mosaic of residential housing, commercial and industrial buildings and urban green spaces. Surrounding Bursledon are arable fields, grassland and small woods in all directions and the River Hamble is c.1.3km to the south-east.

2.3 Proposed activities

This survey was carried out in connection with a proposal to carry out the following works:

- to build first-floor and second-floor on the existing ground floor section;
- to build a single-storey ground-floor extension on the east elevation; and
- to renovate the existing ground-floor and lower ground-floor.

2.4 Current planning status

Planning permission has been applied for at this site, and initial works have commenced.

2.5 Objectives of the survey and report

The survey by Hampshire Ecological Services Ltd included internal and external inspections of the building to identify bat roost suitability and to systematically search for bats and evidence of bats. The aim was to identify if bats were present or likely to use the site for roosting.

The survey and the report writing were carried out in accordance with *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition* (Collins, 2016). Any deviations from the guidelines are justified in the relevant sections.

Additionally, all ecological surveys should be completed in line with Natural England's *Standing Advice for Local Authorities*

(<http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/advice.aspx>), which states:

- Natural England will not comment on applications that are submitted without the relevant protected species surveys if there are no other issues (i.e. in relation to SSSIs or landscape).
- Natural England will not comment on scoping surveys that recommend further surveys where these have not been undertaken and submitted with the scoping reports.

2.6 Structure of this report

This report is structured as follows:

- *Section 1* contains the executive summary;
- *Section 2* contains an introduction;
- *Section 3* describes the survey methods;
- *Section 4* describes the results;
- *Section 5* evaluates the findings;
- *Section 6* contains the figures including:
 - *Figure 1* gives aerial photographs showing the site location;
 - *Figure 2* gives an Ordnance Survey map showing the location of the site;
 - *Figure 3* gives a site plan showing the ecological constraints; and
 - *Figure 4* illustrates the proposed enhancements for the site.
- *Section 7* gives photographs of the site;
- *Section 8* lists the references;
- *Appendix A* gives information on relevant legislation;
- *Appendix B* gives information on bat ecology;
- *Appendix C* lists other enhancements for wildlife (for information, not part of the planning application).

3 **METHODS**

3.1 **Desk study**

The *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk) was used to search for designated sites on or adjacent to the site including Local Nature Reserves (LNRs), National Nature Reserves (NNRs), Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. The search area was 5km for SAC and SPA sites and 2km for LNRs, NNRs, Ramsar sites and SSSIs, as specified in Hampshire's *Biodiversity Checklist*. The search area is also 500m for Sites of Importance to Nature Conservation (SINCs) and ancient semi-natural and ancient replanted woodlands.

In addition, the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk) was used to search for granted European Protected Species (EPS) licences in relation to bats within 2km of the site.

A data search from the Hampshire Biodiversity Information Centre (HBIC) has not been commissioned by the client in relation to this site.

3.2 **Field survey**

3.2.1 *Date, time and weather*

An external and internal inspection of the building was conducted during the daytime on the 8th April 2021. The weather conditions during the survey were cool (7°C) and dry with 100% cloud cover and calm (Beaufort scale 0).

3.2.2 *Personnel*

The survey was carried out by Nicola Pyle MCIEEM who is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) with over 14 years of experience in ecological consultancy. She holds a Natural England licence allowing the disturbance and handling of bats for the purposes of survey in all counties of England (current Bat Class Licence Registration number 2015-18259-CLS-CLS).

This report was reviewed by John Poland CEnv MCIEEM CBiol MSB, who is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM), a Chartered Environmentalist (CEnv), a Chartered Biologist (CBiol) and multi-species licence holder with 20 years of experience in ecological consultancy and Victoria Russell MCIEEM who is also a full member of the CIEEM and multi-species licence holder with over 23 years of experience in ecological consultancy.

All staff adhere to the Chartered Institute of Ecology and Environmental Management's (CIEEM) *Code of Professional Conduct*.

3.2.3 *Assessment of current bat roost suitability*

Because bats are crevice-dwelling mammals it is often difficult to thoroughly inspect buildings for bats and evidence of bats without a destructive search, which is not generally practical or acceptable. Examples are where bats roost between the roofing felt and tiles or slates, around window frames and behind bargeboards. These areas cannot be inspected, but a surveyor would know that bats might roost here because there are places where bats could gain entry. A pipistrelle bat is small enough to fit into a match box and can roost in gaps just 14-20mm wide.

The building was assessed for its **bat roost suitability** according to the following factors that influence the likelihood of bat roosting:

- Surrounding habitat: whether there are potential flight-lines and bat foraging areas nearby.
- Construction detail: the type and construction of architectural features such as attics, bargeboards, soffit boxes, lead-flashing, cavity walls and hanging tiles that could be used by roosting bats. Some construction details and materials are more favourable to bat occupation than others.
- Building condition: whether the building has no roof or has a sound roof without any potential bat access points.
- Internal conditions: bats favour sheltered locations with a stable temperature regime, protection from the elements and little wind/light/rain penetration.
- Potential bat access points: whether there is flight and crawl access.
- Potential roosting locations: the presence of bat-accessible voids, cracks and crevices.

The risk of bat roosts being present will be lower where structures have:

- Urban setting with little greenspace.
- Heavy disturbance.
- Small, cluttered roof void (particularly for brown long-eared bats).
- Modern construction with few gaps or crevices that bats can fly or crawl through (although pipistrelles may still be present).
- Prefabricated steel or sheet materials.
- Active industrial premises.

The above list provides generic criteria and there are exceptions to consider. For example, pipistrelle roost sites are often found in modern housing estates and therefore the absence of bats from such locations should not always be assumed.

Some information on bat ecology is included in *Appendix B*.

3.2.4 *Systematic inspection for bats or evidence of bats*

The building was assessed for its suitability to support roosting bats using the following access and inspection equipment: high-quality 10x42 binoculars; a 1,000,000 candlepower Clulite™ CB2 torch;

an LED pen torch; an Explorer PremiumTM wireless inspection camera with recordable monitor; and a 3.8m surveyors' ladder. Binoculars were employed to view higher areas such as potential access points on the outside of the building. A description of the building was recorded on a survey sheet and digital photographs were taken as a permanent record.

Visual, systematic examinations were made for bats and evidence of bats in the building, both internally and externally, of the following:

- roof beams, especially the ridge beam;
- cracks, crevices and sheltered voids;
- the floors and stored items;
- external features such as cracks and holes in the walls;
- wall and door surfaces;
- window and door frames; and
- wall bases.

Evidence of roosting bats includes droppings, feeding remains and dead bats, but also staining from urine and fur-oils, scratch marks, odour, the presence of bat-fly (Nycteribiid) pupal cases, and in some cases, the absence of cobwebs.

Bat droppings can prove beyond doubt that bats use a building and can help to identify roosting locations because piles often accumulate beneath roosting sites or entrance points. The location, size, shape, texture and colour of the droppings can be used to aid species identification. DNA analysis of droppings is also possible and samples are taken where necessary. The number and condition (age) of droppings can indicate the size of the roost and when it was last used.

Following the internal and external inspections, the building was assigned a level of suitability for being used by roosting bats. This was based on the criteria in *Table 3.2.4.1* (Collins, 2016).

Table 3.2.4.1. Bat Roost Suitability.

Suitability	Description of roosting habitats	Description of commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features on site likely to be used by commuting or foraging bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (<i>i.e.</i> unlikely to be suitable for maternity or hibernation).	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, <i>i.e.</i> 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) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only)	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. The site is close to and connected to known roosts.

4

RESULTS**4.1 Desk study****4.1.1 Designated sites**

According to the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk), the site is not designated or immediately adjacent to any designated areas of nature conservation. However, there are designated sites nearby. These are listed in *Table 4.1.1.1*.

Table 4.1.1.1. Statutory designated sites; non-statutory designated sites and ancient semi-natural and ancient replanted woodlands within the designated search areas of the site.

Level of designation	Designation	Name	Distance & direction from site
International	SPA	Solent & Southampton Water	c.1,433m south
	Ramsar	Solent & Southampton Water	c.1,433m south
	SAC	Solent Maritime	c.1,433m south
National	SSSI	Lincegrove and Hackett's Marshes	c.1,433m south
		Upper Hamble Estuary and Woods	c.1,660m north-east
		Lee-on-the-Solent to Itchen Estuary	c.1,944m south-east
	NNR	-	-
County	LNR	Hackett's Marsh	c.1,433m south
		Netley Common	c.1,493m north
		Manor Farm	c.1,660m north-east
		Westwood Woodland Park	c.1,962m south-west
Local	SINC	-	-
	Ancient woodland	Unnamed woodland	c.305m south-east

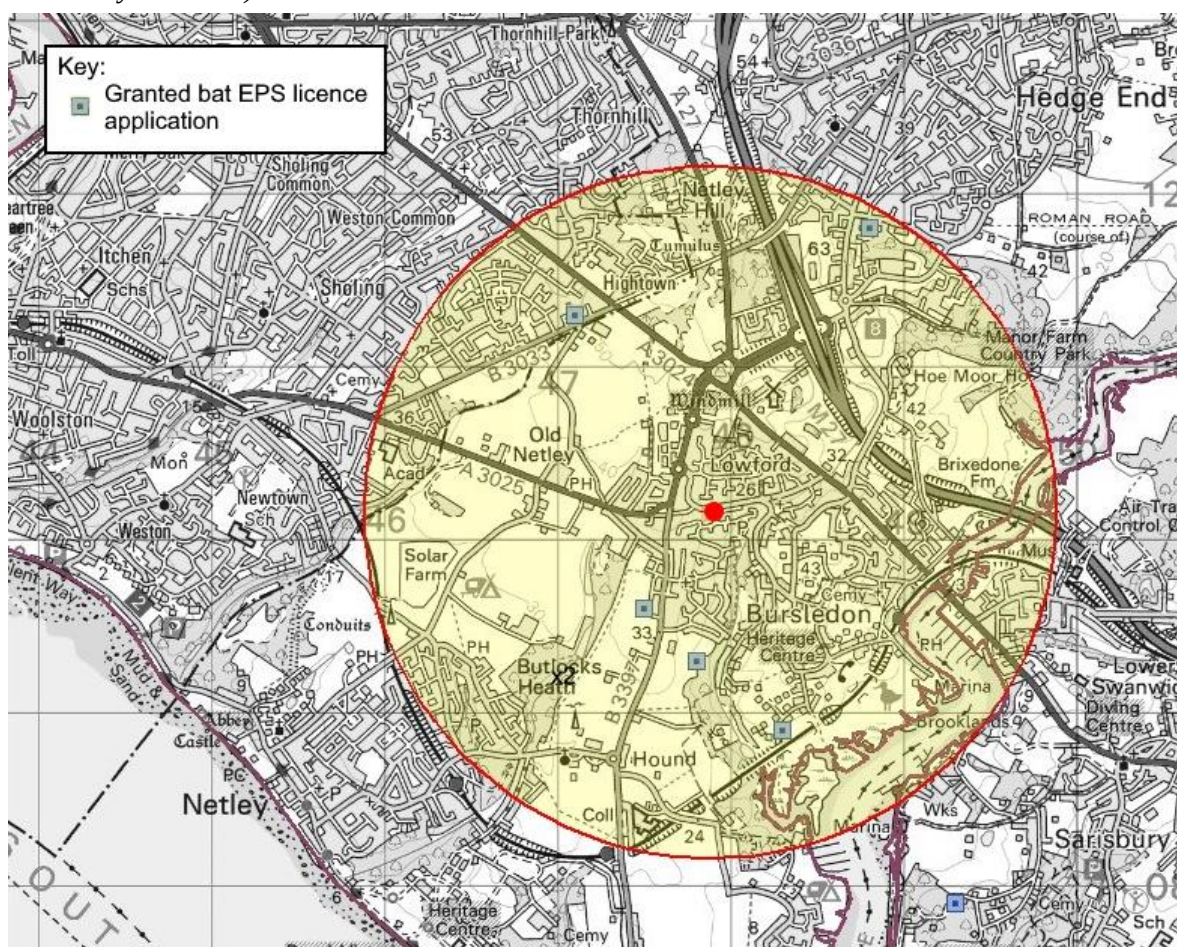
4.1.2 Bats

According to the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk), there have been five bat European Protected Species (EPS) licences granted within 2km of the site. These are listed in *Table 4.1.2.1* and their locations are shown in *Figure 4.1.2.1*.

Table 4.1.2.1. Granted European Protected Species (EPS) licences within 2km of the site.

Species subject of licence	Type of habitat affected	Date licence was granted	Distance & direction from site
Common pipistrelle	Resting place	19/04/2017	c.678m south-west
Common pipistrelle	Resting place	02/09/2014	c.863m south
Common pipistrelle	Resting place	10/10/2017	c.1,336m south
Common pipistrelle	N/A	12/08/2014	c.1,382m north-west
Common pipistrelle	Resting place	29/04/2015	c.1,877m north-east

Figure 4.1.2.1. Location of sites with granted bat EPS licences within 2km of the site (site location marked by a red dot).



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4.2 Survey of building

The construction details and photographs of the building are summarised in Table 4.2.1. Additional photographs showing the immediate vicinity are given in Section 7.

Table 4.2.1. Summary of the buildings construction details.

Type/Name	House	
Description	A one and two-storey brick building with a pyramid hip, tiled roof and a sloped-roof extension to the rear.	
No. of storeys	1 & 2	
Roof type	Pyramid hip and sloped	
Roof cladding	Tile (extension: unknown, covered by tarpaulin)	
Ridge	Tile	
Wall type	Brick and breezeblock	
Exterior	Soffits (east, west and north elevations)	
Photos	North elevation	South elevation
		
	East elevation	West elevation
		
Building dimensions	c.10m wide x c.18m long	
Roof void description	Eaves voids either side of a central converted loft room	
Frame	Wooden beams and rafters	
Roof lining	Celotex-style block insulation	
Roof void dimensions	Roof void: c.0.5m wide x c.8m long (eaves cupboards either side of the loft room)	
		
	Extension: None present	

Roof void height	Main roof void: c.0.5m
	Extension: None present
Potential roosting locations	None
Bat evidence	None
Bat suitability	Negligible
Further surveys needed?	No

4.3 *External potential bat access points*

The roof is well-sealed and in good condition. There are no visible potential bat access points into the main roof void or exterior features that could provide potential roosting locations for bats.

Due to the lack of potential access points, and suitable roosting locations, the building is classed as having negligible suitability to be used by roosting bats, following the criteria in *Table 3.2.4.1*.

4.4 *Commuting and foraging habitat*

The low hedges around the boundaries provide some limited bat foraging habitat in the immediate vicinity of the building. These connect to a network of hedges and tree-lines through the neighbouring gardens and into the wider area. These in turn connect the site to areas of high quality foraging habitat in the wider landscape such as nearby ancient woodland and waterways.

Bats follow linear landscape features such as lines of trees, hedges, buildings and waterways in order to commute from their roost sites to their feeding grounds. Likewise they use these features to navigate between feeding areas and alternative roosts.

4.5 *Evidence of bats*

No bats or evidence of bats was found.

4.6 *Other ecological constraints*

4.6.1 *Schedule 9 species*

One non-native invasive plant species listed on *Schedule 9* of the *Wildlife and Countryside Act 1981* (as amended) was recorded on the site. This is *Crocodyria × crocosmiiflora* (Montbretia) in at the north-west corner of the house. The location of the plant is shown in *Figure 3* in *Section 6*.

4.6.2 *Birds*

The boundary hedges, vegetation in the front garden and the existing building provide some limited suitable habitat for nesting birds.

5 **INTERPRETATION AND EVALUATION**

5.1 **Constraints**

5.1.1 *Constraints on survey data*

Detailed searches often result in the discovery of evidence of bats. However, although such surveys can identify the presence of bats it is more difficult to prove absence due to the crevice-dwelling nature of these elusive mammals. Bat droppings may be missed where there is debris to obscure them (and also, very old droppings generally crumble away to dust).

The site visit was undertaken in April, outside the main active bat season. However, it is possible to assess the buildings and their suitability for roosting bats.

5.1.2 *Constraints on the enhancement measures*

There is a limit to the amount of enhancement measures that are possible (and reasonable) on such a small, householder site. In addition, there are no trees on site that would be suitable for bird and/ or bat boxes to be attached.

5.2 **Potential impacts of the proposed development on bat roosts**

5.2.1 *Desk study*

According to the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk), the site is neither designated nor immediately adjacent to any designated areas of nature conservation. However, there are three nationally and three internationally designated sites within 2km and 5km, respectively. None of these will be directly affected by this small-scale development and all links will be maintained.

The site is within 5km of Solent & Southampton Water SPA (c.1,433m south) and Solent Maritime SAC (c.1,433m south). The SPA is designated due to some of the species of birds it provides habitat for and the SAC is designated due to the type of habitat it includes. As a result of its proximity, the impacts of these works on the SPA and SAC must be considered.

The works will cause an increase to the building size but not to the number of people occupying the building, as the house is a residential property and is staying under the same ownership. Therefore, there will be no increase in the recreational pressure, or pollution, on the internationally designated sites.

According to the *Multi-Agency Geographic Information for the Countryside* website (www.magic.gov.uk), there have been five bat European Protected Species (EPS) licences granted within 2km of the site, with the closest c.678m south-west of the site. Due to their close proximity, it is likely any bats using the site for foraging or commuting are part of the same meta-population.

5.2.2 *Building*

No bats or evidence of bats was found and the building has negligible bat roost suitability. Therefore, the proposed works may commence without further survey or constraints regarding bats (subject to any planning constraints).

5.2.3 *Commuting and foraging bats*

The hedges and bushes around the boundaries provide some limited bat foraging habitat in the immediate vicinity of the building. These are connected to areas of high quality foraging habitat in the wider landscape such as nearby ancient woodland and nearby waterways.

Woodland and waterways provide high quality foraging habitat for a number of different species of bat. These areas will be unaffected by the development and all links will be maintained. The connectivity around the edges of the site (the hedges) will be retained and as such no impact to commuting and foraging bats (and hence bat populations in the local area) is anticipated.

Changes in lighting can affect foraging and commuting bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto retained vegetation (particularly the trees and hedges), and security lights should operate on a timer, to avoid any negative impact on bats.

Any lighting installed should avoid spillage of greater than 1 lux onto any retained vegetation. The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

5.2.4 *Alternative roosting potential*

There are buildings nearby that could provide alternative roosting for bats (see *Figure 1* in *Section 6*). In addition, there are several mature trees in the vicinity which could provide bat roosting opportunities.

5.3 *Other ecological constraints*

5.3.1 *Schedule 9 plant species*

One non-native invasive plant species listed on *Schedule 9* of the *Wildlife and Countryside Act 1981* (as amended) was recorded on the site. It is an offence under the *Wildlife and Countryside Act 1981* to cause any species listed on *Schedule 9* to spread in the wild. Therefore, ideally this should be removed to avoid spreading to the remainder of or off the site.

To comply with the law, the *Schedule 9* species *Crocoshia* × *crocoshiiiflora* (Montbretia) will be controlled and eradicated so not to cause the plant to spread on this or other sites as a result of earth moving, soil/rubble removal or other operations. This will prevent machinery, tools or boots

accidentally carrying them off site. Further information on the removal of this species is given in Section 5.6.4.

5.3.2 *Birds*

The building and bushes provide suitable habitat for nesting birds. The destruction of active bird nests is prohibited under the *Wildlife and Countryside Act 1981* (as amended). Any affected vegetation with the potential to support nesting birds should be cut to near ground level (approximately 30cm) outside the bird breeding season (which is late February to August inclusive). If this is not possible, and vegetation has to be removed during the nesting season, it should be checked for nests (by an ecologist) immediately prior to works. If any active nests are found a 5m buffer zone should be established around them and be temporarily fenced off to prevent plant or personnel disturbing the nest until the end of the breeding bird season (or until the nest is no longer in use).

The roof and ceiling works should take place outside the breeding bird season (which is late February to August inclusive). If this is not possible, and work has to take place during the nesting season, it should be checked for nests (by an ecologist) immediately prior to works. If any active nests are found they must be retained and work must be delayed in that area until the young have fledged and left the nest.

5.4 *Survey report expiry*

This survey data is valid for a maximum of 12 months. Bats frequently move around and adopt new roosting sites, therefore if more than 12 months elapses it may be advisable to conduct further survey work to obtain up-to-date information to advise work, thereby ensuring protected species compliance.

Given the mobility of bats, it is recommended that a walkover of the site to update the survey information is undertaken prior to the development commencing if this does not occur before the end of April 2022.

5.5 *Further survey*

No further surveys are proposed.

5.6 *Outline mitigation and enhancement measures*

5.6.1 *General*

From the 19th February 2019, the Government published the revised National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2019). The document sets out the government's planning policies for England and how these are expected to be applied. This replaces a previous version which was published in March 2012. It states: "*at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).*"

It also states "*opportunities to incorporate biodiversity in and around developments should be encouraged*" as part of the consideration for "*presumption in favour of sustainable development*".

The updated National Planning Policy Framework (NPPF) also states (paragraph 170) that:
"*Planning Policies and decisions should contribute to and enhance the natural and local 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.*"

The updated Planning Policy Guidance (PPG) for the Natural Environment, updated in July 2019 states (paragraph 020) that:

"*Net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand.*"

The updated PPG provides examples of how biodiversity net gain can be achieved. Measures suggested include "creating new habitats" and "enhancing existing habitats".

It is proposed that the enhancements to provide net gain will be in the form of removing *Schedule 9* plant species, new bat roost provision, lighting restrictions for bats (and other wildlife) and new bird nesting provision. These enhancements are detailed in the following sections.

Other enhancements for wildlife that the owners of the site may choose to employ are given in *Appendix C*. However, these are not proposed as enhancements for the purposes of the planning application, but only for information purposes.

All proposed enhancement measures are subject to supplied plans.

5.6.2 *New bat roost locations*

The new extensions will be enhanced for bats using at least one integrated bat box (*e.g.* a Habibat™ Bat Box, an Ibstock Enclosed Bat Box, a Schwegler Bat Tube, or similar), which provides a cavity that is incorporated into the external build structure to offer roosting space for bats.

5.6.3 *Lighting*

Changes in lighting can affect commuting and foraging bats. Therefore, no works should take place in the hours of darkness or under artificial lighting. In addition, no lighting should be directed onto retained vegetation and any lighting installed should avoid spillage of greater than 1 lux near vegetation so that light disturbance is not a problem. This is because lighting can impact bat populations directly by disturbing roosts and reducing their foraging area, or indirectly by severing commuting routes from roosts. Therefore, the following (modified from *Bats and lighting in the UK* (ILP 2018)) should be undertaken:

- **Aim of light** The light should be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible. This lit area must avoid being directed at, or close to, any retained vegetation. A shield or hood can be used to control or restrict the area to be lit.

Avoid illuminating at a wider angle as this will be more disturbing to foraging and commuting bats, as well as people and other wildlife.

For any security lighting, the following should also apply:

- **Power** It is rarely necessary to use a lamp of greater than 2000 lumens (150W) in security lights. The use of a higher power is not as effective for the intended function and will be more disturbing for bats.
- **Movement sensors** Many security lights are fitted with movement sensors which, if well installed and aimed, will reduce the amount of time a light is on each night. This is more easily achieved in a system where the light unit and the movement sensor are able to be separately aimed.
- **Timers** If the light is fitted with a timer this should be adjusted to the minimum to reduce the amount of 'lit time'.
- **Alternatives** The requirement for security lighting in each instance should be carefully considered and only used where absolutely necessary to deter crime.

The use of non-UV LED lighting (preferably using warm spectrum wavelengths) is strongly recommended to avoid the most deleterious impacts of lighting on biodiversity and bats in particular.

5.6.4 Schedule 9 species

As the *Crocasmia × crocosmiiflora* (Montbretia) is required to be removed, two main options exist; mechanical removal and chemical treatment. The options depend on the timescale of the works. If the timescale permits it then the plant will be treated with herbicide. This will be completed by appropriately qualified contractors prior to any earth-moving operations.

If there is a short timescale, then the plant and soil containing corms will be scraped down to a minimum of 50cm. In addition, 2-3m of soil around the visible area will be removed. Any soil which contains this species is classed as controlled waste and must be disposed of appropriately. It will be disposed of in one of the following ways:

- in landfill as controlled waste;
- buried on site at a depth of 2m; or
- used to form a bund on site, where it will be treated with herbicide or buried.

5.6.5 Bird boxes

One swift box will be built into or attached to the new extensions to provide a new nest site. Swift boxes can be supplied and installed by Hampshire Swifts <https://www.hampshireswifts.co.uk> and a new soffit or bespoke designs are available. Bird boxes will be built into or attached to the exterior wall of the extended building to provide new nest sites. The bird boxes are detailed in Table 5.6.5.1.

Table 5.6.5.1. Bird boxes to be erected within the site with additional details on siting them to increase chances of occupancy.

Type & example	Typical	No.	Height	Additional information
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	species			
Ibstock Eco-habitat 	Swifts, sparrows	1	$\geq 5\text{m}$	- Can either be incorporated into the build structure or mounted onto a building. - Position out of direct sunlight (below eaves on the north elevation), away from windows and in a straight line. - Should be in an open area so that it is less accessible to predators and birds are not obstructed as they leave the nest.
Vivara Pro Seville 28mm Woodstone Nest Box 	Blue tits, coal tits	1	2-4m	- Position on a building angled north-east (away from prevailing winds) and tilt forward slightly. - Chances of occupation can be increased by positioning boxes near vegetation.
Vivara Pro Seville 32mm Woodstone Nest Box 	Blue tits, great tits	1	2-4m	- Position on a building angled north-east (away from prevailing winds) and tilt forward slightly. - Chances of occupation can be increased by positioning boxes near vegetation.

5.7 Requirement for Habitats Regulations licence

A bat licence from Natural England is not needed.

In the unlikely event that bats are found either during the works, work will stop and a bat licence will be applied for. This permits activities that may otherwise be offences under the *Conservation of Habitats & Species Regulations 2017*, such as the destruction of roost sites.

Evidence is required from emergence/ re-entry surveys during the bat active season between May and September in order to gather enough information about bat populations (including species, numbers and status of roost sites) to support a bat licence application.

Survey data supporting licence applications must be up-to-date *i.e.* have been conducted within the current or most recent optimal survey season (May to September).

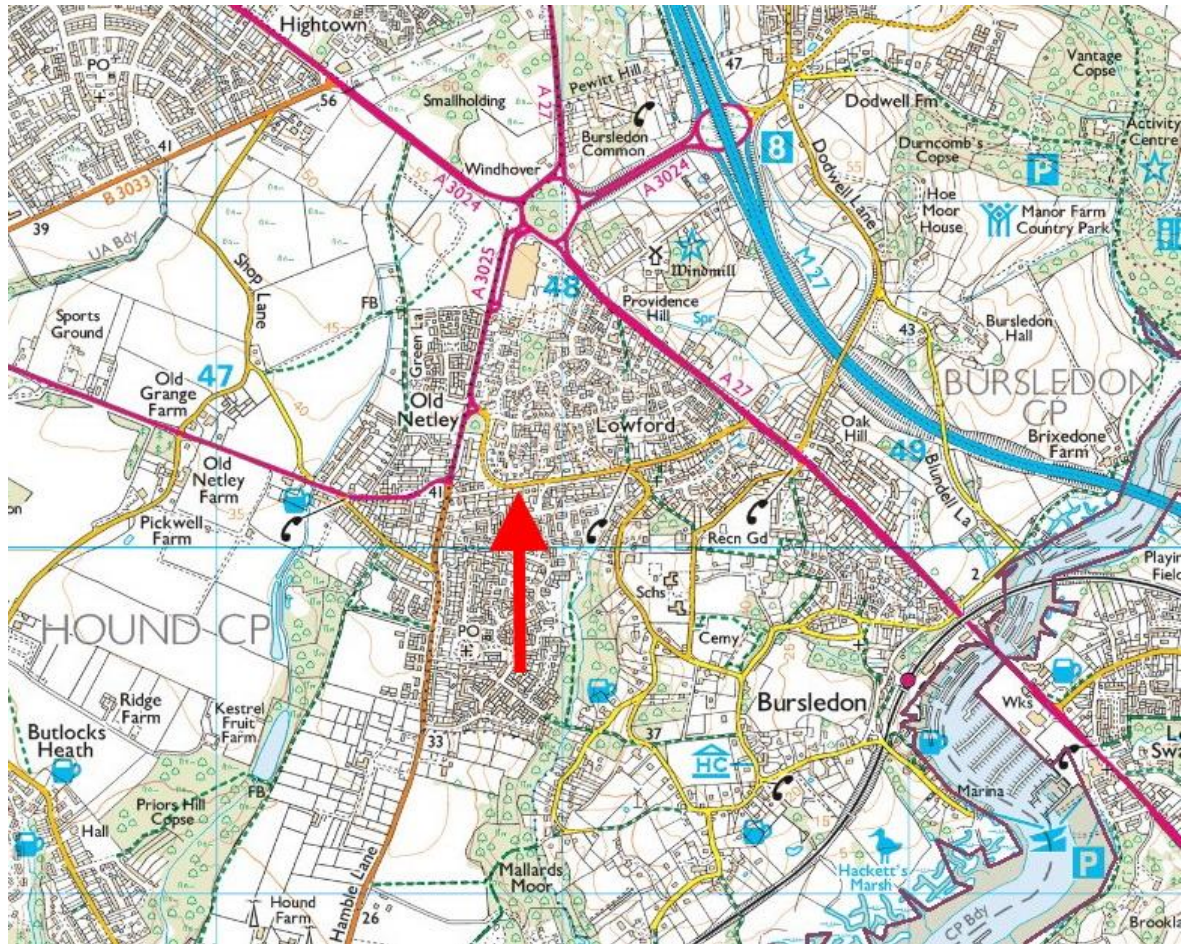
Natural England takes a minimum of 30 working days to process licence applications following receipt of all the relevant documentation. This includes an application form and a Method Statement. This includes a detailed mitigation strategy to eliminate or reduce impacts on bats.

It is not possible to apply for a licence until full planning permission has been granted and any conditions relating to wildlife fulfilled, although Local Planning Authorities usually request the information prior to determining a planning application request. Additional time will be required where any revisions to a proposed mitigation strategy are necessary to obtain the licence.

Figure 1. Aerial photographs showing the location of the site.



Figure 2. An Ordnance Survey map showing the site location, as indicated by the red arrow.



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Figure 3. Plan of the site showing the location of the other ecological constraints.

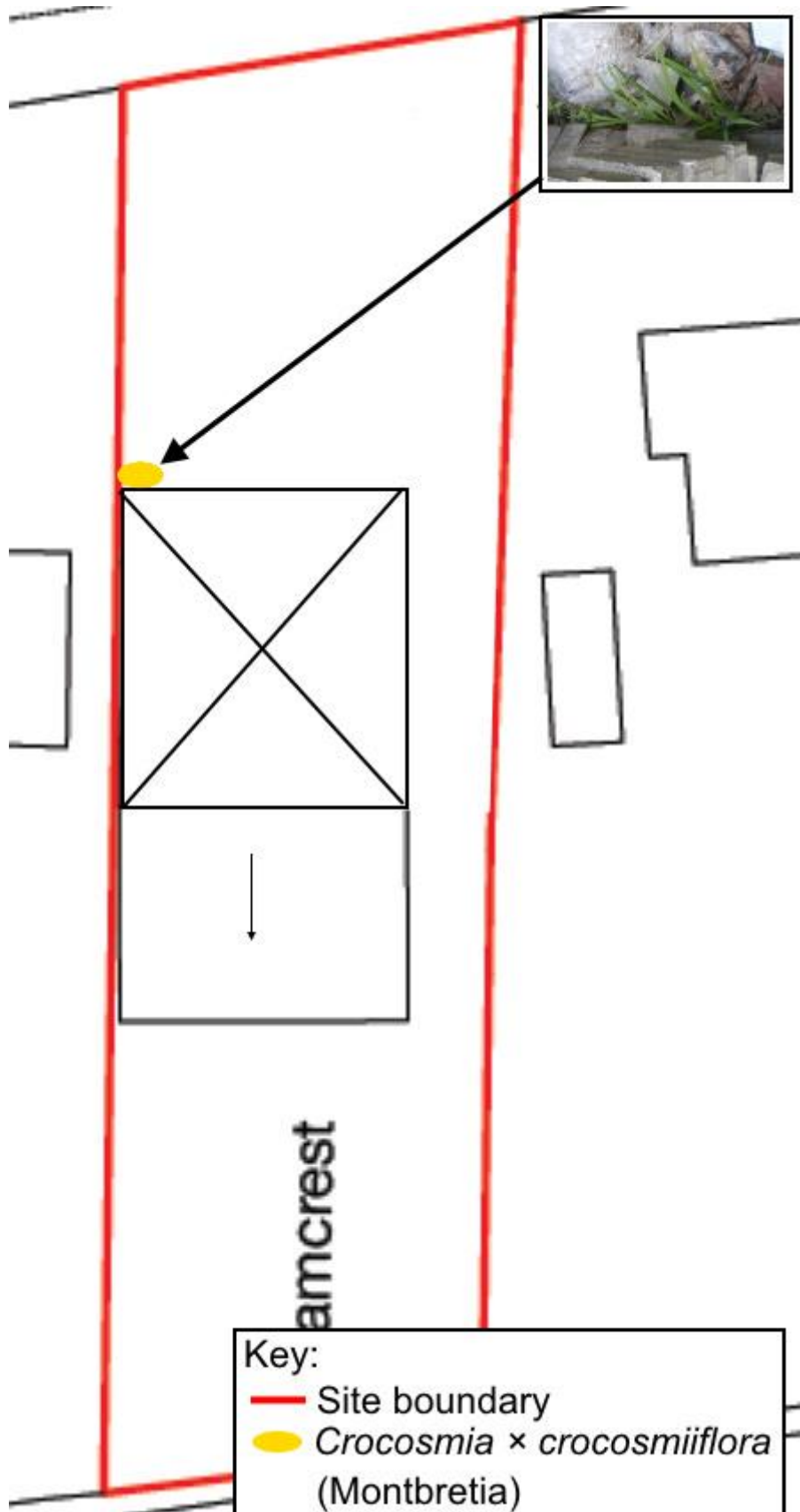
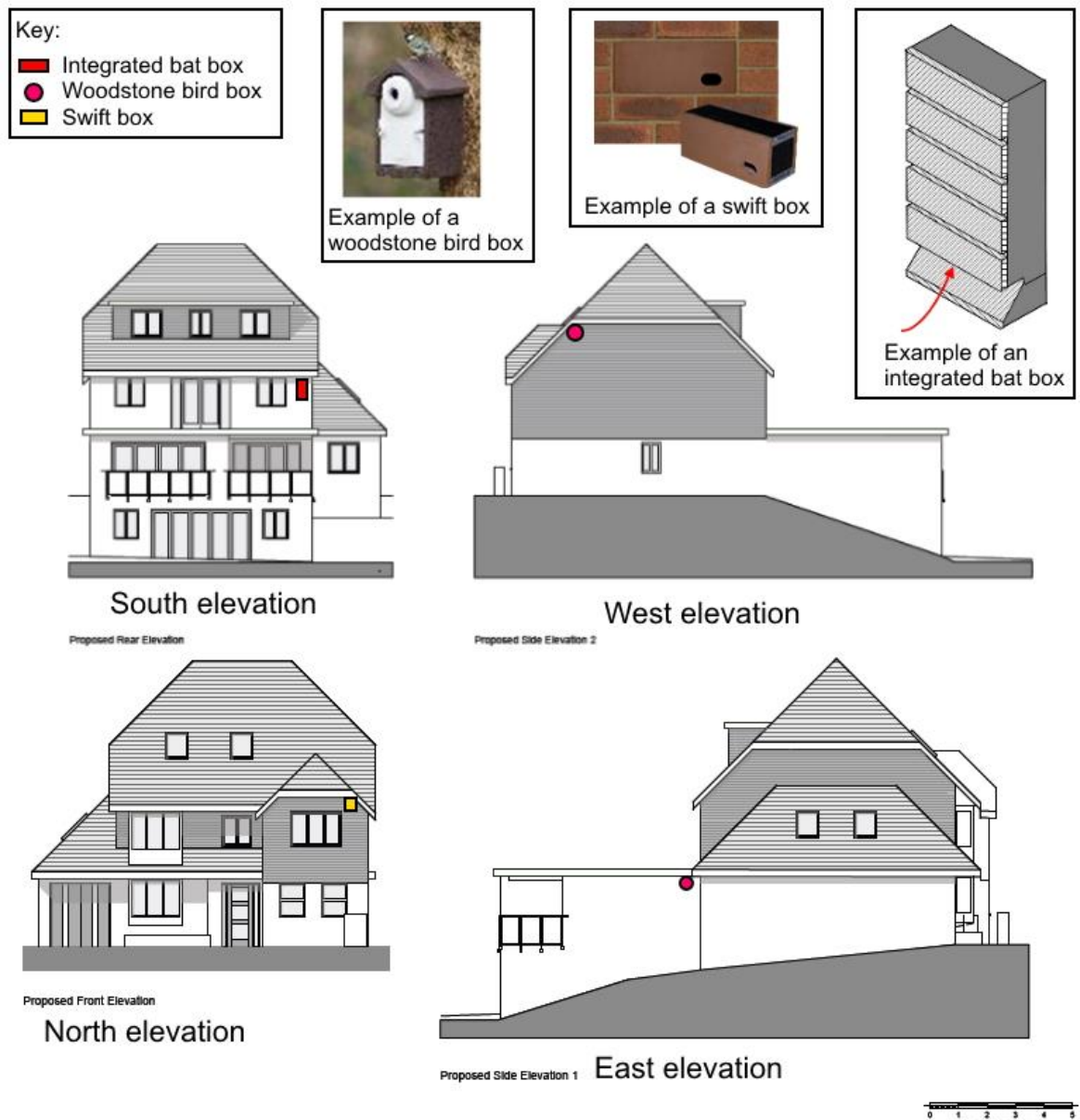


Figure 4. Plan showing the proposed enhancement measures.



PHOTOGRAPHS

Photo 1. Gravel area in rear garden, facing south. (Taken 08/04/21)



Photo 2. Front of Ramcrest viewed from Lowford Hill, facing south. (Taken 08/04/21)



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9.1 *Legal context*

All species of British bat are protected by the *Wildlife and Countryside Act 1981* (as amended) extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst it occupies a bat roost.

Bats are also European Protected Species listed on the *Conservation of Habitats & Species Regulations 2017*. This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb a bat (in such a way as to be likely to significantly affect: (i) the ability of a significant group of bats to survive, breed or rear/nurture their young; or (ii) the local distribution or abundance of the species concerned);
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present (bats tend to reuse the same roost).

Where it is necessary to carry out an action that could result in an offence under the *Conservation of Habitats & Species Regulations 2017* it is possible to apply for a European Protected Species (EPS) licence from Natural England. Licences are only issued where Natural England are satisfied that three derogation tests are met. These are: that the activity is for **imperative reasons of overriding public interest**; that there must be **no satisfactory alternative**; and that **favourable conservation status of the species must be maintained**.

Consideration of these three derogation tests was previously left to Natural England as part of their deliberations on whether to grant a licence for the development activity after a planning consent has been issued. However, the regulations now require that **all** public bodies, i.e. **Local Planning Authorities** (LPAs), have regard to the requirements of the European Habitats Directive when carrying out their functions. As a result, LPAs **must** address the three derogation tests when considering a planning application that could impact upon any European Protected Species (EPS).

9.2 **National planning context**

9.2.1 *General*

Surveys should be completed in line with Natural England's *Standing Advice for Local Authorities* (<http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/default.aspx>), which states:

- Natural England will not comment on applications that are submitted without the relevant protected species surveys if there are no other issues (*i.e.* in relation to SSSIs or landscape).
- Natural England will not comment on scoping surveys that recommend further surveys where these have not been undertaken and submitted with the scoping reports.

In addition to the above, *Section 40* of the *Natural Environment and Rural Communities Act* (2006) imposes a new duty on all public authorities to have regard for biodiversity.

9.2.2 *National Planning Policy Framework (NPPF)*

From the 19th February 2019, the Government published the revised National Planning Policy Framework. The document sets out the government's planning policies for England and how these are expected to be applied. This replaces a previous version which was published in March 2012. It states: "*at the heart of the Framework is a presumption in favour of sustainable development (paragraph 11).*"

Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

- an economic objective;
- a social objective; and
- an environmental objective.

The environmental objective is to "*contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy*".

Planning policies and decisions should contribute to and enhance the natural and local environment by "*protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*" and "*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*".

If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted.

Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.

It states that "development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity".

It should be noted 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 also encourages *"minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures"* and aims to *"promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity"*. This applies to non-statutory designated sites including Sites of Importance for Nature Conservation (SINCs) and equivalent county wildlife sites.

Early engagement with all necessary stakeholders, including expert bodies, is encouraged by the NPPF.

Bats use different roosting sites throughout the year according to their life cycle requirements.

Hibernation during the winter months requires roosting sites that are cool and humid. As conditions improve through the spring, bats become increasingly active and tend to use transitional roosting sites. During the summer months, females give birth in maternity roosts. Maternity roosts tend to be warm and temperature-stable, which aids rapid development of the young, which are weaned in late summer. In the autumn, adult bats congregate in mating roosts and also use transitional roosting sites. Autumn is the time when both adults and juveniles have to build up fat reserves in preparation for hibernation through the winter months.

Bats also use roosts during the night as feeding perches. Species that catch large prey items such as moths (*e.g.* brown long-eared bat) often enter buildings to hang up and eat their prey before emerging again to forage. Such feeding perches tend to be obvious from scatterings of bat droppings with moth wings, which the bats discard.

Bats are at their most vulnerable during the summer in their maternity roosts, when disturbance can jeopardise their breeding success. Bats give birth to only one pup per year and young do not breed until the second or third year after birth. This means that if maternity colonies are disturbed there can be serious implications for the conservation status of populations.

Bats are also vulnerable during the winter hibernation period, when disturbance can reduce their chance of survival through the winter at a time when food is in short supply.

This is why there are often only narrow timeframes for bat survey and mitigation work.

11 APPENDIX C: OTHER ENHANCEMENTS

These are not proposed as enhancements for the purposes of the planning application, but only for information purposes.

11.1 Ornamental planting to attract wildlife

Plants that attract insects are generally helpful and trees, shrubs and flowering plants can provide cover for wildlife. Therefore, to enhance the ecological value of the site, any replacement landscaping in the gardens should incorporate a mixture of native and non-native species of value to wildlife. This mixture will be planted to encourage a diversity of insects, which in turn will attract different species. Flowers that bloom throughout the year, including both annuals and herbaceous perennials, are beneficial. Night-flowering blossoms attract night-flying insects, which in turn provide prey for bats. Examples of suitable plant species that could be planted to encourage wildlife include those in Tables 11.1.1. & 11.1.2. Approximate flowering periods are listed in the tables.

Table 11.1.1. Native and non-native species that could be incorporated into the landscaping.

Species	Common Name	Approximate flowering period
<i>Achillea millefolium</i>	Yarrow	Early summer
<i>Aubretia</i> species	Aubretia	Spring to early summer
<i>Berberis darwinii</i>	Darwin's Barberry	Spring
<i>Iberis sempervirens</i>	Candytuft	Summer to autumn
<i>Centaurea montana</i>	Cornflower	Spring to summer
<i>Centaurea scabiosa</i>	Knapweed	Summer to autumn
<i>Centranthus ruber</i>	Red valerian	Summer to autumn
<i>Cornus sanguinea</i>	Dogwood	Summer
<i>Dianthus barbatus</i>	Sweet William	Summer
<i>Echinacea</i> species	Echinacea	Summer to autumn
<i>Erysimum</i> species	Wallflowers	Spring to early summer
<i>Glebionis segetum</i>	Corn marigold	Spring to summer
<i>Hebe</i> species	Hebes	Summer to autumn
<i>Hedera helix</i>	Ivy	Autumn
<i>Hesperis matronalis</i>	Dame's-violet	Spring to summer
<i>Hyacinthoides non-scripta</i>	English Bluebell	Spring
<i>Hylotelephium spectabile</i>	Ice plant 'Pink lady'	Early autumn
<i>Hypericum</i> species	St John's wort	Spring
<i>Ilex aquifolium</i>	Holly	Spring to summer
<i>Jasminum officinale</i>	Common White Jasmine	Summer to autumn
<i>Lavandula angustifolia</i>	Garden Lavender	Summer
<i>Leucanthemum vulgare</i>	Ox-eye daisy	Summer
<i>Limnanthes douglasii</i>	Poached egg plant	Summer
<i>Lonicera caprifolium</i>	Perfoliate Honeysuckle	Summer

<i>Lonicera etrusca</i>	Italian Honeysuckle	Summer to autumn
<i>Lonicera japonica</i>	Japanese Honeysuckle	Spring
<i>Lonicera periclymenum</i>	Honeysuckle	Summer to autumn
<i>Lunaria annua</i>	Honesty	Spring
<i>Malus domestica</i>	Apple	Spring
<i>Malus sylvestris</i>	Crab Apple	Spring
<i>Malva species</i>	Mallow	Summer to autumn
<i>Matthiola longipetala</i>	Night-scented stock	Summer
<i>Myosotis sylvatica</i>	Wood forget-me-not	Spring
<i>Nicotiana species</i>	Tobacco plant	Summer
<i>Oenothera species</i>	Evening primroses	Summer to autumn
<i>Papaver rhoeas</i>	Corn poppy	Summer
<i>Phacelia species</i>	Phacelia	Summer to autumn
<i>Primula vulgaris</i>	Primrose	Spring
<i>Rosa species</i>	Rose	Summer
<i>Rubus fruticosus</i> agg.	Bramble	Spring to summer
<i>Saponaria officinalis</i>	Soapwort	Summer
<i>Saxifraga fortunei</i>	Cherry pie	Summer to autumn
<i>Scabiosa species</i>	Scabious	Summer
<i>Silene dioica</i>	Red campion	Spring
<i>Silene noctiflora</i>	Night-scented Catchfly	Summer to autumn
<i>Silene vulgaris</i>	Bladder Campion	Summer
<i>Verbena species</i>	Vervain	Summer to autumn
<i>Viburnum lantana</i>	Wayfaring-tree	Spring to summer
<i>Viburnum opulus</i>	Guelder-rose	Summer

Table 11.2.2. Examples of suitable garden herbs that could be planted in and around the site to encourage wildlife.

Species	Common Name	Approximate flowering period
<i>Angelica species</i>	Angelica	Summer to autumn
<i>Borago officinalis</i>	Borage	Spring to early autumn
<i>Calendula officinalis</i>	English marigolds	Summer to autumn
<i>Foeniculum vulgare</i>	Fennel	Summer to early autumn
<i>Hesperis matronalis</i>	Dame's-violet, often sold as Sweet Rocket	Spring to summer
<i>Hyssopus officinalis</i>	Hyssop	Summer to early autumn
<i>Matthiola bicornis</i>	Night-scented Stock	Spring to autumn
<i>Melissa officinalis</i>	Lemon balm	Summer
<i>Monarda species</i>	Bergamot	Summer to early autumn
<i>Nicotiana species</i>	Tobacco-plant	Spring to autumn
<i>Oenothera species</i>	Evening-primroses	Summer
<i>Origanum vulgare</i>	Marjoram	Summer
<i>Rosmarinus officinalis</i>	Rosemary	Spring

<i>Saponaria officinalis</i>	Soapwort	Summer to autumn
<i>Silene noctiflora</i>	Night-scented Catchfly	Summer to autumn
<i>Silene vulgaris</i>	Bladder Campion	Spring to summer
<i>Tanacetum parthenium</i>	Feverfew	Summer to early autumn
<i>Thymus</i> species	Thyme	Summer

11.2 Insects

At least one insect hotel or tower should be installed in the garden. This should be in a sunny location close to vegetation. Bee-friendly and insect friendly plants should be located nearby so that the bees and insects using the boxes have food. Lavender, honeysuckle and buddleia are all pollinator-friendly plants. The boxes suggested in *Table 11.2.1* (especially the BeePot planter) have been chosen so that they form an attractive feature as part of the landscaping. Solitary bees are non-aggressive and as such are suitable for gardens with pets and children.

Table 11.2.1. Examples of insect hotels and towers that could be erected on site.

Type	Species	Height	Additional information
BeePot Bee Hotel 	Solitary bees	>1m from the ground	The BeePot should be positioned in a warm sunny spot, preferably on a south-facing wall, with no vegetation in front of the holes
Insect Tower 	Butterflies, solitary bees, lacewings and ladybirds	>1m from the ground	The different sections of the Insect Tower have been designed to provide a habitat for a variety of insect species. Suitable for mounting on buildings, trees or fences.
Urban Bee Nester 	Solitary bees and a range of other insects	Between 0.75m and 1.5m above ground	The selected canes and the holes are the optimum size for solitary bees but other insects may overwinter in the nester.
Urban Insect Hotel 	A wide range of insects	Between 0.75m and 1.5m above ground	Adding natural materials such as drilled canes, hollow stems or bark in the triangular spaces will encourage more insects to the hotel.
Bee and Bug Biome 	A wide range of insects	>1m from the ground	Best placed near vegetation. Provides plenty of nooks and crannies for insects such as ladybirds, earwigs and lacewings.