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Bat Scoping Report and Preliminary Ecological Appraisal

Land at Upper Bognor Road, Bognor Regis, West Sussex, PO22 8AT

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Report Summary

1. The Ecology Co-op was commissioned by KJ Fox Ltd to undertake a Bat Scoping Assessment at the Land at Upper Bognor Road. The purpose of this report is to present the findings of the appraisal and identify potential ecological constraints and opportunities in relation to a proposal to refurbish existing dwellings, add an extension to building 71/71A, add skylights to building 67/69 and to construct a new dwelling.

2. An assessment of the site was carried out by Sam Lunn, MSc, ACIEEM and Natural England Level 2 class bat licence holder and James Whitby BSc QCIEEM on the 12th of January 2022. This included a ground-based external inspection of the buildings, an internal inspection of potential roost features, such as enclosed loft spaces (subject to access), and an appraisal of the surrounding habitats, to evaluate the site for its potential to support bats. All bat species are European Protected Species (Annex IV, 'Habitats Directive').

3. This site is situated on Land at Upper Bognor Road, Bognor Regis, West Sussex, PO22 8AT. The central grid reference for the site is SZ 94365 99531. The site comprises of three buildings, Charlotte house, 67/69 attached residential dwellings and 71/71A, a ground-floor apartment and a first-floor apartment. The site is also made up of managed grassland, scattered shrubs and trees and unmanaged scrub in the garden of 67/69.

4. The buildings were assessed as having low suitability to support roosting bats based on the presence of gaps in hip, ridge and roof tiles, as well as lifted lead flashing. Features on building 71/71A to be directly impacted by the development could be accessed by ladder and were subsequently endoscoped, reducing their rating to negligible. The features identified on building 67/69 will not be directly impacted by proposed skylights. Habitat within the zone of influence of the proposals was considered to be of potential value to bats for foraging purposes

5. No further surveys of the dwelling are recommended; however, a suitably qualified and licensed ecologist will need to be present for the sensitive stripping of any tiles. Should any bats or signs of bats be identified, the work would have to cease until appropriate surveys have been undertaken and an EPS licence obtained to legally proceed with the development.

6. This project also offers some enhancement opportunities for roosting bats. Bespoke, custom-made roost features could be added into the building fabric, such as purpose-built bat tiles being added into the pitch on the new extension.

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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-op has been commissioned to undertake a bat scoping assessment and Preliminary Ecological Appraisal (PEA) of the Land at Upper Bognor Road by KJ Fox Ltd. This report presents the findings of a walkover survey and building inspection for occupation by bats, undertaken by Sam Lunn MSc ACIEEM and Natural England Level 2 bat survey class licence holder and James Whitby BSc QCIEEM on 11th January 2022. Whilst this report has maintained a focus on assessing potential impacts upon roosting bats and bat activity within the proposal's zone of influence, it has also considered the potential for any other protected/notable species and/or habitats to be adversely affected. The proposal for the site comprises of a new dwelling, an extension added to building 71/71A, skylights to building 67/69 and the general refurbishment of the existing dwellings. Recommendations for further surveys that are likely to be required to inform a planning application and Ecological Impact Assessment are provided, if necessary. Where appropriate, measures to avoid, mitigate and/or compensate for significant adverse effects are outlined.

This report is intended to inform the client and the appropriate planning authority of the potential impacts that this development proposal may have upon roosting bats as well as identifying potential impacts to commuting routes and foraging habitat of value. Where bat roosting potential, or physical evidence of bats has been identified, further survey effort will be required in order to complete an impact assessment to inform a planning application.

1.2 Background

The site is located at the Land at Upper Bognor Road, Bognor Regis, West Sussex, PO22 8AT. The central grid reference for the site is SZ 94365 99531.

The site comprises of three buildings, Charlotte house, 67/69 attached residential dwellings and 71/71A, a ground-floor apartment and a first-floor apartment. The site is also made up of managed grassland, scattered shrubs and trees and unmanaged scrub in the garden of 67/69.

The location of the study buildings is based on a site plan provided by Saunders Architects and is illustrated in Figure 1.

A previous assessment was carried out in 2019 by The Ecology Co-op for previous planning application BR/351/19/PL. The previous application involved the erection of two live-work units, change of use in student accommodation (Charlotte House), reconfiguration of existing dwellings and the creation of new private gardens as well as spaces for parking, bins and bicycles. Internal refurbishments have commenced under the previous application (BR/351/19/PL), and most ceilings and walls have been stripped to reveal the buildings' internal shell. Sensitive habitat clearance was overseen by a suitably qualified ecologist in 2021 to remove bramble scrub to make way for the new dwelling.

The new proposed development/project includes the internal stripping and refurbishment of 71/71A and 67/69. External works include 67/69 to have two skylights added into the lowest slate roof pitch on the

west face of the building, and 71/71A to have a two-storey extension added on to the western face joining below the existing gutter line.

The development will also include the construction of a new dwelling to hold three flats near the eastern boundary. An area of scrub (blue outline on figure 1) had been cleared in November 2021under the supervision of an ecologist from The Ecology Co-op to allow for this under the initial application. As well as this, two new areas for car parking will be added as well as spaces for bins and bicycles.

Charlotte House is still currently owned by the University of Chichester and used as student accommodation. There are currently no planned works for Charlotte House.

Figure 1. Aerial image showing the location of the site indicated with a red outline. Image produced courtesy of Google maps (map data ©2021 Google).

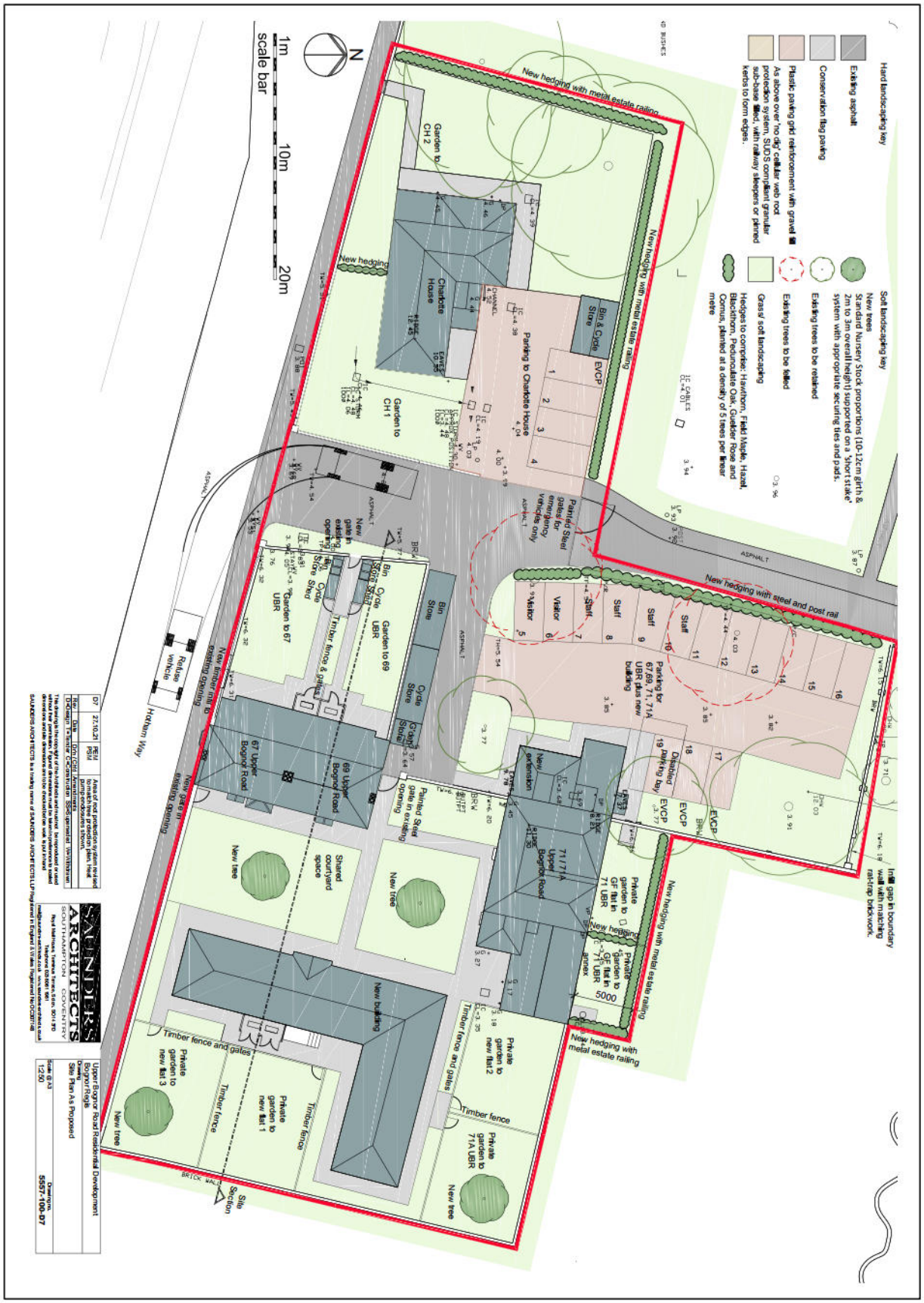

Figure 2. Site Plans provided by Saunders Architects. Drawing No. 5557-100-D7. (2021).

1.3 Policy and Legislation

Legal protection applying to all bat species in the UK and any other species relevant to this appraisal, is outlined in Appendix 1 of this report.

The results of this survey will be used to determine the need for further surveys, impact avoidance measures and/or an appropriate mitigation/compensation strategy to ensure compliance with UK wildlife legislation, policy and best practice.

2 METHODOLOGY

The methodologies used for this survey are in accordance with the bat survey guidelines produced by the Bat Conservation Trust[1]. Where there has been any deviation from the guidelines due to any site-specific constraints or other circumstances, reasoning and justification has been provided. This survey has also considered the Guidelines for Preliminary Ecological Appraisal produced by CIEEM[2], where the potential for impacts to species other than bats has been identified.

2.1 Desk Study

A search of on-line mapping resources has been undertaken to characterise the local context of the site with respect to semi-natural habitats and linear features of value to foraging and commuting bats.

The MAGIC website resource (www.magic.gov.uk) has been used to identify the location of designated sites for nature conservation within 2km and European Protected Species (EPS) licences granted within a 1km radius of the survey site. Priority habitats and ancient woodland, upon the site and within the proposal's zone of influence, have also been identified due to their ecological value and potential to act as important foraging resources for bats.

Priority habitats and ancient woodland are classified as habitats of principal importance. Habitats of principal importance are listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006[3], which places a duty on Local Planning Authorities to have due regard to biodiversity.

2.2 Field Survey

2.2.1 Roosting Potential

Bats can use a wide range of features for roosting purposes including loft spaces, cavity walls, loose tiles, mortice joints and cracks/gaps in a variety of built structures. They can also be found in trees with

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[1] Collins, J.(ed.) (2016*) Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London.
[2] CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2nd edition.* Chartered Institute of Ecology and Environmental Management, Winchester.
[3] HM Government (2006). Natural Environment and Rural Communities Act 2006. Available online at: https://www.legislation.gov.uk/ukpga/2006/16/section/41.

holes, splits, cracks, cavities, ivy and loose bark.

A detailed building inspection was carried out, looking for potential access points and Potential Roosting Features (PRFs) that bats could use and any evidence indicating the presence of bats using the building, such as rub marks, feeding remains, staining or droppings. This included a ground-based external inspection around the buildings and internal inspection of PRFs, such as enclosed loft spaces or roof voids or basements, where safe access was possible. A high-powered torch was used for the internal and external assessment. Where possible, PRF's were inspected with an endoscope to check for signs of roosting bats.

The suitability of each feature, or group of features, to support roosting bats has been assessed as either negligible, low, moderate, or high, in accordance with best practice guidance[1] (see Table 1) Any evidence confirming the presence of bats was clearly recorded including photos and samples taken (e.g. droppings), where appropriate. Further surveys have been recommended in accordance with best practice guidance and the surveyors professional judgement, where evidence of a bat roost or PRFs have been identified that would be adversely impacted by the proposal and where precautionary mitigation alone cannot ensure that bats would not be potentially disturbed or harmed.

Table 1. Guidelines for assessing suitability of structures (buildings and trees etc) to support bat roosts

Suitability	Description of roosting habitats
Negligible	A structure that does not support any features that could be used by roosting bats.
Low	A structure that has one or more potential roosting features that could support individual roosting bats opportunistically. These features however lack the space, shelter or appropriate conditions, to support larger numbers of bats (such as a maternity roost).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter and suitable conditions for roosting, but are unlikely to support a roost of high conservation significance.
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 potential for longer periods of time due to their size, shelter, protection and conditions.

2.2.2 Hibernation Potential

The structure and its associated features were assessed for their suitability to be used by hibernating bats. The assessment was carried out in accordance with guidelines produced by BatAbility[4] and the bat survey guidelines produced by the Bat Conservation Trust[1]. To determine the potential for features to support hibernating bats the following aspects were considered:

- The suitability of features to support roosting bats or to allow access for roosting bats;
- The temperature and humidity conditions likely to be present within the feature during the winter period and the suitability in this respect for it to be used by bats for hibernating;
- The surrounding habitat, in terms of its potential for use by bats outside of the hibernation period for commuting and/or foraging purposes; and
- The presence of known roosts within the structure, or adjacent structures, or surrounding area during the active season.

[4] Middleton. N. (2019). *Assessing Sites for Hibernation Potential. A Practical Approach, including a Proposed Method & Supporting Notes. Version' Draft/V2.2019*. BatAbility.

The potential for use by hibernating bats for each feature, or group of features was assessed as either negligible, low, moderate, or high, in accordance with best practice. Further surveys are recommended where appropriate, considering the feasibility of a hibernation survey for certain PRFs.

2.2.3 Foraging and Commuting Potential

The habitats surrounding the site and wider landscape were broadly assessed for their potential to support foraging and commuting bats, and were categorised as negligible, low, moderate or high potential suitability in line with published guidance[1].

2.3 Other Protected and/or Notable Species

Any birds identified, or evidence of nesting birds discovered during the site visit, were recorded. Special attention was paid to notable species such as red-listed Birds of Conservation Concern[5] and those species afforded special protection on Schedule 1 of the Wildlife and Countryside Act (1981), such as barn owl *Tyto alba* and swallow *Hirundo rustica*.

Whilst this survey has focussed on bats and no specific searches were made with respect to other protected/notable species, any evidence of such species that was encountered during the site visit was also recorded.

3 RESULTS/OBSERVATIONS

3.1 Desk Study and Granted EPS Licences

There are three statutory designated sites present within 2km of the Land at Upper Bognor Road (see Figure 3). Full details of the designated sites are provided in Table 2 below. None of these sites include bats as a designated feature. The Land at Upper Bognor road also sits adjacent to Hotham Park, a recreational ground consisting of mixed grassland, scattered scrub, a boating lake and deciduous woodland. Connectivity to other features is poor, with other smaller patches of deciduous woodland separated by large residential areas.

Table 2. Designated sites within 2km of the Land at Upper Bognor Road.

Site name	Designation	Features listed on citation	Proximity to the site
Felpham SSSI	SSSI	Palaeocene aged flora	0.6km
Bognor Reef	SSSI	Vegetated shingle strip. Geological and botanical interest.	1.7km
The Brooks	Local Nature Reserve	Wetland	1.8km

[5] Eaton et al. (2015). *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*.

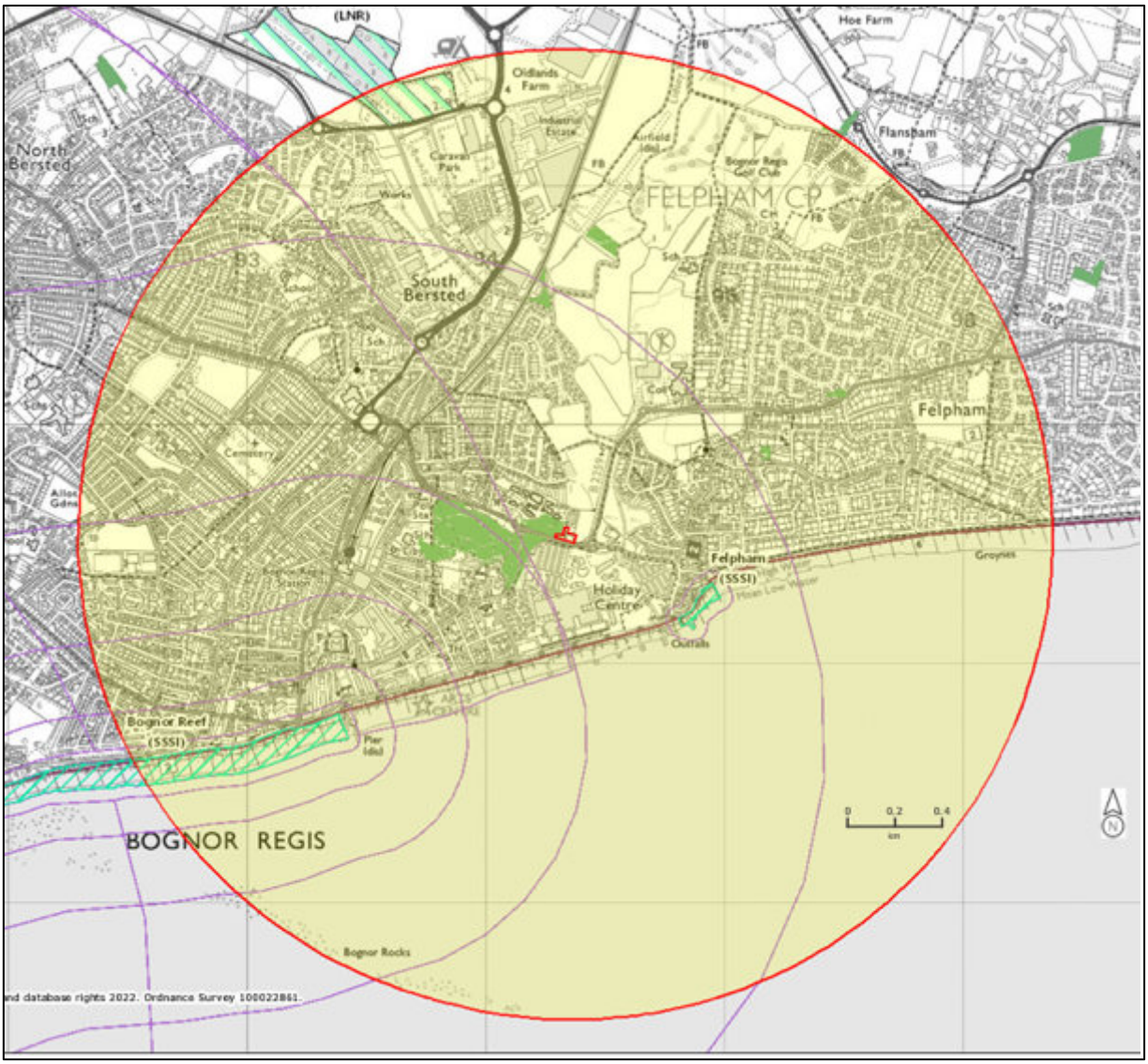

Figure 3. Designated sites and priority habitat within a radius of 2km of the application site. Images produced courtesy of Magic maps (http://www.magic.gov.uk/, contains public sector information licensed under the Open Government Licence v3.0).

There is one EPS licence granted for mitigation projects concerning bats within 1km of the site shown on the Magic Maps website (see Figure 4). 2016-26860-EPS-AD2 was issued to allow the destruction of a resting place. Species listed on the license are common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus.*

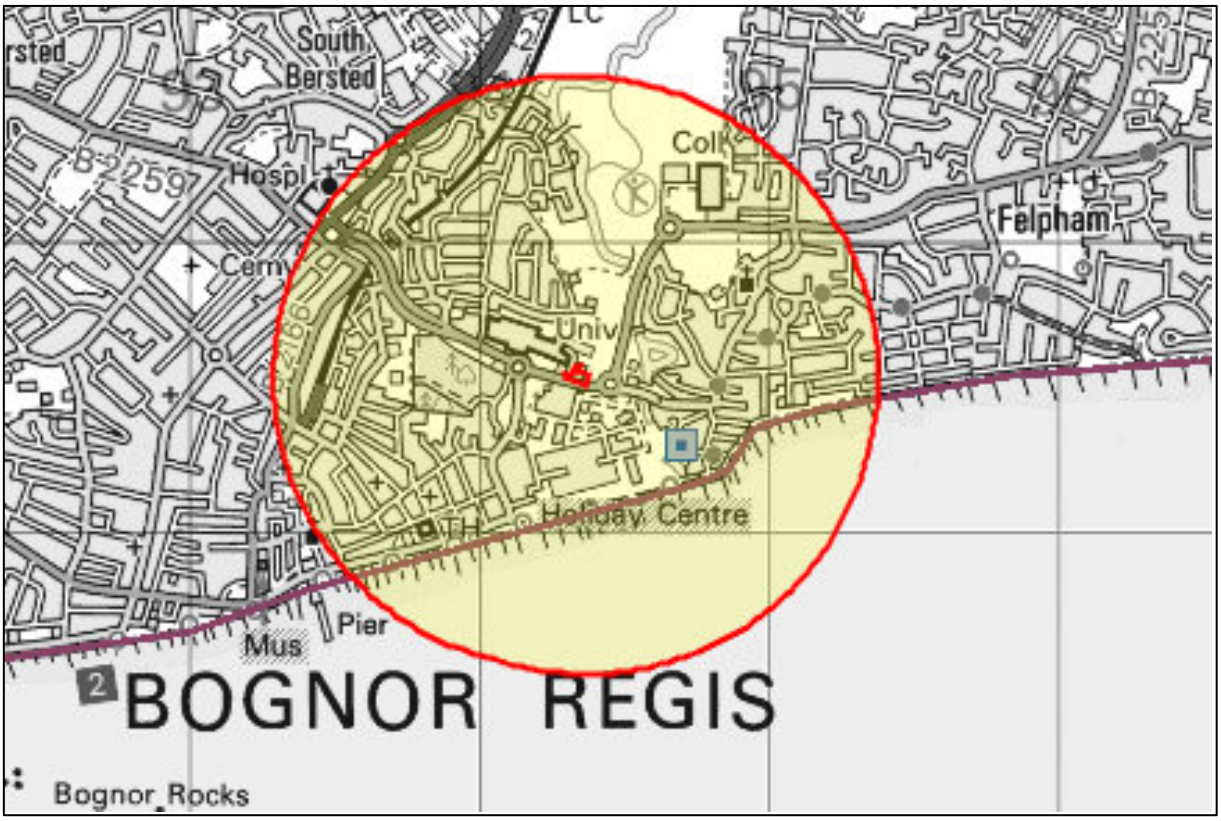

Figure 4. European Protected Species Licence within a radius of 1km of the application site. Images produced courtesy of Magic maps (http://www.magic.gov.uk/, contains public sector information licensed under the Open Government Licence v3.0).

3.2 Site Context and Surrounding Habitats

This site is located in a semi urban location in Bognor Regis. The properties sit over the road from Hotham Park, a recreational area consisting of deciduous woodland, scattered scrub, mixed grassland and a boating lake. The site is also directly surrounded by residential areas, with Chichester University's Bognor Regis campus directly to the northeast. In a wider context, to the south is Bognor Regis' shore front, and approximately 230m west a small river runs north to south eventually flowing to the shore front. To the north, recreational sports grounds and a golf club eventually lead into large agricultural landscapes. The close surrounding habitats are considered to be of moderate suitability for common species of bats in general. However, due to the limited amount of deciduous woodland in the area, it is likely that Hotham Park plays an important role for foraging bats in the area.

The site supports three buildings, Charlotte House, building 71/71A, and building 67/69. Building 71 and 71A is one building split into two dwellings, an upstairs and downstairs and building 67 and 69 is also one building split into two two-storey dwellings, north and south. Charlotte House remains the property of Chichester university. The site supports a small number of scattered trees, mixed scrub and managed grassland.

3.3 Inspection for Bats

3.3.1 Roost Potential

The buildings are in moderate condition, with some areas in poorer condition than others. Both buildings have well fitted slate roofs, with some gaps noticeable at the ridges and the hips, and some lifted roof tiles and lead flashing. The walls of the buildings are generally in good condition, with no gaps or cracks to allow crevice dwelling bats to roost. Generally, gaps round the eaves were limited, however some access to the building's internals were identified. The roofs on both the buildings are bitumen lined, except the kitchen extension on building 67/69 which is lined with Tyvek. As work has been done internally to the buildings under the previous planning application, there was a limited amount of internal roof void space in either of the two properties. Most of the plaster board ceilings have been torn down, leaving exposed roof spaces. Even where some area of void remained, one end was still mostly open and exposed.

Table 3. Assessment of Potential Roosting Features (PRFs).

Building section	**Description of features**	**Assessment of suitability (Collins 2016)**
Building 71/71A	Brick construction residential building with hipped slate tiled roof lined with bitumen. Ridge tiles and chimney offer some roosting potential, with some lead flashing on the chimney lifted. The porch on the western face has two separate pitches, north and west. The western elevation is in good condition, with close fitting slate tiles. The northern elevation of the porch is in worse condition, with some gaps under the tiles. The pitch was inspected from a ladder, which revealed rotten timbers and a large cavity open on the one side. The rest of the gaps and cavity was inspected using an endoscope, revealing more rotten timber and large cavities. No signs of roosting bats were seen. The internal inspection revealed an almost complete absence of a roof void due to previous works carried out under the previous planning application, with a small space, measing around 1-2 meters wide and 1-2 meters long with a varying height of 30-100cm, insulated with rockwool. This section of void was still open at one end to the rest of the house, meaning this is not an enclosed roof space. The inspection also revealed a lot of cobwebs in this section.	Negligible to low bat roost suitability
Building 67/69	Brick construction residential building with hipped slate tiled roof. Ridge tiles and chimney offer some roosting potential, with lead flashing on the chimney lifted. The lower pitch on the western face of the building that makes up the two kitchens of each dwelling is Tyvek lined. Some gaps in the slate tiles are present at the southern end. There is one notable broken tile recently broken by a falling scaffold pole during a chimney repainting, this is unlikely to currently house any bats due to its recent development. The internals of this building are consistent with the previous building. All ceilings have been ripped down during works under the previous application. Some holes were observed in the bitumen lining, meaning access is possible, as well as some gaps seen letting in light.	Negligible to low bat roost suitability
Charlotte House	Dwelling currently used as student accommodation by Chichester University and not to be affected or developed. The overall condition of	moderate bat roost suitability

Building section	Description of features	Assessment of suitability (Collins 2016)
	the building is good with some noticeable lifted ridge and hip tiles. The slate tiles are tight fitted. The external of the property is rated as low, however as the internals of the property could not be accessed a full assessment cannot be given. If any works are to be carried out on Charlotte House in the future, a full inspection of the property will be required to assess its suitability for roosting bats.	

Overall, the bat roost suitability at this site is assessed as low considering the condition of the buildings and the context of the development. The porch on the western face has been brought down to negligible suitability after an endoscope was used to inspect inside the potential features, and no evidence of bats was observed, and features were rotten and in poor condition.

There were no trees contained within the boundary of the site to be removed that have potential for roosting bats and tree roosting bats would therefore not be a constraint to development.

3.3.2 Hibernation Potential

Each structure/feature was assessed for its hibernation potential. The PRF's identified are small in both number and size, however due to the uncertain nature of the *Pipistrelle* genus hibernating bats in these features cannot be ruled out completely. As building 67/69 and 71/71A have been stripped internally leaving the roof void open and exposed, it's extremely unlikely that bats will use this as a hibernation feature. Overall, hibernation suitability is low.

3.4 Foraging and Commuting Potential

The site is situated directly adjacent to Hotham Park, which is likely a valuable foraging and commuting resource for bats as it is the largest space of deciduous woodland in the area. General connectivity to other resources is poor, lowering the value of this for bats, as large residential areas fragment other potential areas of foraging habitat.

3.5 Other Protected and/or Notable Species

All of the scattered scrub and shrubs on site has the potential to support the occasional nest of common bird species such as blackbird *Turdus merula* or chaffinch *Fringilla coelebs*. The garden of 67/69 has scrub of varying length, although no higher then 50cm, with a pile of dead sticks/vegetation towards the back. This scrub has been cleared on several occasions under the previous application and in its current state has low potential for reptile and amphibian species as well as hedgehogs. However, if left unmanaged it could become a suitable length to offer some opportunities to breeding birds.

The remainder of the proposed zone of impact is comprised of buildings, mown grassland and scattered trees. There are no waterbodies upon or adjacent to the site. The habitats are not considered to have value for reptiles, amphibians, badgers, and any other protected species.

3.6 Survey Limitations

An initial site assessment such as this is only able to act like a 'snapshot' to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey but may be evident at other times of the year. Bats will commonly roost in small inaccessible crevices, such as spaces underneath ridge tiles that are impossible to inspect during a scoping assessment. For this reason, habitats and features are assessed for their potential to support bats, even where no direct evidence (such as droppings) has been identified.

There were considered to be no limitations to this survey. All loft voids were accessible and inspected in full and all aspects of the building and the trees due for removal could be observed fully during the survey.

The only building not accessed was Charlotte house meaning a full assessment of the dwelling cannot be made, however is not scheduled for development.

3.7 Photographs

Photograph 1. Building 71/71A from the south-eastern corner (left), western face, location of proposed extension.

Photograph 2. The western elevation of the building. Note gaps at the ridge, hips and lead flashing to the left of the chimney.

Photograph 3. The west and north elevation of the small porch on the west face of the building. Note gaps on the northern elevation (left). Gaps on the western elevation (right) were inspected and assessed as negligible due to size.

Photograph 4. Broken tiles and rotten timber revealing open cavity.

Photograph 5. Internals of building 71/71A. Walls and ceilings have been stripped exposing the roof void.

Photograph 6. Small section of void left but open at one end. Left illustrates the space above the hatch, right illustrates where the one end of this is exposed.

Photograph 7. Left illustrates the Building 67/69 from the west, right illustrates the lower pitch of the kitchen extension for both properties.

Photograph 8. Area of roof to be fitted with skylights (left), broken and lifted tiles towards the southern end of the pitch away from the proposed skylight area.

Photograph 9. Internal roof space of 67 where ceilings have been stripped exposing the void.

Photograph 10. Left illustrates the exposed void in 69 right illustrates the Tyvek lined roof over the kitchens of both properties.

Photograph 11. Unmanaged Scrub in the back garden of building 67/69.

Photograph 12. Managed grassland and some of the scattered shrub.

Photograph 13. Charlotte house, currently being used a student accommodation. Not to be affected by the works.

4 ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES

4.1 Designated Sites

Three statutory designated sites are present within 2km of the Land at Upper Bognor Road the closest being Felpham SSSI at 0.6km away. The proposed development is small in scale and considered to be low in impact with the proposed footprint currently comprising of mown amenity grassland and cleared scrub. Due to this and the distance between the designated sites the construction phase impacts such as dust, lighting, physical damage, vibration and noise are considered unlikely to negatively impact these sites.

Post construction the proposal for a new dwelling and the refurbishment of the remaining buildings will not result in a significant increase in the number of residents and therefore there is no potential for increased recreational pressure to the designated sites.

4.2 Bats

4.2.1 Roost Potential

Overall, suitability for both 67/69 and 71/71A have been rated as low suitability for bats. Both buildings lack any enclosed roof spaces, yet have a small number of suitable PRF's externally, most notably roof tiles, ridge and hip tiles and lead flashing.

71/71A – The scheduled external works is localised to the western face which will directly impact on the porch. Both elevations on the porch after an endoscope check were rated as negligible

67/69 – The lower western pitch is scheduled to have two skylights installed. This will involve the stripping of some slate tiles. Features on this pitch are limited to some lifted tiles at the far southern end. Each skylight is to be placed in the middle of this pitch, away from any lifted or broken tiles. While unlikely, it is still possible that bats could gain access and move along the Tyvek lined roof to the skylights proposed location. For this reason, this feature is rated as low.

The guidelines state "If the structure has been classified as having low suitability for bats, an ecologist should make a professional judgement on how to proceed based on all of the evidence available"[1]. In this instance no further surveys are recommended. However, as a precautionary measure a licensed bat ecologist should be present to inspect and oversee the soft stripping of the slate roof tiles prior to demolition, so that in the highly unlikely event a bat is present, the risk of injury/killing or destruction of a roost is avoided. The stripping of this feature should be undertaken carefully by hand under the supervision of the licensed ecologist. In the event a bat was to be discovered, the feature should be made good where possible and works would need to cease immediately. Work would likely not be able to continue until an EPS mitigation licence has been obtained. It is likely that any license application would need to be supported by further surveys to classify the nature of the roost (day/maternity/transitional). Any resumed works in the house should be done using hand tools where possible, and any workers on site must remain vigilant for bats present in the void. If any are spotted, work must cease immediately, and an ecologist must be notified. As the buildings as a whole have been

rated as low, there is still disturbance risk to bats using features identified elsewhere on the structures. Any construction work around these areas should be handled with care, using hand tools where possible to avoid loud noises and excessive vibrations.

Charlotte House has been rated as moderate. Some features were observed in the roof, such as gaps under hip and ridge tiles, and some lifted lead flashing. As access to the roof void was not given, a full assessment cannot be made. Currently, there are no development plans for Charlotte House. Should Charlotte House be developed in the future, a full assessment of both the external and the internal of the property is required.

4.2.2 Hibernation Potential

Both buildings are assessed as having low hibernation potential for bats. The features that could be used for hibernation include roof tiles which it would be impossible to fully investigate bat use over the winter period without dismantling the features, and hence potentially destroying a bat roost. Therefore, in this instance no further surveys for winter roost potential are recommended. Instead, mitigation must be implemented to reflect the risk that bats may be use this building for hibernating during the winter. This must include timing the works to the building between in the period between mid-March and the end of October to avoid disturbing bats that could be in hibernation.

4.2.3 Foraging and Commuting Suitability

As no habitat used by foraging bats is to be directly impacted, no further surveys to determine the value of foraging bats is necessary.

However, as the site is adjacent to Hotham Park, likely one of the more important foraging features in the area, it is important that the potential for disturbance from artificial lights is considered. The proposed development should include an ‘ecologically sensitive lighting scheme’ in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 2). Any new lighting should be pointed away from Hotham Park.

4.3 Other Protected and/or Notable Species

As the scrub in the back garden of 67/69 has been cleared on several occasions before it has low potential for reptile and amphibian species, however if left unmanaged it could become suitable for breeding birds. Any clearance of this scrub should be done outside of the breeding season (avoiding 1st March to 31st August) to ensure the site remains unsuitable for breeding birds, reptiles and amphibians. Extra care should be taken on the small vegetation pile, dismantled by hand, in case of the unlikely event of a hibernating hedgehog being present.

If this is not possible to schedule this management before breeding bird season, the area should be subject to nesting bird checks by a suitably qualified ecologist as appropriate to the works. If an active nest is identified, a minimum exclusion zone for all works within 5 meters radius of the nest must be established to the nest to protect it from disturbance until the young have fledged.

4.4 Biodiversity Enhancement Opportunities

The proposed development represents an opportunity for habitat enhancement to benefit insects, birds, and bats. Any planting scheme should include native shrub species and flowering species known to encourage insect diversity. Such enhancement measures are in line with the recommendations of the NPPF and as such would be considered favourably when determining the planning application.

The developer is also encouraged to consider including integral bat roosting opportunities into the building fabric such as bat tiles and internal voids/access points for bats. For example 3no. purpose designed bat tiles could be placed onto the new roof for the extension on 71/71A. Alternatively, a Beaumaris Wall-Mounted bat shelter could be installed upon the external faces of both buildings close to the eaves of the building on the south or eastern face.

It is recommended that any trees planted as part of the landscaping are specimens sourced only from UK stock. The following species are recommended in this location: wild cherry *Prunus avium*, wayfaring tree *Viburnum lantana*, hawthorn *Crataegus monogyna*, elder *Sambucus nigra,* field maple *Acer campestre*, crab apple *Malus sylvestris,* all species consistent with Arun District Council's 10 year planting scheme. Given the arrival of ash dieback, it is not recommended that any ash saplings are planted anywhere on the site.

If any bats or other protected species are found during the development, work should be stopped immediately, and an ecologist must be contacted for advice.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.

APPENDIX 1 – Wildlife Legislation and National Planning Policy

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to bats.

All bat species in the UK are included in Schedule II of the Habitats Regulations 2017, which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("The EC Habitats Directive"). As such all bat species in the UK are defined as 'European Protected Species (EPS).

Four species of bat (Bechstein's bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus*, greater and lesser horseshoe bats, *Rhinolophus ferrumequinum* and *R. hipposideros*) are also listed on Annex IV of the EC Habitats Directive. This requires the designation of a series of sites which contain important populations of these species as Special Areas of Conservation (SACs).

All species of British bat are also fully protected under the Wildlife and Countryside Act (1981), as amended, through inclusion in Schedule V.

All species of bat are listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Section 41 of the NERC Act lists the habitats and species of principle importance. This places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of habitats and species of principal importance for the conservation of biodiversity in England (commonly referred to as the 'Biodiversity Duty'). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers.

Under the above legislation it is an offence to:

- kill, injure or take any individual bat of any species;
- possess any part of an individual bat, either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by bats for shelter, rest, protection, or breeding;
- intentionally or recklessly disturb these species whilst using any place of shelter or protection; or
- deliberately disturb bats in such a way as to be likely to impair their ability to:
    - survive, to breed or reproduce, to rear or nurture their young; to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong;
- keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

It is also an offence to set and use articles capable of catching, injuring, or killing bats (for example a trap or poison), or knowingly cause or permit such an action. There is also protection under Schedule 6 of The Wildlife and Countryside Act 1981 (as amended) relating specifically to trapping and direct pursuit of bats.

A European Protected Species Licence (EPSL) in relation to bats is required from Natural England for

any work that would result in an otherwise unlawful activity (e.g. damage to a bat roost). A license can only be issued to permit otherwise prohibited acts if Natural England are satisfied that all the following three tests are met:

- The proposal is for 'preserving public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment';
- There is no satisfactory alternative; and
- The action authorised by the license will not be detrimental to the maintenance of bat populations at a favourable conservation status in their natural range.

A bat roost is defined by the Bat Conservation Trust's Bat Surveys—Good Practice Guidelines 3rd Edition as "the resting place of a bat". In general, the word roost is interpreted as "any structure or place, which any wild bat uses for shelter or protection."

Bats tend to re-use the same roosts; therefore, legal opinion is guided by recent case law precedents, that a roost is protected, whether or not the bats are present at the time. This includes summer roosts used for resting during the day and/or breeding; or winter roosts, used for hibernating.

APPENDIX 2 – Reducing Impacts of Artificial Light

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts on other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness. Guidelines issued by the Bat Conservation Trust[6] should be considered while designing the lighting scheme. A simple process which should be followed where the impact on bats is being considered as part of a proposed lighting scheme. It contains techniques which can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

Avoid lighting on key habitats and features altogether
there is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation. However, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species

Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations
Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- Dark buffers, illuminance limits and zonation
- Sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill
- Consider the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consider the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cats eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times.
- Screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding
- Glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features.
- Creation of alternative valuable bat habitat on site, whereby additional or alternative bat flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development.
- Dimming and part-night lighting. Depending on the pattern of bat activity across the key features

[6] Bat Conservation Trust and Institute for Lighting Professionals (2018) Guidance note 8. Bats and Artificial Lighting. https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

Demonstrate compliance with illuminance limits and buffers

- *Design and pre-planning phase*; It may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking;* as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

Further reading:

Buglife (2011) *A review of the impact of artificial light on invertebrates.*

Royal Commission on Environmental Pollution (2009) *Artificial light in the environment.* HMSO, London. Available at: https://www.gov.uk/government/publications/artificial-light-in-the-environment

Rich, C., Longcore, T., Eds. (2005) Ecological Consequences of Artificial Night Lighting. Island Press. ISBN 9781559631297.

CPRE (2014) *Shedding Light: A survey of local authority approaches to lighting in England.* Available at: http://www.cpre.org.uk/resources/countryside/dark-skies/item/3608-shedding-light

Planning Practice Guidance guidance (2014) When is light pollution relevant to planning? Available at: https://www.gov.uk/guidance/light-pollution

Institution of Lighting Professionals (2011) Guidance Notes for the Reduction of Obtrusive Light GN01:2011. Available at: https://www.theilp.org.uk/resources/free-resources/