

**127A AND 127B LONDON ROAD, WATERLOOVILLE, HAMPSHIRE,
EXTENDED PHASE 1 ECOLOGICAL ASSESSMENT AND PHASE 2 BAT
SURVEY REPORT**

Final Document

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Phase 1 and 2 Ecological Assessments • NVC • EclA • Management Plans • Protected Species Licensing
Habitats • Badger • Bats • Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

ECOSA Ltd, Ten Hogs House, Manor Farm Offices, Flexford Road, North Baddesley, Hampshire, SO52 9DF
Tel: 02380 261065 Email: info@ecosa.co.uk Web: www.ecosa.co.uk

Registered Office: 3-4 Eastwood Court, SO51 8JJ Registered in England No: 6129868



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EXTENDED PHASE 1 ECOLOGICAL ASSESSMENT AND PHASE 2 BAT SURVEY
REPORT**

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EXECUTIVE SUMMARY

- An extended Phase 1 ecological assessment was undertaken on 26th September 2014 at 127a and 127b London Road, Waterlooville, Hampshire, P07 7TL. The proposals entail the demolition of two existing detached houses followed by the redevelopment of the site including a new residential building and associated car parking and driveway.
- The ecological assessment, comprising an extended Phase 1 ecological survey followed by Phase 2 bat surveys, were undertaken to ascertain the potential for protected habitats and species to be present within the site.
- 127a and 127b London Road is situated within the town of Waterlooville in Hampshire. The site is approximately 6km north of the city of Portsmouth and 4km northwest of the town of Havant. The site is located within an urban environment with a dual carriageway to the south and east, terraced housing to the north and industrial/commercial units to the west. The site itself comprises two detached houses with associated gardens with mature shrub and tree borders.
- The two detached houses were found to support a small number of features with potential to be used by roosting bats including gaps under tiles and under wooden weatherboarding.
- Phase 2 bat surveys were undertaken on the two existing properties. The Phase 2 surveys recorded no bat emergences or re-entries and roosting bats are considered currently absent from the site. Low levels of foraging and commuting activity were recorded around the properties, with the majority of bat activity concentrated in the mature gardens to the west of the buildings.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been contracted by Planning Issues Limited on behalf of their client Churchill Retirement Living to undertake an extended Phase 1 ecological assessment at 127a and 127b London Road, Waterlooville, Hampshire, P07 7TL. The site is centred on National Grid Reference (NGR) SU683095.

This report presents the findings of the Phase 1 ecological assessment carried out by ECOSA on 26th September 2014.

1.2 Aims and Scope of Report

This report is based on a Phase 1 field survey and desktop study which is aimed at assessing the suitability of the site and its immediate surrounds to support notable habitats and protected species. This information allows an initial assessment of the biodiversity value of the site to be made.

The Phase 2 bat surveys were aimed at assessing the presence or likely absence of roosting bats on site and, if present, to provide an assessment of the number, species, status and location of bat roosts supported by the site. The Phase 2 survey was also aimed at determining any important areas of foraging and commuting activity within the vicinity of the property.

This information allows an assessment of the value of the site for roosting, foraging and commuting bats to be made. The data gathered during the bat survey work has been used to assess the potential ecological impacts of the proposed redevelopment works, and recommendations based on the findings of the surveys and the identified impacts are provided.

1.3 Site Setting and Description

127a and 127b London Road is situated in the South Coast Plain and Hampshire Lowlands Natural Area, described by Natural England as follows¹:

"The landscape of the South Coast Plain and Hampshire Lowlands is split between the generally open, often featureless landscape of the coastal plain and the more varied landscape in the west. The Natural Area contains a number of nature conservation features. Although relatively small in extent, the south-facing slopes of Portsdown Hill support some high quality chalk grassland, and the chalk rivers of the

¹ Natural Areas are defined by Her Majesty's Stationery Office as 'biogeographic zones which reflect the geological foundation, the natural systems and processes and the wildlife in different parts of England, and provide a framework for setting objectives for nature conservation' (Biodiversity: The UK Steering Group Report, HMSO, 1995).

Itchen and Test flow through the Natural Area, supporting fine examples of threatened habitat and several key species. The floodplains of the Rivers Test and Itchen contain some botanically rich neutral grassland and elsewhere in the Natural Area fen and fen-meadows occur, especially where chalk springs arise at the foot of the downs."

The site is situated within the town of Waterlooville in Hampshire. The site is approximately 6km north of the city of Portsmouth and 4km northwest of the town of Havant. The site is located within an urban environment with a dual carriageway to the south and east, terraced housing to the north and industrial/commercial units to the west.

The site itself comprises two detached houses with associated gardens with mature shrub and tree borders. A small area of secondary broadleaved woodland is located to the west of the site.

1.4 Site Proposals

The proposed works entail the demolition of the two existing buildings on site followed by the construction of new sheltered accommodation together with associated parking and access. **Appendix 1** shows the outline of the proposed development. The majority of mature boundary vegetation will be retained with the exception of a number of mature poplar *Populus* trees along the northwest boundary.

2.0 METHODS

2.1 Introduction

This section details the methods used during the Phase 1 ecological assessment undertaken at 127a and 127b London Road, Hampshire.

2.2 Desk-Based Assessment Methods

2.2.1 Multi-Agency Geographic Information for the Countryside (MAGIC)

The Multi-Agency Geographic Information for the Countryside (MAGIC)² database was accessed on 7th October 2014 in order to establish the presence of statutory designated sites located within the vicinity of the site. This included a search for all internationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsars within 7km of the site and a search for nationally designated sites including Sites of Special Scientific Interest (SSSIs), Local Nature Reserves (LNRs) and National Nature Reserves (NNRs) within 1km of the site.

2.3 Phase 1 Field Assessment

The Phase 1 ecological field survey was carried out on 26th September 2014. The survey involved a walkover of the site to identify the habitat types present and to record evidence of protected species, with particular reference to badger *Meles meles*, bats, dormouse *Muscardinus avellanarius*, breeding birds, reptiles, great crested newt *Triturus cristatus* and terrestrial invertebrates. Details of the species-specific survey methods are given below.

2.3.1 Vegetation

An assessment was made of all areas of vegetation within the site using the standardised Phase 1 survey methodology³. This involved a walkover survey to identify broad vegetation types, which were then classified against Phase 1 habitat types. A list of characteristic plant species for each vegetation type was also compiled.

2.3.2 Badger

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

² <http://defra.magic.gov.uk>

³ Handbook for Phase 1 habitat survey: A technique for environmental audit – Field manual (2003), *Joint Nature Conservation Committee (JNCC)*

2.3.3 Bats

An assessment was made of the suitability of buildings, and trees on the site and immediately on the site boundary to support roosting bats based on the presence of features such as holes, cracks, splits, loose bark and ivy cladding. An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The survey conformed to current Bat Conservation Trust guidelines⁴.

2.3.4 Dormouse

The assessment for the potential of the site to support dormouse was based on an assessment of habitat features that may indicate that dormice are present on the study area. This includes the presence of food sources such as common hazel *Corylus avellana* and honeysuckle *Lonicera periclymenum*. Additionally, the species requires a continuum of food supply so that habitat structure, diversity and connectivity to adjacent areas of woodland/scrub are important features for determining the potential presence of dormice.

2.3.5 Breeding Birds

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

2.3.6 Reptiles

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

2.3.7 Great Crested Newt

The assessment of the site to support great crested newts included establishing the presence of suitable aquatic habitats such as ponds within or adjacent to the site and the presence of suitable terrestrial habitat. Ponds that are densely shaded, highly eutrophic or that contain fish are likely to be less suitable for this species.

In addition, online mapping resources at a minimum scale of 1:25,000 were used to identify the presence of ponds or other waterbodies within a 500 metre (m) radius of the site. The 500m is a standardised search radius to assist in the assessment of the

⁴ Hundt L (2012) *Bat Surveys: Good Practice Guidelines*, 2nd edition, Bat Conservation Trust (BCT)

potential of a site and its surrounding habitat to support this species, based on current Natural England guidance⁵.

2.3.8 Terrestrial Invertebrates

An assessment was made of the site for its potential value to support diverse communities of invertebrates or any Biodiversity Action Plan (BAP) or scarce species. The assessment was made based on the presence of habitat features which may support important invertebrate communities. These features include, for example, an abundance of dead wood, the presence of diverse plant communities, the presence of varied woodland structure and sunny woodland edges with a diverse flora, presence of ponds and water courses and the presence of free draining soil exposures. During the Phase 1 survey there was no attempt made to identify species present and where a site supports features that may be of importance to invertebrates then further Phase 2 surveys may be required to assess the importance of the site.

2.4 Initial Protected Species Assessment

Details of the assessment criteria used to determine the ecological value of on-site attributes during the Phase 1 survey is outlined below. During a Phase 1 survey the assessment criteria is based on the potential for the site to support the species considered, this is usually based on the on-site habitat features and their suitability for the species considered. However, in many cases Phase 2 surveys will be required to assess the status of species and hence the importance of a population at the site, therefore the assessment of value should be considered a provisional assessment.

2.5 Criteria used to Assess Ecological Potential

Details of the assessment criteria used to determine the ecological value of on-site attributes during the Phase 1 survey is outlined below. During a Phase 1 survey the assessment criteria is based on the potential for the site to support the species considered, this is usually based on the on-site habitat features and their suitability for the species considered. However, in many cases Phase 2 surveys will be required to assess the status of species and hence the importance of a population at the site, therefore the assessment of value should be considered a provisional assessment.

Table 1 defines the criteria used to assess the potential of the site, its building and trees to support protected species, based on the habitat characteristics of the site.

⁵ Great Crested Newt Mitigation Guidelines, Natural England, August 2001.

Table 1: Criteria used to assess ecological potential

	Bats⁶		Other Protected Species⁷
	Building Assessment	Tree Assessment	
Species Present	Evidence of bat presence confirmed during survey, which may include presence of live or dead bats, droppings, feeding remains or urine stains etc. Where possible, a provisional assessment of roost status is made.	In some instances, bat presence can be confirmed from trees e.g. where staining or droppings are visible; where roosting bats have been observed entering/emerging from a tree; or where roosting bats can be heard.	The presence of a protected species can sometimes be confirmed by evidence recorded, for example guard hairs or latrines for badger or hazel nuts gnawed in the characteristic style for dormice.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the status of the species present.		
High Potential	Buildings with features highly suitable for roosting bats, including gaps, hanging tiles or large lofts, etc. Often, but not always, buildings of more historic construction.	Trees with features such as loose bark, splits and deep or extensive holes suitable for roosting bats. High potential trees are generally large and/or mature specimens.	On-site habitat is of high quality for a species or species group. The site is within or near a geographic stronghold. Good quality surrounding habitat and good connectivity.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.		
Medium Potential	Medium potential buildings have a moderate number of features that may be used by bats for roosting. These may include loose fascia, roof voids, etc.	This category includes trees with some interest for tree-roosting bats such as broken snags, some flaking bark, a covering of ivy or shallow holes.	On-site habitat is of moderate quality, providing most of the species/species group requirements. Limiting factors may include small habitat area or disturbance.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.		
Low Potential	Buildings that provide limited bat roosting potential although some features that may be used by roosting bats may be present.	Low potential trees have some, although generally limited potential to support tree-roosting bats, or ivy may obscure roost features.	On-site habitat is of poor to moderate quality for the species or group. Presence cannot be discounted on the basis of distribution, isolation, surrounding habitats, etc.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.		
Negligible Potential	Buildings that are extremely unlikely to support roosting bats due to the absence of suitable features.	Trees that provide few or no features with bat roosting potential.	Site includes very limited or poor quality habitat for the species /group; surrounding habitat is unlikely to support wider populations.
	Further Phase 2 surveys are unlikely to be required as species is unlikely to be present.		

⁶ The criteria are an attempt to qualify the potential for a given building or tree to support roosting bats and are to a degree subjective. Bats may make use of a single feature on an otherwise unsuitable building or tree and therefore an assessment of bat potential cannot solely be based on the quantity of potential roost features present.

⁷ Badger, otter, water vole, dormouse, breeding birds, reptiles, great crested newt and terrestrial invertebrates.

The potential for the sites to support protected species is based on the results of the field survey assessment. The potential for on-site habitat to support badger, dormouse, breeding birds, reptiles, great crested newt, terrestrial invertebrates and breeding birds is based upon the following criteria:

- **Species Present** - In some instances, the presence of a protected species can be confirmed by the presence of recorded evidence, for example badger hairs or latrines and hazel nut gnawed in the characteristic style by dormice. In these instances further Phase 2 surveys will be required in order to establish the statuses of the respective species.
- **High Potential** - Species confirmed as present during the field survey. The on-site habitat is of high quality for a given species/species group. The site is located within or adjacent to a national or regional stronghold. Good quality surrounding habitat and good connectivity. Further Phase 2 surveys will be required to assess the presence/absence of the species.
- **Medium Potential** - The on-site habitat is of moderate quality, providing most or all of the known key requirements of a given species/species group. Factors limiting the potential of occurrence may include small habitat area, habitat severance and disturbance. Further Phase 2 surveys will be required to assess the presence/absence of the species.
- **Low Potential** - On-site habitat is of poor to moderate quality for a given species/species group. Although presence cannot be discounted on the basis of national distribution, nature of surrounding habitats, habitat fragmentation, recent on-site disturbance etc. Further Phase 2 surveys may be required to assess the presence/absence of the species.
- **Negligible Potential** - Although presence cannot be absolutely discounted, the site includes very limited or poor quality habitat for a particular species/species group. The surrounding habitat is considered unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known the national range for a species. Further Phase 2 surveys are unlikely to be required to assess the presence/absence of the species.

2.6 Phase 1 Survey Timing and Weather Conditions

The extended Phase 1 ecological survey was carried out by Simon Mason of ECOSA on 26th September 2014. The weather conditions were sunny and warm with approximately 21% cloud cover, an ambient temperature of 21°C and gentle south westerly breeze.

2.7 Phase 1 Survey Equipment

During the Phase 1 survey the surveyor was equipped with 10x40 binoculars, a high powered torch and a digital camera.

2.8 Phase 1 Survey Limitations

The roof void of 127b was small and cluttered and also contained an asbestos flue pipe and was therefore not surveyed due to health and safety risks. However, due to the small and cluttered nature of the roof void it is considered to offer negligible potential for cavity dwelling bats such as long-eared *Plecotus* sp. And the fact that this roof void could not be thoroughly inspected is not anticipated to have affected the conclusions of this assessment.

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

During the survey no access was possible to the internal, unoccupied areas of the building. Areas such as cellars and roof voids provide suitable locations for roosting bats and as a result of the lack of access these areas are yet to be surveyed for the presence/absence of bats.

It is not always possible to provide definitive assessments of a species' presence/likely absence at a site and so in the absence of direct evidence, assessments and recommendations are based on the presence of suitable habitat within/adjacent to a site and the results of species records within the desk study data.

2.9 Phase 2 Bat Survey

Phase 2 bat surveys were carried out at the site in early October 2014. The Phase 2 works involved two dusk emergence surveys, whereby surveyors are in position 15 minutes before sunset and up to two hours post sunset to await bats as they emerge from their roosts. The level of bat foraging and commuting activity was also recorded during the Phase 2 survey to establish key on-site foraging areas and commuting routes.

The dusk surveys were carried out by four experienced ECOSA surveyors, who were positioned at previously identified vantage point areas around the buildings. These

vantage point locations allowed good survey coverage of the areas affected by works.

Table 2 provides details of each Phase 2 bat survey 1 survey.

Table 2 Phase 2 bat survey details

Survey Date	Survey Type	Duration	Weather Conditions	Sunset/ Sunrise Time
1 st October 2014	Dusk	18:28 – 20:20	20% cloud cover, start temperature 19°C, end temperature 17°C, light winds	18:43
9 th October 2014	Dusk	18:15 – 20:00	100% cloud cover, start temperature 17°C, end temperature 11°C, moderate winds (F3). Occasional light rain with heavy thunder shower at 20:00	18:25

During the Phase 2 surveys each surveyor recorded the time, species, location and direction of flight for each bat encountered, with particular attention being paid to establishing bat access/egress locations.

2.9.1 Survey Personnel

The Phase 2 surveys were led by an ECOSA ecologist, assisted by additional suitably qualified and experienced ECOSA surveyors.

2.9.2 Survey Equipment

During the Phase 2 surveys each surveyor was equipped with a Pettersson 240x time expansion bat detector. The Pettersson detectors were connected to Edirol R-90 recorders for the full duration of the surveys. Recordings made with the Pettersson detectors were later analysed using Sonobat[®] (v2.9.7) to confirm the identity of any species encountered.

2.9.3 Bat Survey Limitations

Some bat species, e.g. long-eared bat species, generally emerge from their roosts in total darkness and do not produce strong echolocations, and therefore these bats can be difficult to observe and record during Phase 2 bat surveys, leading to under-recording.

Weather conditions during the second survey were sub-optimal with light rain showers during the survey and heavy rain halting the survey at 20:00, 1 hour and 35 minutes after sunset. No bats were recorded during this survey, potentially due to the sub optimal weather conditions. As the buildings were assessed as having low bat

roost potential, in accordance with BCT survey guidelines⁴ one emergence survey is recommended to be undertaken to determine likely absence. Therefore, as one survey was undertaken in favourable conditions, it is considered that the Phase 2 bat surveys provide an appropriate assessment of the level of bat activity on site.

3.0 RESULTS

3.1 Introduction

This section details the results of the extended Phase 1 ecological assessment and Phase 2 bat surveys undertaken at 127a and 127b London Road, Hampshire, during September and October 2014.

3.2 Desktop Study

3.2.1 Statutory and Non-statutory Designated Sites

The MAGIC website search revealed that there are no statutory or non-statutory designated sites of nature conservation situated within a 1km radius of the site. There are however five European Designated sites of nature conservation within 7km of the site. Details of these designations are provided in **Table 3**.

Table 3: European Designated sites located within a 7km radius of the 127a and 127b London Road site

Designation	Name	Relative Location	Reason for Designation
Special Area of Conservation (SAC)	Solent Maritime NGR: SU 756 003	4.4km south	The Solent encompasses a major estuarine system with four coastal plain estuaries and four bar-built estuaries. The Solent and its inlets are unique in Britain and Europe for their hydrographic regime of four tides each day, and for the complexity of the marine and estuarine habitats present within the area.
Special Protected Area (SPA)	Chichester and Langstone Harbour NGR: SU 760 000	4.6km southeast	Sheltered estuarine basins comprising extensive sand- and mud-flats exposed at low tide. The two harbours are joined by a stretch of water that separates Hayling Island from the mainland. Tidal channels drain the basin and penetrate far inland. The mud-flats are rich in invertebrates and also support extensive beds of algae, especially <i>Enteromorpha</i> species, and eelgrasses <i>Zostera</i> spp. The basin contains a wide range of coastal habitats supporting important plant and animal communities. The site is of particular significance for waterbirds, especially in migration periods and in winter. It also supports important colonies of breeding terns <i>Sterna</i> spp.
Ramsar Site	Chichester and Langstone Harbour NGR: SU 760 000	4.6km southeast	The site is designated as a wetland of international importance.
Ramsar Site	Portsmouth Harbour	6km southwest	The site is designated as a wetland of international importance.

Table 3: European Designated sites located within a 7km radius of the 127a and 127b
London Road site

Designation	Name	Relative Location	Reason for Designation
Special Protection Area (SPA)	Portsmouth Harbour	6km southwest	The mud-flats support large beds of narrow-leaved eelgrass <i>Zostera angustifolia</i> and dwarf eelgrass <i>Z. noltii</i> , extensive green algae beds, mainly <i>Enteromorpha</i> species, and sea lettuce <i>Ulva lactuca</i> . Portsmouth Harbour has only a narrow connection to the sea via the Solent, and receives comparatively little fresh water, thus giving it an unusual hydrology. The site supports important numbers of wintering dark-bellied brent goose <i>Branta bernicla bernicla</i> , which feed also in surrounding agricultural areas away from the SPA.

3.3 Vegetation Survey Results

The vegetation within the site is described here in general terms using Phase 1 habitat survey terminology and referring to dominant, characteristic and other noteworthy species in each vegetation type within the survey area. The habitat types on site consist of:

- Amenity grassland
- Hedgerow
- Scattered Trees

3.3.1 Amenity Grassland

Managed amenity grassland (**Figure 1**) is present to the rear of 127a and to the front and rear of 127b. This short mown lawn comprises creeping bent *Agrostis stolonifera*, red fescue *Festuca rubra* and perennial rye *Lolium perenne* together with occasional herbs including herb robert *Geranium robertianum* and common ragwort *Senecio jacobaea*. The close mown lawn is bordered by a mixture of native and ornamental shrubs (including cotoneaster *Cotoneaster* sp., hazel *Corylus avellana* and rhododendron *Rhododendron ferrugineum*).



Figure 1: Amenity Grassland to the rear of 127b



Figure 2: managed hedgerow dividing gardens of 127a and 127b

3.3.2 Hedgerow

The two gardens are divided by a low managed hedgerow (**Figure 2**) comprising a mix of native and ornamental shrubs including cherry laurel *Prunus laurocerasus*, Leyland cypress x *Cupressocyparis leylandii*, ash *Fraxinus excelsior*, yew *Taxus baccata*, and dogwood *Cornus sanguinea*.

The northwest boundary of the site is formed of an overgrown hedgerow/line of trees comprised of Leyland cypress and mature poplar trees.

3.3.3 Scattered Trees

The garden of 127a contains two semi-mature beech *Fagus sylvatica* trees. In addition there are a number of trees within the shrub borders of the two properties including sycamore *Acer pseudoplatanus*, hazel and eucalyptus *Eucalyptus* sp.

3.3.4 Summary

The onsite vegetation is of **low ecological value** as all species identified are widespread and abundant and typical of managed garden habitats.

3.4 Badger Survey Results

No evidence of badger was found during the survey. The mature trees and shrubs which are located along the boundary of the site provide suitable habitat for badger and the amenity grassland provides potential foraging habitat. The wider area is largely developed with little green space. However, there is a small area of broadleaved woodland immediately to the west of the site which provides a small area of suitable, albeit isolated, badger habitat. Given the largely urban nature of the local area and limited amount of suitable habitat, overall the site is considered to offer **low potential** for supporting foraging/commuting badgers and **low potential** for resident badgers.

3.5 Bat Survey Results

3.5.1 Bats - Building Assessment

The site contains two detached houses of similar construction with brick walls and hipped roofs with clay tiles and dormer windows. The results of the Phase 1 survey of the buildings are provided in **Table 4**.

No evidence of bats was identified in either building. However, both buildings contain a number of features with potential to support small numbers or individual roosting bats including under weather boarding and under tiles.

Overall the site is considered to have a **low potential** to support roosting bats within the buildings.

3.5.2 Bats – Tree Assessment

None of the trees on site were identified as supporting features with potential to be used by roosting bats. The small area of secondary broadleaved woodland to the northwest of the site contains a number of mature trees, some of which may support potential roosting features. However, these were not surveyed in detail as the woodland is outside of the site boundary and will not be directly impacted by the works.

3.5.3 Foraging and Commuting Habitat

The trees and shrubs within the gardens of the site provide medium quality foraging habitat for bats. The wider area is largely urban offering low quality foraging habitat, within the exception of the small area of broadleaved woodland to the northwest of the site. The site is considered to have a **medium potential** to be used by foraging bats. The short hedgerows do not link potential roost sites with high quality foraging areas and are unlikely to be used as significant commuting routes for bats.

Table 4: Building assessment – summary of features with bat roost potential and evidence of bat roost activity

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Bat Roost Potential
127a		Brick bungalow with partially converted roof. Hipped roof with clay tiles and dormer windows. The eaves are lined with modern plastic soffit boxes. Internal roof void is heavily insulated with fiberglass insulation and the roof is lined with bitumen roofing felt.	The internal roof void appeared to be well sealed with no visible access points. The roof void was heavily cobwebbed and no droppings or other evidence of bats was identified. Externally the building is generally well sealed with a small number of features providing potential roosting opportunities for small groups or individual bats. These features include; a small gap under lead flashing around the chimney on the southern roof aspect; a small gap under hanging tiles on the dormer window on the northern aspect of the roof and a small area of wooden weather boarding on the eastern roof aspect.	No evidence of bats identified during the survey.	Low Potential
127b		Brick bungalow with partially converted roof. Hipped roof with clay tiles and a mix of Velux and dormer windows. The eaves are lined with modern plastic soffit boxes. The northern and southern gable ends are partially covered with wooden weather boarding (Figure 4). Internal roof void is small and cluttered.	The internal roof void is considered too small and cluttered for cavity dwelling bats such as long-eared. The void was not surveyed due to the presence of an asbestos flue pipe. Externally the building is generally well sealed with a small number of features providing potential roosting opportunities for small groups or individual crevice dwelling bats such as pipistrelle spp. The weather boarding on the southern gable is well sealed with limited opportunities for roosting bats. The weather boarding on the northern gable appears to have been sealed with expanding foam, however, there are a number of small gaps in the foam which	No evidence of bats was identified during the survey.	Low Potential

Table 4: Building assessment – summary of features with bat roost potential and evidence of bat roost activity

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Bat Roost Potential
			provide potential bat access points behind the weather boarding. Loose tiles are present around the flue pipe on the northern roof aspect and a small number of gaps are present under tiles around the velux window on the northern roof aspect.		

3.6 Dormouse Survey Results

The trees and shrubs around the site boundary provide a low diversity of native species which provide low quality foraging and nesting habitat for dormouse. The onsite vegetation is linked to a small area of broadleaved woodland to the northwest of the site. However, the habitat onsite and offsite is too small to support a viable population of dormice and therefore overall the site is considered to have a **negligible potential** to support dormouse.

3.7 Breeding Bird Survey Results

The trees and shrubs within the gardens of the site provide nesting and foraging opportunities for a range of common garden birds and robin *Erithacus rubecula* and great tit *Parus major* were recorded on site during the phase 1 survey. Overall the site is considered to have a **medium potential** to support nesting birds.

3.8 Reptile Survey Results

The well managed gardens of 127a and 127b London Road offer limited potential for reptiles with few features suitable for foraging and basking reptiles. Overall the site is considered to have a negligible potential to support common reptiles.

3.9 Great Crested Newt Survey Results

The managed gardens within the site provide limited opportunities for terrestrial newts, although the trees and shrubs around the gardens do provide medium quality habitat offering opportunities for shelter and foraging newts. A review of the 1:10,000 Ordnance Survey map identified no ponds or other suitable aquatic features within 500m of the site. Due to the lack of suitable breeding habitat within 500m, the site is considered to have a **negligible potential** to support great crested newt.

3.10 Terrestrial Invertebrates

The areas of managed grassland together with a mix of native and ornamental trees and shrubs provide habitat which is likely to support a moderate diversity of common and widespread invertebrate species. The site does not comprise any habitats which are likely to support important or rare invertebrate assemblages. Overall the site is considered to be of **low value** for invertebrates.

3.11 Phase 2 Bat Survey Results

The survey recorded no emergences or re-entries at the properties. A total of four species were recorded during the survey including common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, *Myotis*⁸ and long-eared bat sp.

⁸ *Myotis*

There are seven species of *Myotis* bats in Britain. *Myotis* bats are very difficult to identify specifically, this can generally only be done by examination of physical features and Phylogenetic Analysis Identification of bat droppings.

Table 2 provides details of the species, numbers and locations of bats recorded during the Phase 2 bat survey.

Table 2: Phase 2 bat survey results

Survey Date	Bat Roosting Activity	Foraging and Commuting Bats: Species	First Pass	Last Pass
1 st October 2014	Summary: No emergences were recorded throughout the survey.	Common pipistrelle	19:01	20:13
		Soprano pipistrelle	20:13	20:13
		Myotis	19:25	19:41
		Long-eared	19:31	19:59
		Summary: The majority of bat activity throughout the survey was related to foraging common pipistrelle with up to two bats recorded foraging within the gardens of 127a and 127b. Activity was greatest in the rear gardens with only occasional passes recorded by the surveyors located to the front of the properties. A single soprano pipistrelle pass was recorded during the survey as well as two <i>Myotis</i> bat passes and two long-eared passes.		
Survey Date	Bat Roosting Activity	Foraging and Commuting Bats: Species	First Pass	Last Pass
9 th October 2014	Summary: No emergences were recorded during the survey.	No bats were recorded during the survey.		

Summary Assessment

During the Phase 1 survey no evidence of bats or bat activity such as droppings or urine staining was recorded externally or internally. A small number of potential bat roosting features including gaps under roof tiles and gaps under weatherboarding were located externally on all both 127a and 127b, providing potential access/egress points.

During the Phase 2 survey no emergences or re-entries were recorded, indicating that the building is not currently used by roosting bats. Low levels of common pipistrelle⁹, soprano pipistrelle, *Myotis* sp. and long-eared bat sp. activity was recorded foraging

Many of these bats are common and will utilise buildings for roosting often occupying small and inaccessible voids. For the purpose of this report all species shall be referred to as *Myotis* bats unless a specific identification has been possible.

⁹ There are three species of pipistrelle bat, the common pipistrelle *Pipistrellus pipistrellus*, the soprano pipistrelle *Pipistrellus pygmaeus* and the Nathusius' pipistrelle *Pipistrellus nathusii*. The species can be separated by their echolocations, examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the three species shall be referred to in this report as pipistrelle bat. All three species will roost in similar locations within buildings. The soprano pipistrelle has a tendency to form larger roosts numbering 100's of bats and is associated with wetland habitat. Nathusius' pipistrelle bats frequently share maternity roosts with soprano pipistrelle bats.

and interacting with the site close to the property and boundary vegetation adjacent; however the vast majority appeared to be foraging briefly before passing through the site or at height. Given the small size of the site it is not considered to form a primary resource for foraging bats in the local area.

No bats were recorded during the survey on the 9th October and this is likely to be due to the low levels of bat activity in the area and the sub-optimal weather conditions during the survey. As the buildings were assessed as having low bat roost potential, in accordance with BCT survey guidelines⁴ one emergence survey is recommended to be undertaken to determine likely absence. Therefore, as one survey was undertaken in favourable conditions, it is considered that the Phase 2 bat surveys provide an appropriate assessment of the level of bat activity on site.

4.0 EVALUATION, IMPACTS AND RECOMMENDATIONS

4.1 Introduction

This section presents the conclusions of the extended Phase 1 and 2 ecological assessment. It provides an initial assessment of the likely ecological constraints to the proposed development and detailed recommendations for any further survey work or mitigation measures considered necessary. An outline of protected species legislation relevant to the findings of this report is provided in **Appendix 2**.

4.2 Site Evaluation

The vegetation within and adjacent to the site comprises common and widespread species. The two existing buildings were identified as having a low potential to support roosting bats. Phase 2 bat surveys identified no bats emerging from the buildings and therefore roosting bats are considered likely to be absent from the site. The trees, shrubs and hedgerows on site provide suitable habitat for nesting birds and there is a moderate potential for the site to be used by common breeding birds. This site is also used by low numbers of foraging bats. Overall, the site is considered to be of **low ecological value**.

4.3 Potential Impacts of Development

The proposed development entails the demolition of the two existing detached houses on site followed by the construction of a new block of sheltered accommodation together with associated access and parking facilities. The potential ecological impacts are:

- Disturbance of nesting birds if vegetation clearance is undertaken between March and August inclusive.

4.4 Outline of Recommendations

The following main recommendations are made to minimise the potential impacts:

- Vegetation clearance should be undertaken outside the breeding bird season of March to August, inclusive, or if not possible, an ecologist should be present immediately prior to clearance to check vegetation. Active nests should be left with an undisturbed 5-10m buffer until nesting ends.

Table 2: Table of evaluations, impacts and recommendations for protected species at 127a and 127b London Road

Ecological Feature	Summary	Potential Impacts of Development	Recommendations
Designated Sites	There are five European statutory designated sites of nature conservation situated within a 7km radius of the site, Chichester and Langstone Harbour Ramsar and SPA, Portsmouth Harbour Ramsar and SPA and Solent and Isle of White Lagoons SAC.	Due to the distance of the designated sites from the site there will be no direct impacts associated with the proposed works. There is a potential for indirect impacts due to increased visitor pressure on the designated sites. However, due to the nature of the development (sheltered accommodation) it is considered unlikely that the proposed development will result in any notable increase in visitor pressure to the sites.	There are no recommendations to be made in respect of designated sites due to a lack of impact.
Vegetation	The site comprises low ecological value habitats of species-poor amenity grassland, hedgerows and shrubs. The surrounding area is largely urban with the exception of a small area of broadleaved woodland to the northwest of the site.	There will be a small loss of mature trees including poplar sp. and the hedgerow which currently divides the two gardens will be removed. There will also be a loss of amenity lawn. The impact of losing these poor quality habitats is considered low.	Proposed garden landscaping should incorporate native tree and shrub species rather than cultivars to enhance the biodiversity interest on site.
Badger	The site is classed as having low potential for supporting resident and foraging badger.	As there is only a low likelihood of badger utilising the site, there are no anticipated impacts on badger associated with the proposals.	In the unlikely event that a badger becomes trapped in excavations during construction works, a timber ramp should be inserted to allow the animal to escape of its own accord.

Ecological Feature	Summary	Potential Impacts of Development	Recommendations
Bats	No evidence of roosting bats was recorded during the phase 1 and 2 surveys and therefore roosting bats are considered likely to be absent from the site. The site provides areas of habitat suitable for common species of foraging and commuting bats. All bat species are fully protected under the Wildlife and Countryside Act 1981 (as amended); see Appendix 2 for details.	The development will result in a slight reduction in the amount of available foraging habitat, although the majority of the boundary habitats, which are the best features for this purpose, are to be retained. There will be increased lighting and human presence post-development which could result in minor disturbance to foraging bats.	The use of native tree and shrub planting in new landscaping will mitigate for the loss of foraging habitat on-site. Any new artificial lighting should be designed to minimise the impact on bats. New lighting should comprise hooded luminaires directed away from vegetation. Ideally the bulbs will be LED and at the warmer end of the spectrum (e.g. avoiding blue or white light). LED lights emit much lower levels of UV and therefore have a lower impact on wildlife ¹⁰ . The new lighting should be motion-activated and task related, associated with specific entrance/exit points of the properties. The lux level should be as low as possible to allow the task to be carried out safely and effectively. Guidance on task related lighting levels published by the Chartered Institution of Building Services Engineers (CIBSE) ¹¹ will be followed.
Dormouse	Vegetation on and adjacent to the site have negligible potential for supporting dormice, being too small to support a viable population of dormice.	Due to a lack of suitable habitat impacts to dormice at the site are considered to be negligible.	There are no recommendations to be made in respect of dormice.

¹⁰ *Wildlife and Artificial Lighting Seminar, 21st – 22nd March 2014, Arup London, Bat Conservation Trust.

¹¹ CIBSE (1992) Lighting Guide 6: The Outdoor Environment; CIBSE (2002) Code for Lighting, Butterworth-Heinemann, UK.

Ecological Feature	Summary	Potential Impacts of Development	Recommendations
Breeding Birds	The site offers a range of hedgerows, trees and shrubs that would be suitable for supporting common and widespread bird species during the breeding season. The site has medium potential overall.	The clearance of hedgerow, tree and shrubs on site could cause harm to breeding birds if undertaken during the breeding season. All birds, their nests, eggs and young are legally protected; legislation is provided in Appendix 1 . Post-development, there will be a minor loss of nesting habitat.	Vegetation clearance should be undertaken outside the breeding bird season of March to August, inclusive, or if not possible, an ecologist should be present immediately prior to clearance to check vegetation. Active nests should be left with an undisturbed 5-10m buffer until nesting ends.
Reptiles	Grassland habitat at the site is heavily managed, therefore it lacks suitable shelter, foraging, basking and breeding opportunities for reptiles. It is deemed as having negligible potential for this species group overall.	As reptiles are unlikely to be present, anticipated impacts to reptiles associated with the proposals are considered negligible.	There are no recommendations to be made in respect of reptiles.
Great Crested Newt	There are no suitable waterbodies within 500m and the site does not support suitable terrestrial habitat for great crested newt. The site therefore has negligible potential for supporting this species.	There are no anticipated impacts associated with this species and the proposals.	There are no recommendations to be made in respect of great crested newt.
Terrestrial Invertebrates	The site supports low value habitats that are limited in extent. It has negligible potential for supporting rare or notable invertebrate species or assemblages.	There are no impacts anticipated.	There are no specific recommendations for invertebrates, however the vegetation recommendations above would enhance the site for this species group.

APPENDIX 1 Proposed Site Plan



REVISIONS

Rev.	Date	By
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PLEASE REFER TO DRAWING
NUMBER 144-LS 01 FOR DETAILED
LANDSCAPE STRATEGY.

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TOWN PLANNING AND ARCHITECTURAL DESIGN
John Shelbourn RIBA
Group Design Director
Millstream House * Parkside
Ringwood * Hampshire BH24 3SG
Telephone: (01425) 462109
Fax : (01425) 462101
Email: design@planningissues.co.uk

Client

Churchill
Retirement Living

Project Title
Proposed Sheltered Housing
London Road
WATERLOOVILLE

Drawing Title

SITE PLAN

Scale	1:200 @ A1	Date	JAN 2015
Drawn	SRB	Checked	RKP/JFS
Drawing No.	10072WV - P02	Rev.	

London Road, Waterlooville - Proposed Sheltered Housing - Site Plan

APPENDIX 2 Protected Species Legislation

European Protected Animals¹² - Bats

In England, all bat species are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, these species are protected under the Conservation of Habitats and Species Regulations 2010. Taken together, these legislative instruments make it illegal to carry out the following activities:

- Deliberately or recklessly capture or kill any wild animal of a European protected species;
- Deliberately or recklessly disturb any such animal;
- Deliberately or recklessly take or destroy eggs of any such wild animal;
- Damage or destroy a breeding site or resting place of such a wild animal; and
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal of a European protected species, or any part of, or anything derived from such a wild animal.

Any activity that would result in a contravention of the above legislation would require a licence to avoid committing an offence. Natural England has powers to grant a licence for the following purposes:

- 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; or
- Preventing the spread of disease; or
- Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property or to fisheries.

The Conservation of Habitats and Species Regulations contain three "derogation tests" which must be applied by Natural England when deciding whether to grant a licence to a person carrying out an activity which would harm an European protected species. For development activities this licence is obtained after Planning Permission has been obtained. The three tests are that:

¹² Summarised from www.defra.gov.uk

- The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
- There must be no satisfactory alternative; and
- Favourable conservation status of the species must be maintained.

A recent court judgment¹³ makes it clear that, notwithstanding the licensing regime, the Local Planning Authority must also address its mind to these three tests when deciding whether to grant planning permission for a development which could harm a European protected species. A Local Planning Authority failing to do so would be in breach of Regulation 3(4) of the Conservation (Natural Habitats, &c.) Regulations 1994 (revised in 2010 to become the Conservation of Habitats and Species Regulations) which requires all public bodies to have regard to the requirements of the Habitats Directive in the exercise of their functions.

In order to determine whether an activity requires a licence, Natural England advises that the guidance of a consultant ecologist is sought. However, Natural England offer the following advice as a guide:

- A licence is needed if the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably likely to result in an offence under regulation 39; or
- If the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence under regulation 39 then no licence is required. However, in these circumstances Natural England would urge that reasonable precautions be taken to minimise the effect on European protected species should they be found during the course of the activity. If they are found then work should cease and an application be made to the Wildlife Licensing Unit at Natural England, Bristol.

¹³ Judgment handed down by His Honour Judge Waksman QC sitting as a judge of the High Court at the start of June 2009 in the case of *R (on the application of Simon Woolley) v Cheshire East Borough Council*. The judgment clarified for the first time the legal duty of a Local Planning Authority when determining a planning application for a development which may have an impact on European Protected Species ("EPS"), such as bats, great crested newts, dormice or otters.

Wild Birds¹⁴

The Wildlife & Countryside Act 1981 (as amended) is domestic legislation for Great Britain that repeals existing wildlife legislation such as:

- Protection of Birds Acts 1954 to 1967; and
- Conservation of Wild Creatures and Wild Plants Act 1975.

The Act covers the provisions made in these previous acts and provides additional provision for species and countryside protection. The Act is the primary legislation in Great Britain for the protection of flora, fauna and the countryside. The Act includes the UK's domestic implementation of the species protection of the European Directive on the Conservation of Wild Birds (79/409).

Under the Wildlife and Countryside Act 1981 all birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions to intentionally:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while it is in use or being built.
- Take or destroy the egg of any wild bird.
- Have in one's possession or control any wild bird (dead or alive) or any part of a wild bird which has been taken in contravention of the Act or the Protection of Birds Act 1954.
- Have in one's possession or control any egg or part of an egg which has been taken in contravention to the Act. This includes items taken or killed before the passing of the Act.
- Have in one's possession or control any live bird of prey of any species in the world (with the exception of vultures and condors) unless it is registered and ringed in accordance with the Secretary of State's regulations.
- Have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered (and in some cases ringed) in accordance with the Secretary of State's regulations.
- Disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

¹⁴ www.naturenet.net

Status of Wild Birds

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status of the birds that are regularly found in the UK. A total of 247 regularly breeding or wintering species were assessed and each placed onto one of three lists - Red, Amber or Green. Forty species are Red-listed, 121 are Amber-listed and 86 are Green-listed. Seven quantitative criteria were used to assess the population status of each species and place it onto the Red, Amber or Green List. These criteria are listed below. The review excluded species that are not native to the UK and those that occur irregularly as vagrants or scarce migrants.

Global Conservation Status - Species assessed as Globally Threatened using IUCN11 criteria were placed on the Red List.

Recent Decline - Species whose breeding or non-breeding population declined, or range contracted, rapidly (by more than 50%) or moderately (by between 25 and 49%) over the last 25 years were placed on the Red and Amber Lists respectively.

Historical Decline - Species whose populations declined severely between 1800 and 1995 were placed on the Red List, except for those that have recovered substantially (more than doubled) in the last 25 years, which were Amber Listed. In earlier assessments, all species showing a serious historical decline were Red Listed, but in this assessment the success of recent conservation action has been recognised by moving recovering species to the Amber List.

European Conservation Status - Species whose population status is unfavourable in Europe (but which are not Globally Threatened) were placed on the Amber List.

Rare Breeders - Species with a mean population size of 1-300 pairs breeding annually over the last five years were placed on the Amber List. If a full census was carried out in a single year, the result of this was used instead of a five-year mean.

Localised Species - Species for which 50% or more of the breeding or non-breeding population occurs at 10 or few sites were placed on the Amber List. This criterion was used because a species whose population is confined to a few sites faces a greater threat from chance events than one whose population is widespread. The sites considered were either Important Bird Areas (identified by BirdLife International) or Special Protection Areas (designated under the European Union's Directive on the Conservation of Wild Birds).

International Importance - Species with 20% or more of their European population breeding in the UK were placed on the Amber List, as were non-breeding wildfowl with 20% or more of

their northwest European population occurring in the UK and non-breeding waders with 20% or more of their East Atlantic Flyway population occurring in the UK. This criterion is different from the others as it is a measure of the UK's responsibility for each species rather than the extent to which species are threatened.

- Red List species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.
 - Amber List species are those with an unfavourable conservation status in Europe, those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
 - Species that fulfil none of the criteria are Green-listed.
-