

Ecological Appraisal

Report for:

**Hampshire County Council –
Property Services**

Godbey House, Hayling Island

Children's home to be vacated

January 2015

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SUMMARY

This report constitutes an assessment of the potential impacts arising from the proposal and site set out below and provides recommendations to ensure that this proposal can reasonably avoid or mitigate such effects identified. If the proposal differs from that set out below, then this assessment and recommendations may not be applicable. Furthermore, the assessment and recommendations are based on surveys which may only be considered valid for up to two years following the date of this report.

- An Extended Phase 1 Ecological Survey was undertaken on 15 January, 2015 at Godbey House Children's Home, Hayling Island. The Children's Home is proposed for relocation and the site is likely to be redeveloped for housing.
- The Extended Phase 1 Ecological Survey comprised a desk-based study and field survey including internal and external bat inspection to assess the potential for the site to support protected habitats and species.
- The site is located within 1km of several designated sites including Chichester and Langstone Harbours Special Protection Area and the Sinah Common Site of Special Scientific Interest (SSSI), which is across the road to the south of the site.
- Habitats on the site include mature trees, introduced scrub and amenity grassland which were assessed to have the potential to support breeding birds and common amphibians.
- Recreation pressures associated with the development have the potential to impact upon Solent SPAs, including the Chichester and Langstone Harbours SPA located to the north of the site. A financial contribution based upon the number of residential units constructed at the site is likely to be required to mitigate for these impacts.
- Natural England should be consulted regarding potential impacts upon the Sinah Common SSSI.
- The building and a single mature tree were assessed as having the potential to support roosting bats. Prior to the submission of any planning application, further survey is likely to be required during the survey season of May-August (including at least two visits spaced a month apart) to determine the presence or likely absence of roosting bats. Should roosting bats be found to be present further mitigation under a Natural England licence would be required.
- It is highly advisable to undertake necessary clearance of trees and scrub outside of the bird nesting season, (March to the end of August). If there is absolutely no alternative to doing the work during this period then a thorough, careful and quiet examination of the affected area must be carried

out before clearance starts. If occupied nests are present then work must stop in that area, a suitable (approximately 5m) stand-off maintained, and clearance can only recommence once the nest becomes unoccupied of its own accord.

- A precautionary approach to the clearance of scrub must be undertaken to minimise the risk of killing or injuring amphibians should they be present.
- Recommendations for ecological enhancements include the use of native plant species in landscaping for the site and the installation of bird nest boxes.

1 INTRODUCTION

1.1 Project Description

Hampshire County Council Ecology Team (HCCET) has been commissioned to carry out an Extended Phase 1 Ecological Survey at Godbey Children's Home, Hayling Island, PO11 0BD.

1.1.1 Proposal

The site is to be vacated following construction of an alternative site. The site is likely to be redeveloped to construct a new residential building although no formal proposals have been made.

1.1.2 Requirement for Ecological Survey/Assessment

An ecological assessment was required in order to inform proposals to redevelop the site.

1.1.3 Limitations to Report

There were no access or weather constraints during the survey.

1.2 Site Description

Godbey House is located to the southwest of Hayling Island, off Seafront Road. The site includes amenity garden areas and is located adjacent to residential buildings, with the seafront, including areas of scrub and a golf course to the south of the site.

2 METHODS

2.1 Desk-based Assessment

A desk-based assessment was carried out by HCCET on 16 January 2014. Geographical Information Systems (GIS) mapping was used in order to identify all records of protected species and habitats within a 1km radius of the site. In addition, records were obtained of all statutory and non-statutory designated nature conservation sites within the search radius.

HCCET had full access to the extensive biological database held by the Hampshire Biodiversity Information Centre (HBIC). The data is aggregated to meet the HBIC Data Users Agreement and attention is drawn to paragraph 5 of the agreement which states: *'Whilst every reasonable effort is made to validate information supplied to and by the Hampshire Biodiversity Information Centre, owing to the dynamic and judgmental nature of information relating to wildlife, HBIC disclaims any responsibility for the accuracy or comprehensiveness of the information supplied, and accepts no liability for any indirect, consequential, or incidental damages or losses arising from use of the information'*.

2.2 Field-based Assessment

An Extended Phase 1 Ecological Survey was carried out on January 15, 2015. The survey entailed two surveyors undertaking a methodical investigation of all areas of the site in order to identify the presence of, or habitat considered suitable for supporting, legally-protected species. A brief description of the survey methods used is provided below.

2.2.1 Vegetation

All broad habitat types were identified and a list was compiled of characteristic plant species within each habitat type.

2.2.2 Badger

All areas of the site were inspected for field signs of badger activity. This includes badger setts, latrine sites, dung piles, well-used trails, prints and hairs.

2.2.3 Bats – Built Structures

Built structures within the site were, where necessary, subject to detailed internal and external investigation to identify evidence of bat activity. Where accessible, all internal voids and similar spaces were inspected for evidence of bat presence such as live bats, corpses, droppings, feeding remains and urine- and fur-staining. Where necessary, samples of bat droppings were collected for analysis.

All external areas of each building were inspected visually to identify potential bat access, egress and roosting features. Such features include: missing, slipped, broken or bowed roof materials; gaps within soffits; gaps behind fascias; gaps/holes within brickwork; louvers; lifted lead flashing and gaps around window and door casements. Features were inspected using binoculars and, where possible, a ladder

in order to locate unambiguous field signs such as droppings or urine/fur-staining. Surveyors were equipped with a high-powered torch and a video endoscope. Survey methods used were those described within Hundt (2012).

Each surveyed built structure has been assessed for its potential to support roosting bats based upon the presence of direct evidence or the presence of features suitable access, egress or roosting features. Each structure has been graded using the criteria detailed in **Table 1**.

Table 1 Bat Roost Building Grading Criteria

Grading Criteria	Reason
Confirmed Bat Roost	Presence of unambiguous evidence: live bats, corpses, droppings, feeding remains, urine- and fur-staining. Bats heard within roost. Known roost based on desk-based assessment.
High Potential	Structure exhibits numerous or high-quality features for roosting bats. Examples may include older/historic buildings with traditional roof materials, roof voids etc. Potential often higher when structure is in a non-urban setting.
Moderate Potential	Structure exhibits moderate number or moderate-quality features for roosting bats. Examples may include structures of more-modern construction exhibiting gaps within roof materials.
Low Potential	Structure exhibits low number or low-quality features for roosting bats. Examples may include otherwise-suitable structures exhibiting a very small number of potential features.
Negligible Potential	Structure exhibits no features for roosting bats. Examples may include modern structures in sound condition exhibiting no suitable features. Such structures are often within an urban setting.

2.2.4 Bats – Trees

All trees within the site likely to be impacted were subject to detailed visual inspection from ground level in order to identify features which may offer suitable roosting opportunities for bats. These features include: dense ivy cladding; woodpecker holes; rot holes; limb stubs; cavities; flaking bark; cracks and splits. The methods used were those described within Hundt (2012).

Each tree has been graded for its potential to support bats based on criteria within the Bat Conservation Trust's 'Bat Surveys Good Practice Guidelines 2nd Edition (Hundt, 2012) and are detailed in **Table 2**.

Table 2 Bat Roost Tree Grading Criteria

Grading Criteria	Reason
Confirmed Bat Roost	Unambiguous evidence of roost: bats seen emerging/entering, bats audible, droppings/urine-/fur-staining visible. Known roost based on desk-based assessment. Further survey required.
Category 1*	Trees with multiple, highly-suitable features capable of supporting larger roosts. Further survey required.
Category 1	Trees with definite bat potential, supporting fewer suitable features than Category 1* or with potential for use by single bats. Further survey required.
Category 2	Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats. Further survey potentially required.
Category 3	Trees with no potential to support bats. No further survey required.

2.2.5 Bats – Foraging and Commuting Habitat

An assessment was made of the suitability of the site and the surrounding landscape to support foraging/commuting/flying bats. These activities cover the varied range of behaviours exhibited by bats when they are not roosting and will include feeding, travelling between sites and other social behaviours. The assessment was based on the presence of key habitat features such as woodland, scrub, hedgerows, grassland and open water which are highly attractive to bat species for those activities. Of importance is the presence of unlit semi-natural vegetation and habitat linkage between the site and the surrounding landscape.

The quality of bat foraging/commuting/flying habitat has been assessed using the criteria detailed in **Table 3**.

Table 3 Bat Foraging/Commuting/Flying Habitat Grading Criteria

Grading Criteria	Reason
Optimal Quality	Presence of optimal habitat features such as unlit woodland, scrub, hedgerows, grassland and open water with excellent linkage to similar habitats within the wider landscape. Presence of high potential buildings/trees and/or known roosts within immediate landscape. Sites are generally rural in character.
Moderate Quality	Presence of optimal habitat features such as woodland, scrub, hedgerows, grassland and open water with reasonable linkage to similar habitats within the wider landscape. Limiting factors may include size of site.
Low Quality	Presence of some limited habitat features such as scrub or hedgerows, with minimal linkage to suitable habitats within the wider landscape.
Poor Quality	No suitable habitat present or, if present, highly degraded/fragmented. Minimal unlit areas with no linkage to suitable habitat beyond site. Generally urban in character.

2.2.6 Hazel dormouse

An assessment was made of the suitability of habitat on site to support hazel dormice. Key habitats are woodland, scrub and hedgerows, particularly where these offer dense vegetation within which to nest/hibernate and key resources such as hazel nuts, fruiting/nectar-rich plants (e.g. hawthorn, bramble) and honeysuckle (for nesting material). Of key importance is the presence of landscape-scale habitat linkages such as hedgerows.

2.2.7 Birds

An assessment was made of the site's suitability to support breeding and wintering bird species. Nesting birds will utilise a broad range of habitats, including: built structures; trees; scrub; isolated shrubs; dense herbaceous vegetation (terrestrial and aquatic) and open grassland.

2.2.8 Reptiles

An assessment was made of the site's suitability to support reptile populations. Key habitat features include: tussocky/patchy grassland; scrub edge; linear watercourses; ponds; compost heaps; brash piles and rubble/soil heaps. Linkage to suitable habitat within the surrounding landscape will increase the potential for reptiles to occur, although populations can occur within isolated/fragmented habitats even within urban areas.

2.2.9 Amphibians

An assessment was made of all waterbodies and terrestrial habitat within the site for their suitability to support populations of amphibians. Suitable waterbodies will generally be characterised by the presence of good quality water, diverse macrophyte cover and an absence of fish.

2.2.10 Invertebrates

The presence of important invertebrate species or assemblages is generally dependant upon distinct micro-habitats such as dead wood (standing, fallen, of all decay stages), sap runs, damp/wet soils, mixed sun/shade, bare/friable soils (e.g. exposed sand banks) and a diversity of plant species. For aquatic invertebrates, important species/assemblages will generally be associated with high-quality aquatic habitats such as ponds, rivers, streams and ditches. Key factors will include water quality, substrate, waterbody morphology and plant diversity.

2.2.11 Protected Species Assessment

The surveyed site has been assessed for its potential to support the above-named protected species based upon the criteria in **Table 4**.

Table 4 Protected Species Grading Criteria

Grading Criteria	Justification
Confirmed Presence	Species confirmed on site through direct sighting, presence of field signs (e.g. scat, hair, prints, nest, eggs, habitation etc.) or through desk-based assessment.
High Potential	Presence of optimal habitat features for species. Surveyed site within known range/close to known occurrence. Excellent connectivity to optimal habitat. No justification for discounting presence of species.
Moderate Potential	Presence of some suitable habitat features for species. Surveyed site within/close to known range or known occurrence but factors such as isolation/fragmentation may reduce potential. Presence of species is more likely than not.
Low Potential	Minimal suitable habitat present or, if present, highly degraded/fragmented. Minimal linkage to suitable habitat beyond site. Presence of species unlikely.
Negligible Potential	Site is entirely unsuitable for species. Presence of species highly unlikely.

3 RESULTS

3.1 Introduction

This section provides details of the results of the Extended Phase 1 Ecological Survey carried out at Godbey House, Hayling Island.

3.2 Desk-based Assessment

3.2.1 Designated Sites

The site is located within 1km of several designated sites, including the Solent Maritime Special Area of Conservation (SAC) and the Chichester and Langstone Harbours Special Protection Area (SPA). **Table 5** provides details of these sites.

Table 5 Designated sites located within 1km of Godbey House Children's Home

Site Name	Distance and Direction from Site (km)	Reason for Designation
Internationally designated sites		
Solent Maritime SAC	514m south, but also overlapping with Chichester and Langstone Harbours to the north	Supporting coastal habitats of conservation interest, including <i>Spartina</i> swards and Atlantic salt meadows.
the Chichester and Langstone Ramsar SPA (includes Langstone Harbour SSSI)	670m north	Designated due to internationally important populations of breeding, passage and wintering birds.
Nationally designated sites		
Sinah common Site of Special Scientific Interest (SSSI)	10m south	Site is designated due to coastal habitats including vegetated shingle habitats supporting several nationally scarce plant species.
Locally designated sites		
Sinah Stables Site of Importance for Nature Conservation	500m northwest	Designated as a known site used by dark bellied brent geese (<i>Branta bernicla bernicla</i>), a bird species of conservation concern.
Sinah Warren Village Marsh	670m northwest	Designated due to coastal habitats of conservation interest including a notable plant species.

Site Name	Distance and Direction from Site (km)	Reason for Designation
Saltmarsh C and E SINC	670m north	Two designated sites used by dark bellied brent geese (<i>Branta bernicla bernicla</i>).
Gun Site Car Park & Open Space SINC	690m west	Designated due to the presence of nationally scarce plant species <i>Geranium purpureum forsteri</i> .
Hayling Billy Local Nature Reserve (LNR)	840m north	Locally designated site supporting notable plant species.

3.2.2 Protected Species

A review of the biological database held by HBIC, as well as records of protected species submitted in association with local planning applications, revealed the presence of a number of protected and notable species within a 1km radius of the site. Relevant records are shown in **Table 6**.

Table 6 Protected and Notable species located within 1km of Godbey House Children's Home

Species	Details	Distance and Direction from Site
Bats		
Bechasteins bat <i>Myotis bechsteinii</i>	Coarse scale record from a mist netting survey.	770m north
Daubenton's bat <i>Myotis daubentonii</i>	Two records from coastal scrub south west of the site.	600m west
Pipistrelle bat <i>Pipistrellus</i> sp.	Records of roosting pipistrelle bats.	550m east
Common pipistrelle <i>Pipistrellus pipistrellus</i>	Several records primarily centred on the area of coastal scrub south west of the site.	600m west
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>		530m west
Natterer's bat <i>Myotis nattereri</i>	Coarse scale record from a mist netting survey.	770m north
Birds		
Dartford warbler <i>Sylvia undata</i>	Likely associated with the coastal scrub south of the site.	Record overlaps with the site.

3.3 Field Survey

3.3.1 Vegetation

The site includes landscaped areas to front (south) and rear (north) of the building, predominantly comprising managed amenity grass, including typical lawn species. Photographs are shown on Figure 1 below the text.

Scattered trees occur throughout the garden areas. These include lime (*Tilia* spp. and ash *Fraxinus excelsior* to the north of the site with mature coniferous trees including scots pine *Pinus sylvestris* and cypress *Cupressus* spp to the south. Areas of scrub occur across the site, particularly to the north- and south eastern boundaries of the site, largely comprising ornamental species such as garden privet *Ligustrum ovalifolium*.

A small standing waterbody is located to the north of the building that was solely vegetated with terrestrial plant species including grasses and docks *Rumex* spp., indicating that it is dry for most of the year.

The garden areas include unmanaged boundaries no more than 0.75m wide with species such as ivy *Hedera helix* and thistles *Cirsium* spp. prominent.



Figure 1: Habitats in the garden areas of the site include amenity grassland and scattered mature trees

3.3.2 Badger

No evidence of badger activity was recorded within the surveyed areas and the habitats, although badgers may on occasion use habitats on site to forage or move through. Overall, the site is considered to offer **low potential** for supporting badger.

3.3.3 Bats - Built Structures

The main building on the site comprises a large detached three-storey structure estimated to be in the region of 80 years old. The main structure is rendered brick and the roof is gabled east to west and covered with machine-cut clay tiles. The facias to the building comprise an open soffit overhang with ventilation gaps covered with meshing. Gable ends on the eastern and western aspects of the

structure were observed to be in good condition with no gaps observed. Photographs of the building are included on Figure 2 below.

To the north of the building lies a single storey extension, which appears of similar construction to the main building with a gabled roof covered with clay tiles and a gable end in good condition.

A two storey extension is located to the south of the building which has a flat roof covered with felt. This part of the structure has hanging tiles covering upper portions of the western, southern and eastern sections of the extension.

A small three storey extension is located to the east of the building which includes a small area of clay tiled roof.

It was possible to access all of the main roof voids. These generally contained rock wool insulation and *Tyvek* membranes to the roof. Exposed brick walls formed the eastern and western ends of the building. No evidence of roosting bats was found within the voids and no potential egress/ entry points were identified.

Several gaps underneath the clay tiles on the roofs of the main structure and extensions to the north and east were observed. In addition, gaps underneath the hanging tiles on the southern, eastern and western aspects of the southern extension were observed.

The building is surrounded to the north, east and west by residential buildings with associated amenity areas. An extensive area of scrub vegetation is located to the south of the building.

Overall, the building is assessed to have moderate potential to support low numbers of common bat species.



Figure 1: (left) Showing the northern elevation of the building and (right) showing the extension to the south of the building. No evidence of roosting bats was identified in the roof voids, but

numerous gaps under clay tiles have the potential to support small numbers of roosting bats.

3.3.4 Bats – Trees

A mature Cypress tree to the south east of the site was observed to have deep crevices at a height of approximately 5m. The tree has been assigned to Category 1, and is assessed to have **low potential to support roosting bats**, see Figure 3 below.



Figure 3: One of the trees on site was assessed as having potential to support roosting bats. The location of the tree is indicated by the red dot.

3.3.5 Bats – Foraging and Commuting

The mosaic of amenity grassland with scattered trees is likely to be of some limited value to foraging or commuting bats, although better habitat does occur in the vicinity of the site. Overall, the habitats at the site are considered to represent **low quality** foraging and commuting habitat for roosting bats.

3.3.6 Hazel Dormouse

Whilst the site does contain areas of woody vegetation, this is isolated from any similar habitat in the wider landscape. As such the site is considered to offer **negligible potential** for supporting dormice.

3.3.7 Birds

The woody vegetation on site provides opportunities for nesting birds and it is inevitable that small numbers of common and widespread garden bird species will occur and possibly nest. Overall, the site is considered to exhibit **high potential** for supporting small numbers of common and widespread breeding birds.

3.3.8 Reptiles

The site is characterised by managed amenity grassland and is not well connected to any significant areas of suitable habitat. Overall, it is considered to offer **negligible potential** for supporting reptiles.

3.3.9 Amphibians

The site is characterised by managed amenity grassland which is not considered to be wholly suitable for supporting amphibians. However, the areas of scrub on the site may provide shelter for species such as common frog *Rana temporaria* or common toad *Bufo bufo* and therefore the site is considered to offer **low potential** for supporting amphibians.

3.3.10 Invertebrates

The habitats present on site are widespread and common with little diversity. It is therefore probable that the site supports similarly widespread and common terrestrial invertebrate species and is unlikely to include any scarce or notable species. The site is considered to have **negligible potential** for supporting scarce or notable invertebrate species.

4 IMPACTS

4.1 Introduction

This section is supported by the results of the Extended Phase 1 Ecological Survey and presents the likely impacts, in the absence of any mitigating actions, on protected and notable habitats and species associated with the proposed development. Only those features confirmed as present on site or considered to have from low to high potential occurrence on site have been taken forward for further assessment. In addition, all designated sites located within 1km of the site have been taken forward for further assessment. Note that as proposals are yet to be finalised it has been assumed that all features identified by the survey will be impacted.

4.2 Impacts

4.2.1 Designated Sites

Providing pollution (such as dust) is controlled during development works, direct impacts upon designated site from the works are not anticipated. However, as outlined in the *Interim Solent Recreation Mitigation Strategy* (2014), increases in residents associated with development within 5.6km of Solent Special Protection Areas (including the Chichester and Langstone Harbours SPA located to the north of the site) are considered to have the potential to cause negative impacts to the designated sites through increased recreational pressures. Furthermore, proposals could impact upon the Sinah Common SSSI located to the south of the site, through increased recreational pressures. It is therefore concluded that there is **potential for impacts to designated sites**.

There are not considered to be potential impacts upon the other designated sites located within 1km of the site.

4.2.2 Habitats/Vegetation

Habitats present on the site are generally are not of significant ecological value. It is therefore considered that there will be **no impact to habitats of ecological importance**.

4.2.3 Badgers

Given the presence of very limited suitable habitat within the surveyed area, although it is possible that badgers may very occasionally commute through the site, it is considered that there is **negligible potential for impacts to badgers**.

4.2.4 Bats - Built Structures

Proposals involving significant works to the building are considered to have **moderate potential for impacts to roosting bats**.

4.2.5 Bats - Trees

Should proposals impact upon the tree identified within Section 3 as having the potential to support roosting bats, it is considered that there is **low potential for impacts to roosting bats**. This includes in direct impacts such as noise and lighting which could be associated with proposals.

4.2.6 Bats – Foraging and Commuting

The site overall offers limited habitat for supporting foraging/commuting bats, and therefore as proposals are yet to be finalised, it is considered that there is **low potential for impacts to foraging/commuting bats**.

4.2.7 Birds

The trees and scrub on the site have the potential to support small numbers of common and widespread nesting birds. Should the finalised proposals require removal any of these habitats it is considered that there is **moderate potential for impacts to nesting birds**.

4.2.8 Amphibians

Necessary clearance of scrub vegetation is considered to have **low potential for impacts to common species of amphibian**.

5 MITIGATION AND ENHANCEMENT

5.1 Introduction

This section provides details of recommendations considered necessary in order to ensure that potential ecological constraints are considered fully. This includes recommendations for additional survey works and for mitigation, compensation or enhancement measures to avoid, lessen or offset the identified impacts to ecological features arising from the proposed works.

5.2 Mitigation

5.2.1 Designated Sites

The *Interim Solent Recreation Mitigation Strategy (2014)*, anticipated to be in place until its review in 2017, requires at the time of writing that residential developments should contribute £172 per unit to cover costs of mitigation measures centrally administered by local planning authorities (the level of contribution may be revised after 2017 review).

It is also recommended that Natural England should be consulted once proposals are finalised regarding potential impacts to the adjacent Sinah Common SSSI, in order to determine whether they consider impacts likely to be significant.

5.2.2 Bats - Built Structures

Stage 2 bat surveys are likely to be required to determine the presence or likely absence of bat roosts from the building, and will therefore be required prior to the submission of planning permission. Stage 2 bat surveys should include at least two visits spaced month apart during the suitable survey season of May-August inclusive. Where bats are found to be roosting, a European Protected Species Licence from Natural England is likely to be required, informed by an appropriate mitigation strategy.

5.2.3 Bats - Trees

Should proposals impact upon the tree identified within Section 3, the presence or likely absence of bats should be determined. This could be done by undertaking Stage 2 surveys as outlined above. Alternatively an aerial survey, undertaken at any time of the year may be able to confirm or rule out the presence of roosting bats.

5.2.4 Bats – Foraging and Commuting

In order to offset potential impacts upon foraging or commuting bats, it is recommended that proposals for the site include measures to benefit this species. These should include retaining and enhancing habitats where possible and designing lighting associated with the development in a sensitive manner, keeping external lighting to a minimum, focusing it only on required areas and using low-power bulbs.

5.2.5 Birds

It is highly advisable to undertake clearance of potential bird nesting habitat including trees and shrubs outside the bird nesting season, which is generally seen as extending from March to the end of August, although may extend longer depending on local conditions. If there is absolutely no alternative to doing the work during this period then a thorough, careful and quiet examination of the affected area must be carried out before clearance starts. If occupied nests are present then work must stop in that area, a suitable (approximately 5m) stand-off maintained, and clearance can only recommence once the nest becomes unoccupied of its own accord.

5.2.6 *Amphibians*

It is recommended that any removal of dense vegetation is carried out sensitively due to the potential for this area to harbour terrestrial amphibians. If the measures recommended for nesting birds in Section 5.2.3 are followed there should be no killing or injury of any amphibians in this area. Should any animals be encountered, these can be moved by hand to areas of suitable habitat well outside the immediate works area.

5.3 Enhancements

In line with local and national planning policy, it is recommended that ecological enhancements should be incorporated into proposals for the site. The following are examples of some potential options for enhancing the site ecologically:

- Using only native plants species within proposals for landscaping at the site;
- Creation of wildlife pond, not stocked with fish; and
- Installation of specialised bat, bird and insect boxes on buildings and retained trees at the site.

6 REFERENCES

Institute of Ecology and Environmental Management (2012). *Guidelines for Preliminary Ecological Appraisal*. IEEM, Winchester.

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

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