



THE
ENVIRONMENTAL
PROJECT CONSULTING
GROUP

Land at 53 Hart Plain Avenue
Cowplain, Hampshire PO8 8RG

ECOLOGICAL IMPACT ASSESSMENT

ADDENDUM

Client: Peak Quality Homes Ltd
The Square, Rowledge, Farnham, Surrey GU10 4AA
Site: Land at 53 Hart Plain Avenue, Cowplain, Hampshire PO8 8RG
Grid reference: SU 68031 10929
Project: Ecological impact assessment
Report: 24 September 2013
Addendum: 1 November 2013
Report by: Ron Allen BSc Hons Geol (Lond), ARSM, CSci, CEnv, CBiol, EurProBiol, MIEEM, MSB, MEnvSc
The Environmental Project Consulting Group
44A Winchester Road, Petersfield, Hampshire GU32 3PG
Tel. 01730 231019 Email. ra@epcg.co.uk

APP/13/00576 53 Hart Plain Avenue, Waterloooville, PO8 8RG

1.0 APPLICATION RESPONSES ON ECOLOGY

Following submission of the 24 September 2013 Ecological Impact Assessment there has been responses from:

1. Havant Borough Council; and
2. Natural England

as follows.

1. Response from Havant Borough Council

From: Aaron Wright [mailto:Aaron.Wright@havant.gov.uk]
Sent: 22 October 2013 15:12
To: Graham Anderson
Subject: FW: APP/13/00576 53 Hart Plain Avenue, Waterloooville, PO8 8RG 13.1163

Dear Mr Anderson,
Please find attached the comments of the Ecological Officer regarding the above application.
Please can you address the points raised below - especially in regards to the following:

- the presence of roosting bats in the trees
- additional information is required on the destination of reptiles translocated from site
- No information is provided on the receptor site and it is therefore not possible for the local planning authority to comment on the validity of any reptile mitigation plans.

Please can this information be submitted as soon as reasonably possible.

Regards

Mrs Wright

2 Response from English Nature

See overleaf.

Ecological Impact Assessment - Addendum

Michelle Houghton

From: Aaron Wright
Sent: 22 October 2013 15:21
To: bst shared
Subject: FW: APP/13/00576 Demolition of existing 3 bed bungalow and construction of 4No. 4 bed detached houses. 53 Hart Plain Avenue, Waterloooville, PO8 8RG.

Please add as a consultation response.

From: Consultations (NE) [<mailto:consultations@naturalengland.org.uk>]
Sent: 22 October 2013 15:19
To: Aaron Wright
Subject: APP/13/00576 Demolition of existing 3 bed bungalow and construction of 4No. 4 bed detached houses. 53 Hart Plain Avenue, Waterloooville, PO8 8RG.

Dear Mr Wright

Re: Planning application APP/13/00576 'Demolition of existing 3 bed bungalow and construction of 4No. 4 bed detached houses, 3 with integral garages and 1 detached garage and associated parking and landscaping with access from Wedgewood Way. 53 Hart Plain Avenue, Waterloooville, PO8 8RG'.

We have received notification from a member of the public regarding the abovementioned planning application, stating that there are bats, slow worms, hedgehogs and breeding birds present on site. Where representations from other parties highlight the possible presence, or the Council is aware of a Protected or Priority species on the site, the Council should request detailed survey information from the applicant before determining the application. Paragraph 98 and 99 of ODPM Circular 06/2005 provides information on priority and protected species and their consideration in the planning system.

We have also noted that although the bat survey effort undertaken on site has identified that bats are not using the buildings, bats are known to have roosted in one of the mature oaks on site previously, (this is well documented), and the survey undertaken did not include any trees on site. As a number of trees are destined to be felled or have 'works' carried out, the Council should remind the applicant that **further surveys** should be undertaken in order to ensure compliance with the law.

We would draw the Council's attention to Natural England's [Protected Species Standing Advice](#), which provides guidance on when protected species may be impacted by a proposal.

Kind regards

Sally Tainton

Customer Services Consultation Team

Natural England

Block B, Government Buildings,

Whittington Road,

Worcester, WR5 2LQ

2.0 COMMENT ON BOTH RESPONSES

2.1 THE ISSUES RAISED

Both responses deal with broadly similar issues and so I address below each of the matters raised.

- Presence of roosting bats in trees.
- Destination of reptiles translocated from the site.
- Hedgehogs.
- Breeding birds.

2.1.1 Presence of roosting bats in trees

Natural England suggest that the presence of bats in one of the boundary oak trees is well documented. No reference is given to any such reference.

I note however that the Hampshire County Council Senior Ecologist indicates that:

'Local residents have stated that survey works in relation to previous planning application in 2006 highlighted the presence of roosting bats within a large oak tree within the grounds of the application site – this tree is apparently covered by a Tree Protection Order. Having investigated the details of the 2006 application (06/66444/004) I can find no evidence of any ecological reports so I cannot at this time comment on the presence of roosting bats'.

It is my understanding that these trees are subject to a Tree Preservation Order and the application layout plans show that all of these trees are to be retained on site.

I also understand from the applicant that the only works required to these trees are minor trimming of a few low overhanging branches. We inspected these branches at the time of the initial survey and observed that these branches are not suited to use by bats. However, I took a precautionary approach in my ecological impact assessment and in section 8.2 suggested that major works to trees should be supervised by a licenced bat ecologist. A further precautionary measure would be that minor works, such as trimming back small overhanging branches should also be supervised by a licenced bat ecologist.

2.1.2 Destination of reptiles translocated from the site

It is proposed to transfer the collected reptiles to a private nature reserve on the edge of Butser Hill (**Figure 1**).

This field, and adjacent woodland, is owned and managed by Jonathan West as part of the The Whitelands Project.

The site is a former arable field and which has been allowed to revert to grassland since 1999-2000. Part is being established as native woodland and part maintained as grassland (**Figure 2**). Part of the grassland I understand has been designated as a Site of Importance for Nature Conservation on floristic grounds demonstrating the success of the nature conservation site objectives.

The tussocky nature of the site with of sunny open aspect slopes makes this site ideal for translocation of reptiles not only because of well-suited habitat but also because the arable history of the site means that there is no well-established pre-existing

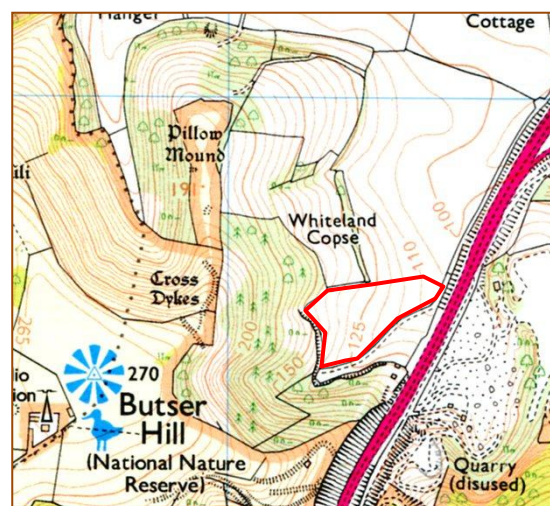


Fig. 1 Proposed receptor site

population. Further, the site is managed for nature conservation with long-term objectives and so the site has a secure long-term future. Reptiles known to occur on the site include the more mobile adder and grass snake which will have entered the site from adjacent habitat.

Wood piles on site and edges of the adjacent woodland provide for shelter and hibernacular and further woodpile hibernacular can be provided on site sourced from the adjacent woodland.



Fig. 2 Reptile suitable habitat on Whitelands field

2.1.3 Hedgehogs

I am aware that hedgehogs are found in adjacent gardens.

In the event that hedgehogs are found on site during the reptile translocation proposed for the spring of 2014, the simplest option would be to place a hedgehog proof fence (**Figure 3**) just inside the line of the rows of oak and cypress trees beyond which any hedgehogs could be placed and from where they can then find their way into the adjacent gardens. I understand from a local resident hedgehogs do indeed use the gardens.

Suitable fencing is already proposed for the reptile translocation work.



Fig. 3 Location of proposed hedgehog fence

2.1.3 Nesting birds

The tree and shrub vegetation in the gardens is ideally suited to the common garden nesting birds and the derelict state of the building means that this too has potential to support nesting birds.

A strategy for avoiding damage to nesting birds is set out in **sections 6.2 and 8.1** of the Ecological Impact Assessment.

Damage to nesting birds can be prevented by removing potential nesting sites outside of the nesting season.

It is recommended that all trees and shrubs that need to be removed to enable the development should be cut back to their stems outside of the nesting season. The nesting season being March to August inclusive and therefore, tree works should be undertaken between October and mid-February to prevent birds nesting. All cut arisings should be removed from the site to prevent nesting in piles of branches. Roots and stems can be left and removed during the reptile destructive search.

The building should also be removed during the late autumn or winter to prevent birds nesting in the structure.



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Fig. 1 Derelict bungalow

1.0 INTRODUCTION AND SUMMARY

1.1 THE PROPOSAL

Peak Quality Homes Ltd proposes to develop this derelict bungalow (**Figure 1**) and adjacent overgrown garden for four detached residential properties and to include highways access, gardens and car parking.

1.2 ECOLOGICAL IMPACT ASSESSMENT

This ecological impact assessment follows guidance issued by the Institute of Ecology and Environmental Management¹ with the overall provision of an objective and transparent assessment of the ecological effects of the project to all interested parties and to facilitate objective and transparent determination of the consequences of the project and to set out what steps will be taken to adhere to legal requirements relating to designated sites and legally protected or controlled species.

Given the measures proposed, the overall ecological impact is seen as Minor Positive.

¹ Guidelines for Ecological Impact Assessment in the United Kingdom IEEM 2006

1.3 INITIAL SCOPING VISIT AND RECOMMENDATIONS

An initial scoping visit on 4 September 2013 identified the general character of the site as derelict bungalow and a large overgrown garden. While there were no semi-natural habitats on site of special importance, nor any open waters, the state of the bungalow meant that there was potential for bats to use the building for roosting, and the outgrown lawns were suitable for reptiles. Recommendations were made to further evaluate the garden habitats and to undertake an activity survey for bats and a refugia survey for reptiles.

1.4 THE SITE AND SURROUNDINGS

The proposal site comprises a derelict bungalow together with an overgrown garden containing mature trees, ornamental shrubs, invasive scrub and unmanaged long grassland (former lawns).

The site is completely enclosed by adjacent urban land within Cowplain and comprising streets of domestic properties and their gardens.

Access is currently via a narrow private driveway off Hart Plain Avenue to the east, but it is proposed that a new access be provided from the north off Wedgewood Way (a cul de sac).

The application red line boundary area (**Figure 2**) is marked by hedgerows and fencing on all sides, other than the current small access drive in the south-east corner of the site.

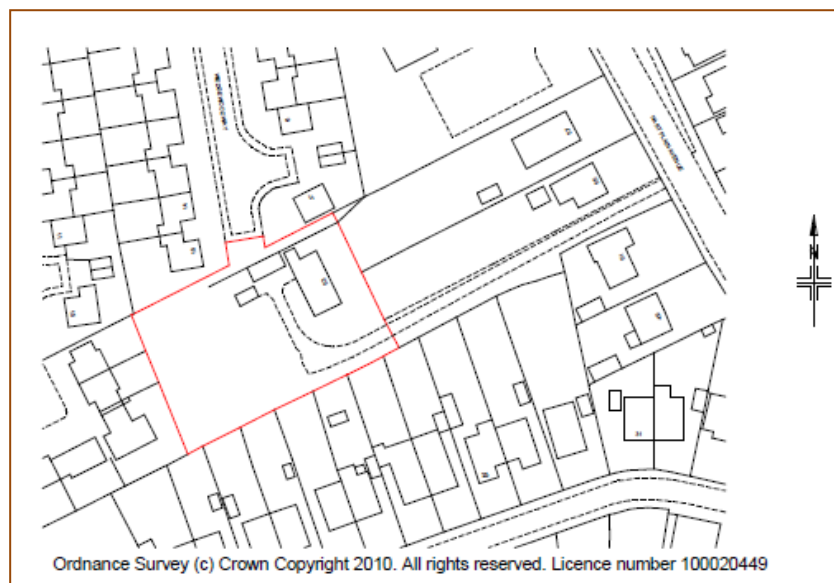


Fig. 2 Red line boundary to proposal site

1.5 THE PROPOSALS

A block plan showing the outline proposals is provided in **Figure 3**.

This plan shows the location and layout of the proposed four new properties, the new access from the north and the protection given to large trees along the southern and western boundaries.

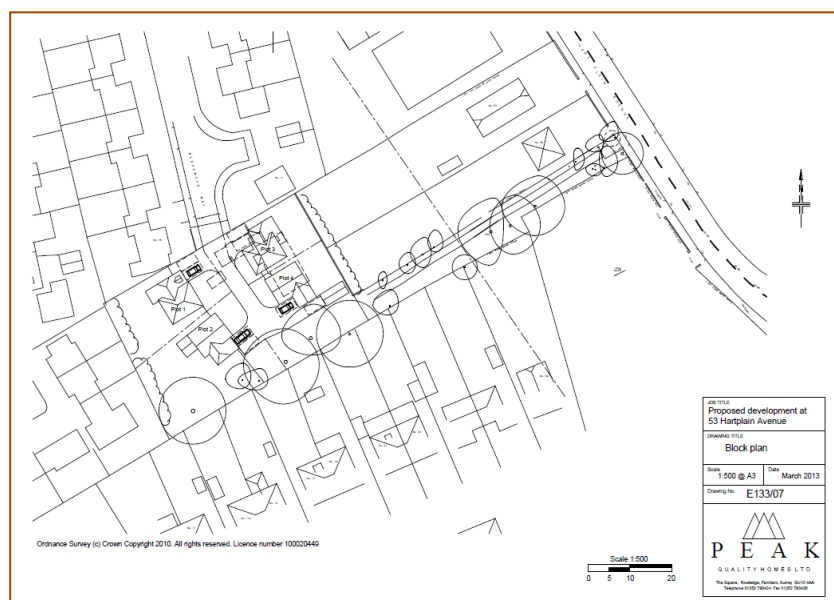


Fig. 3 Block plan showing development proposals

1.6 SUMMARY OF RESULTS AND RECOMMENDATIONS

1.6.1 Habitats

The site comprises a derelict bungalow and a large overgrown garden with trees, shrubs and former lawns now long tussocky grassland.

1.6.2 Species

Reptiles

A large population of slow-worms was recorded across the main lawn areas.

Great crested newt

There are no open waters on the site and none were recorded locally and so this species is most unlikely to be absent.

Other amphibians

Common newts and common frogs were recorded from under some refugia, possibly spread from nearby garden ponds.

Bats

Examination of the building and an activity survey did not reveal bats using the building.

Nesting birds

The abundant scrub and trees on site make this a prime area to support nesting birds during the spring and summer.

Mammals

No evidence of badgers. Feather spread on the former lawn was strongly indicative of fox. Neighbour reports slow-worms, fox and hedgehogs in adjacent gardens.

1.6.3 Recommendations

- To avoid impact on **nesting birds**, scrub, shrubs and trees to be removed should be removed between October and early February to prevent birds nesting. Works to scrub, shrubs and trees should be avoided during the period March to August when birds may be nesting.
- **Reptiles and amphibians** should be removed during the spring and early summer when they are most active and transferred to a safe location. Collection should be using refugia followed by a destructive search using an excavator.
- **Planting of the proposed gardens** should use native or insect attracting herbs and native shrubs and trees wherever possible.
- **Bat roosting and bird nesting boxes** should be installed on the buildings and retained trees to provide additional and replacement habitat.
- **Major works to larger trees** by way of tree surgery should be supervised, at least initially, by a licensed bat ecologist.

2.0 BIODIVERSITY DESK STUDY

A 1km radius data search has been commissioned from the Hampshire Biodiversity Information Centre (HBIC).

2.1 STATUTORY DESIGNATED SITES

No statutory designated sites (such as SSSIs, SPAs, SACs) were identified with the search area.

2.2 NON-STATUTORY DESIGNATED SITES

Non-statutory designated sites are shown in **Figure 4** and listed in **Table 1**. None are adjacent to or in close proximity to the site.

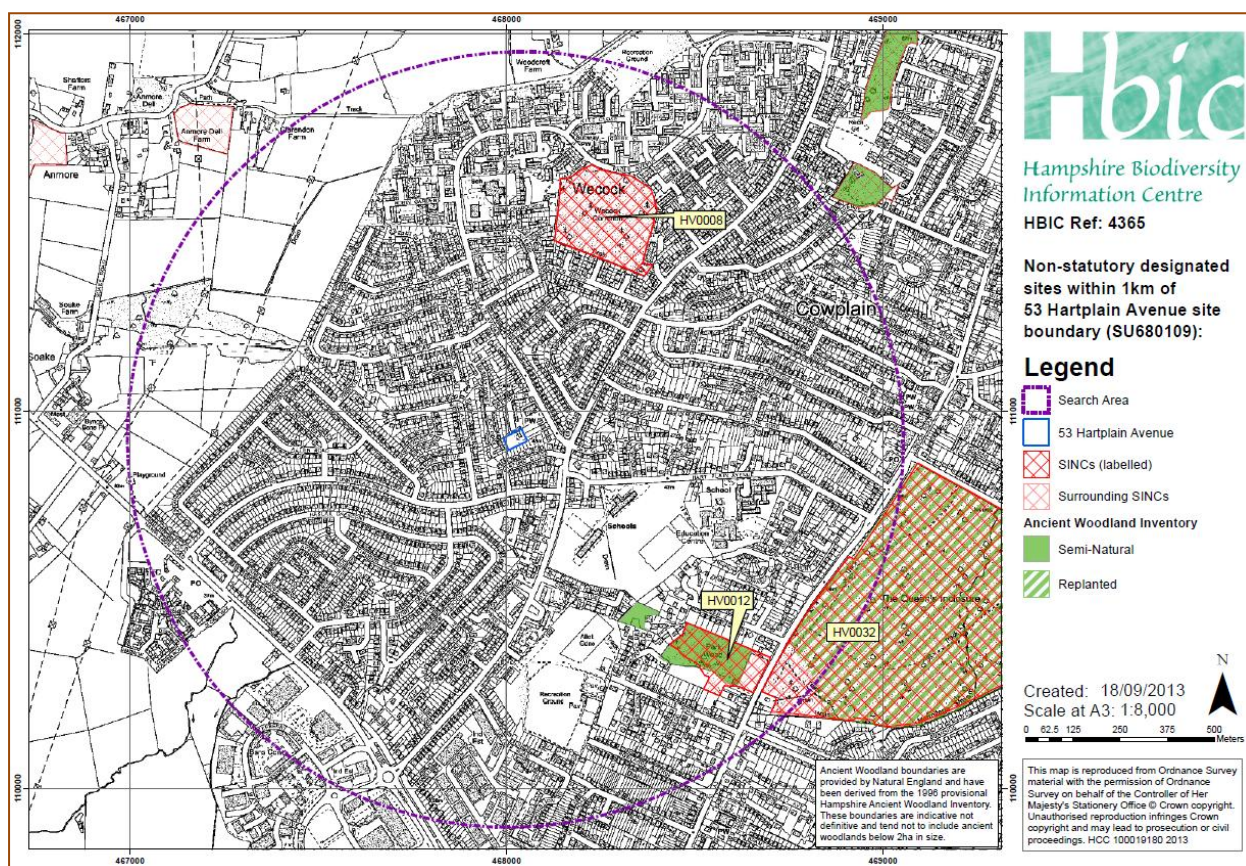


Fig 4. Non-statutory designated Wildlife Sites within 1km of the proposal site.

There are three Sites of Importance for Nature Conservation (SINCS) within 1km radius and also a small area of semi-natural ancient woodland; their characteristics are summarised in **Table 1** below. All three SINCS are 500m or more from the proposal site and separated by urban land and public highways.

Weacock Common SINC (pasture and wooded commons) is 500m to the north and separated from the site by urban housing.

Park Wood SINC (ancient semi-natural woodland) is 500m to the southwest and separated from the site by urban housing and schools.

The Queen's Inclosure SINC (ancient semi-natural woodland) is 800m to the east-south east and separated from the site by urban housing, schools and the A3 highway.

Table 1 Sites of Importance for Nature Conservation within 1km of the proposal site.

SINC Ref	SINC Name	Central Grid Ref.	SINC Criteria	Species supported that meet Section 6 of SINC Selection Criteria	Area (ha)
HV0008	Wecock Common	SU68201140	1D Pasture and wooded commons	-	5.57
HV0012	Park Wood, Havant	SU68501040	1A Ancient semi-natural woodlands	-	2.60
HV0032	The Queen's Inclosure	SU69301050	1A Ancient semi-natural woodlands	-	39.79

2.3 BIODIVERSITY ACTION PLAN HABITATS

2.3.1 BROAD HABITAT INFORMATION

HBIC have provided a map of broad habitats within the search area based on Hampshire County Council's habitat/land use mapping (**Figure 5**).

Broad habitats depicted close to the proposal site include a large area of urban development containing areas of 'unknown' habitat, primarily verges and playing fields.

2.3.2 PRIORITY HABITAT INFORMATION

HBIC have provided a map of priority habitats within the search area based on Hampshire County Council's habitat/land use mapping (**Figure 6**).

There are no priority habitats adjacent to or within close proximity to the site. The nearest such habitats are areas of lowland mixed deciduous woodland, all at or greater than 500m distant.

2.4 PROTECTED AND NOTABLE SPECIES

HBIC have provided a listing of protected and notable species within the search area.

Many of these species listed are birds not relevant to this application. However, some species of bats and hedgehog have been reported as below:

Eptesicus serotinus	Serotine bat
Nyctalus noctula	Noctule bat
Pipistrellus	pipistrelle bat species
Pipistrellus pipistrellus	Common Pipistrelle bat
Pipistrellus pygmaeus	Soprano Pipistrelle bat

NB. All species of bat and their roosts are strongly protected by EU and UK legislation.

Erinaceus europaeus	West European Hedgehog.
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NB. Hedgehogs are a Priority Species listed under Section 41 of the Natural Environment and Rural Communities Act 2006.

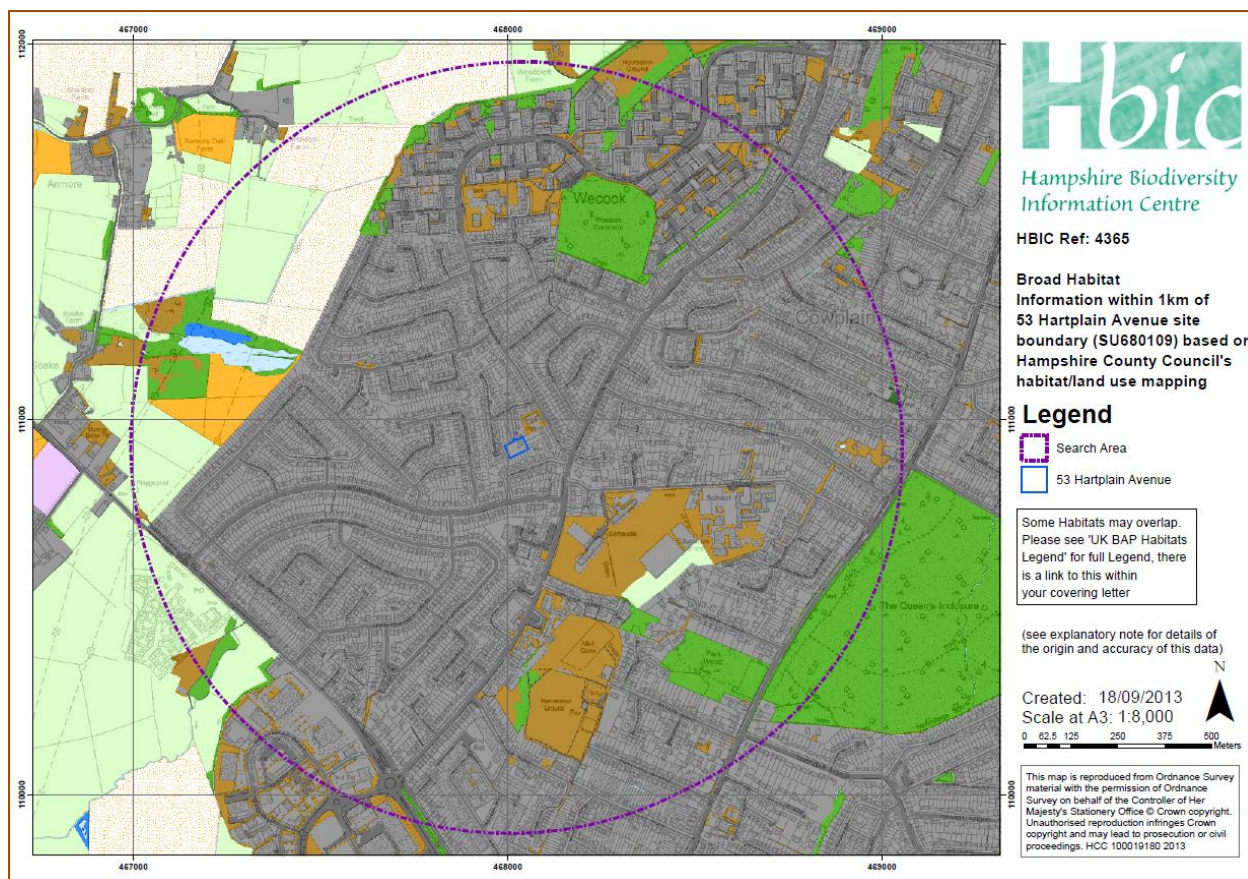


Fig 5. Broad Habitat Information from HBIC

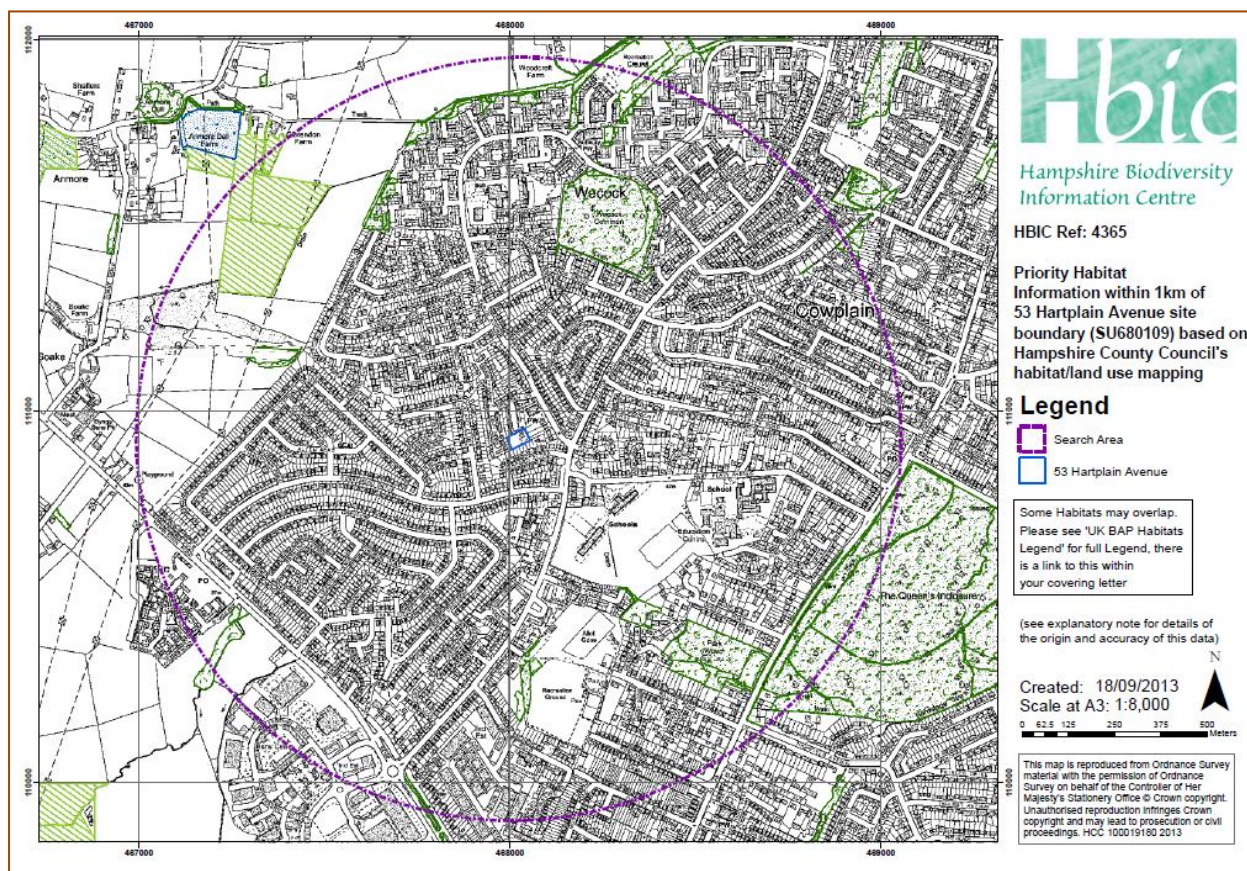


Fig 6. Priority Habitat Information from HBIC

3.0 WILDLIFE HABITATS

Wildlife habitats are shown in **Figure 7** and habitat photographs in **Figure 8**.

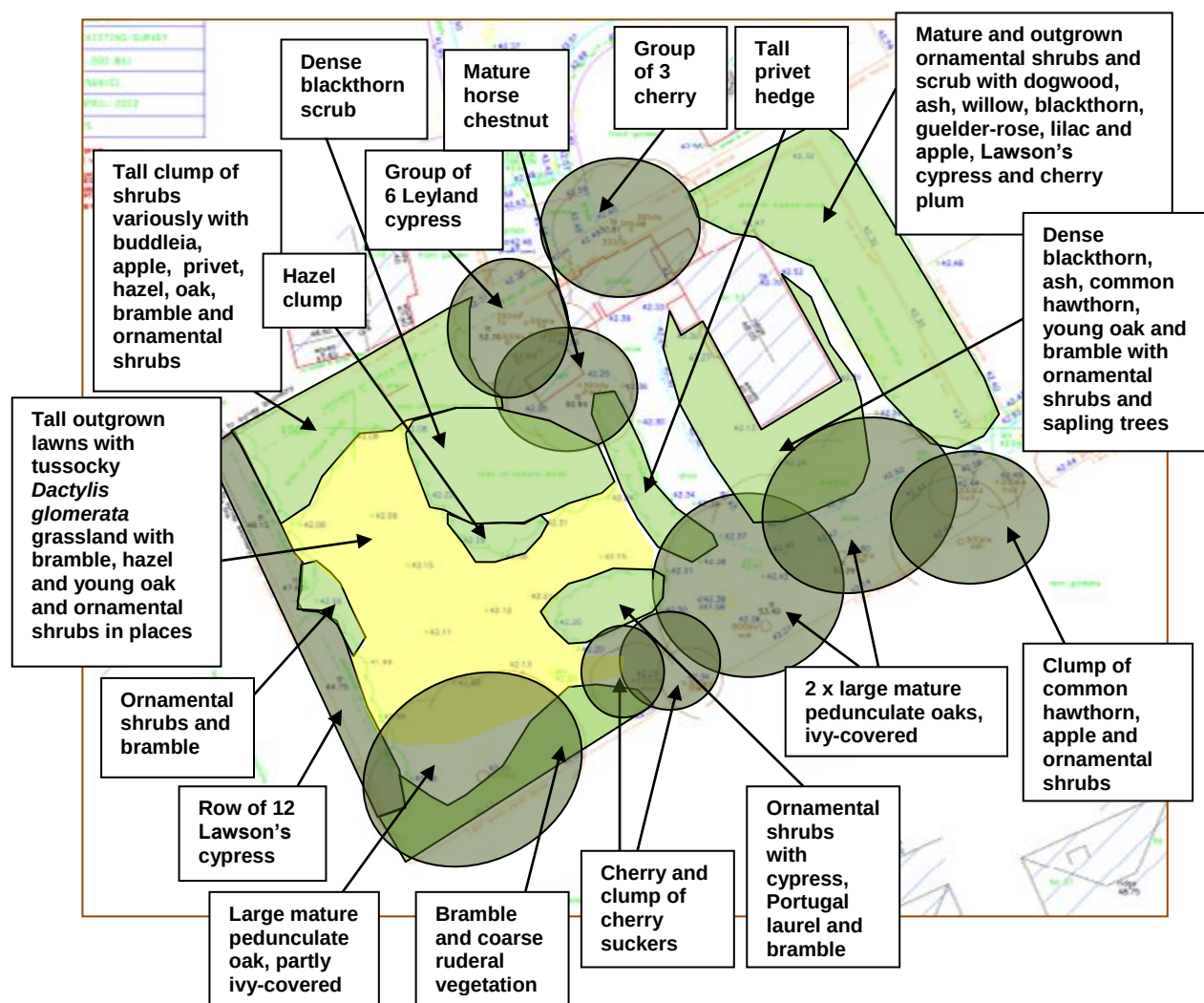


Fig 7. Garden habitats

Habitats present include:

- Derelict bungalow with outbuildings/garage/greenhouse
- Tall outgrown lawns mainly of *Dactylis* and with scattered ornamental and sapling trees
- Dense scrub generally of blackthorn but with a mixture of ornamental shrubs and trees
- Hedges and tree lines of Lawson cypress and privet
- Large ivy covered oak trees on southern boundary
- Clumps of cherry, cherry plum and other small trees
- Large horse chestnut tree.

Coarse ruderal vegetation including brambles, nettles and docks is widespread.



Fig 8. Site photographs

- | | |
|----------------------|--|
| Top left: | Rear of building and outbuildings. |
| Top right: | Front of building and scrub. |
| Middle left: | Grassland scrub and distant privet hedge. |
| Middle right: | Grassland and tall cypress hedging. |
| Bottom left: | One of the mature oak trees to be retained. |

4.0 REPTILES AND AMPHIBIANS

4.1 SITE CHARACTERISTICS AND REPTILE SUITABILITY

The site comprises former lawns that are now outgrown, long and tussocky and invaded in places by small shrubs and sapling trees. The grasslands are bounded by blackthorn and some hazel scrub with areas of bramble and outgrown plantings of garden shrubs and trees.

There are no bodies of open water on the site.

Guidance on reptile habitat is found in *Reptiles: guidelines for developers* English Nature 2004 and from which the following key points are extracted:

- Reptiles may be found in a range of habitats, both in countryside and some urban situations.
- They frequently occur on brown field sites.
- Reptiles are generally less abundant in intensively managed farmland, highly built up settings and in upland areas.
- Of the four common species, the common lizard is found in a range of habitats, grassland, woodland edges, brownfield sites, heaths and dunes, the slow-worm is found in a variety of habitats and the most frequent reptile in urban areas, the grass snake is often found close to ponds, lakes and rivers, and the adder is found on heaths, moors, meadows, woodland glades and urban fringe sites.

Further guidance is provided in Natural England's Standing Advice Species Sheet: Reptiles.

4.2 SITE SUITABILITY FOR REPTILES AND AMPHIBIANS

The long tussocky outgrown lawns appeared to be very well-suited to reptiles and slow-worms in particular and with ample scrubby areas for hibernation. The urban setting is less suited to common lizards and adders and lack of open water reduces the potential for grass snake. Absence of heathland means that the highly protected species, sand lizard and smooth snake, would not be expected.

The site is thus highly suited to slow-worms.

The lack of open water prevents the site being a breeding ground for amphibians, but as amphibians are terrestrial for much of the year, the site is suited to common species outside of the aquatic breeding season.

4.3 LEGAL PROTECTION

All native reptiles are protected in Britain under the Wildlife and Countryside Act 1981 making it an offence to intentionally kill, injure, sell or advertise to sell, any of the six native species.

The 1981 Act also protects the rare species, smooth snake and the sand lizard, by making it an offence, to possess, handle, capture or disturb them.

The common amphibians have no special protection other than prevention of cruelty.

4.4 SITE APPRAISAL

The site visit indicated that the grassland areas are well suited to slow-worms and recommended that a survey should be undertaken.

4.5 SITE SURVEY

In order to check for the presence or absence of reptiles and to identify those parts of the site where they may be present, 32 artificial refuges were placed within the long grassy areas and along grassy margins to the bungalow access track.

The refugia comprised pieces of old corrugated iron of the general proportions 0.5m x 1m with some pieces of 1m x 1m corrugated composition board. These refugia differentially warm up during sunny conditions, becoming warmer than the surrounding land and so attracting reptiles to them for shelter and basking.

Refugia locations are shown in **Figure 9**.

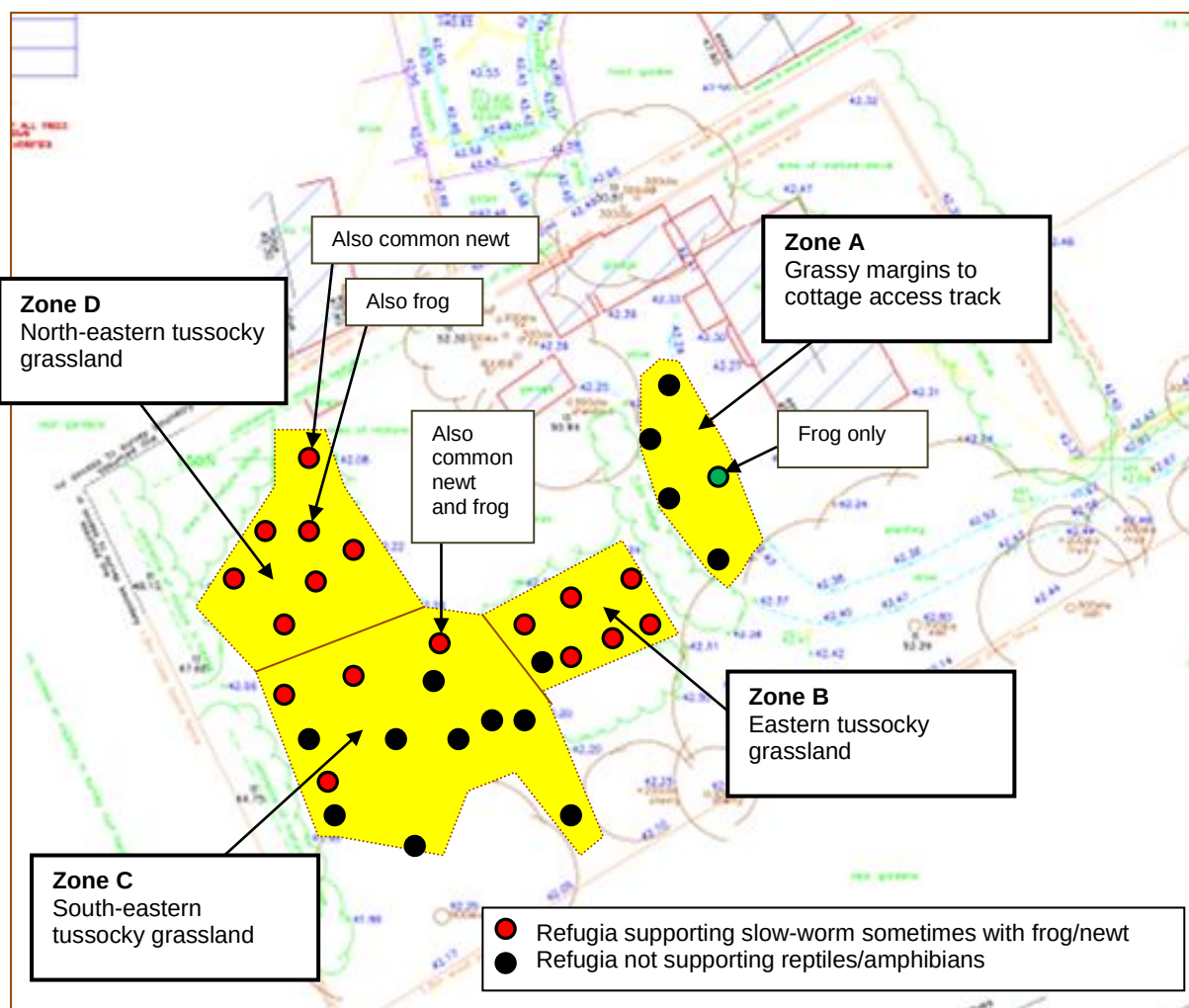


Fig. 9 Location of artificial refugia and showing refugia supporting slow-worms/frog/common newt

Having laid refugia on 4 September 2013, the site was visited on the following days:

11 September 2013
13 September 2013
16 September 2013.

Because of the abundance of slow-worms recorded and their wide distribution across the grassland area, no further visits were deemed necessary. **Tables 2, 3 and 4** set out records made. **Figure 9** also shows those refugia which supported slow-worms, frogs and common lizards.

Given the enclosed nature of the site, visits were timed at mid-day to early afternoon when most of the grassland would have been lit by the sun and most shadows avoided.

At each visit, refugia were lifted and examined for slow-worms and the locations of refugia with slow-worms recorded. Total length and snout to vent length were measured where

Ecological Impact Assessment - Addendum

possible, or estimated if this avoided excessively disturbing the slow-worms. Weather conditions were also described

Table 2 Reptile and amphibian records 11 September 2013

11 September 2013 Survey start time: 12.40 17deg C, Light air to light breeze but sheltered on site, dry, 90% light cloud, refugia mostly warm, some cool or cold in shade.					
Zone	Refugia reference	Species	Tail entire or stub	Total length / snout to vent (cm)	Life stage Sex (from colouring)
A	A1				
	45				
	47				
	ES9				
	523				
B	A8				
	A27				
	40	SW	Ent	22/12	Sub-adult Fe
	413	Lizard (?)	Ent	6	Juvenile
	171	SW	Ent	15/7.5	Sub-adult Fe
		SW	Ent	22/11	Sub-adult Fe
		SW	Stub	14/8	Sub-adult Fe
		SW	Ent	16/9	Sub-adult Fe
	155	SW	Stub	35/25	Adult Male
		SW	Ent	25/12	Sub-adult Fe
		SW	Ent	28/14	Adult Fe
		Lizard(?)	Ent	6	Juvenile
		Frog	-	3	Juvenile
	ES8	SW	Ent	25/13	Sub-adult Fe
C	5	Common newt	-	8	Juvenile
	A11				
	32				
	64				
	ES10				
	190				
	4				
	1	SW	Stub	24/16	Adult Male
	506				
	ES3				
	A10/411				
	3/A9	SW	Ent	35/17	Adult Male
		SW	Ent	25/13	Sub-adult Fe
		SW	Ent	22/12	Sub-adult Fe
	38				
D	192	SW	Ent	40/22	Adult Male
		SW	Ent	30/16	Adult Fe
	A12	SW	Ent	12	Juvenile
		SW	Ent	40/22	Sub-adult Male
	ES9	Common newt	-	12	Sub-adult
	6	SW	Ent	22/12	Sub-adult Fe
	A14				
	3				
	220	SW	Stub	38/20	Adult male
		SW	Ent	25/16	Sub-adult Fe
		SW	Ent	20/11	Sub-adult Fe
		Frog	-	3	Juvenile
		SW	Ent	20/10	Sub-adult Fe
		SW	Ent	12/6	Juvenile

Ecological Impact Assessment - Addendum**Table 3 Reptile and amphibian records 13 September 2013**

13 September 2013 Survey start time: 13.10 19.5deg C, light air but sheltered on site, dry, rain previous night, 75-100% light cloud with sunny intervals, refugia warm or cool, some cold in shade and hot in sun.					
Zone	Refugia reference	Species	Tail entire or stub	Total length / snout to vent (cm)	Life stage Sex (from colouring)
A	A1				
	45				
	47	Frog			Juvenile
	ES9				
	523				
B	A8				
	A27				
	40				
	413				
	171	SW SW	Stub Ent	21/17 20/11	Adult Male Sub-adult Fe
	155	SW SW SW	Ent Ent Ent	18/9 25/13 17/9	Sub-adult Fe Sub-adult Male Sub-adult Fe
	ES8	SW SW SW	Ent Ent Ent	15/17 14/7 16/8	Sub-adult Fe Sub-adult Fe Sub-adult Fe
	5	Frog SW	- Ent	- 15/7	Juvenile Sub-adult Fe
	A11				
	32				
C	64				
	ES10				
	190				
	4				
	1	SW	Stub	24/16	Adult Male
	506				
	ES3	SW	Ent	15/7	Juvenile
	A10/411				
	3/A9	SW SW	Ent Ent	17/9 18/9	Sub-adult Fe Sub-adult Fe
	38				
	192	SW SW	Ent Ent	38/19 25/13	Male Sub-adult
	A12	SW	Ent	16/8	Sub-adult Fe
	ES9	SW		Not measured	
	6	SW SW SW Frog	Stub Ent Ent	24/17 35/18 33/17	Male Sub-adult Fe Sub-adult Fe Juvenile
	A14	SW	Ent	23/14	Sub-adult Fe
D	3	SW SW	Ent Ent	17/9 18/9	Sub-adult Fe Sub-adult Fe
	220	SW SW SW	Stub Ent Ent	29/17 32/17 35/18	Adult male Adult Fe Adult Fe

Table 4 Reptile and amphibian records 16 September 2013

16 September 2013 Survey start time: 13.15 13deg C, moderate breeze, but sheltered by vegetation on site, dry with occasional rain, rain previous night, 50% cumulus cloud in blue sky, refugia warm or cool, some cold in shade.					
Zone	Refugia reference	Species	Tail entire or stub	Total length / snout to vent (cm)	Life stage Sex (from colouring)
A	A1				
	45				
	47				
	ES9				
	523				
B	A8				
	A27				
	40				
	413				
	171				
	155	SW	Ent	15/8	Sub-adult Fe
		SW	Ent	16/8	Sub-adult Fe
	ES8	SW	Ent	25/12	Sub-adult Fe
		SW	Ent	20/10	Sub-adult Fe
		SW	Ent	18/9	Sub-adult Fe
		Frog			Juvenile
C	5	SW	Ent	15/8	Sub-adult Fe
	A11				
	32				
	64				
	ES10				
	190				
	4				
	1				
	506				
	ES3				
	A10/411				
	3/A9	SW	Ent	7/-	New born
		SW	Ent	18/-	Sub-adult Fe
		SW	Ent	20/-	Sub-adult Fe
	38				
D	192	SW	Ent	35/16	Adult Male
		SW	Ent	26/13	Adult Fe
		Common newt			
	A12				
	ES9				
	6				
	A14				
	3	SW	Ent	7/-	New born
		SW	Ent	18/9	Sub-adult Fe
		SW	Ent	20/-	Sub-adult Fe
	220	SW	Stub	29/17	Adult male
		SW	Ent	35/-	Adult Fe
		SW	Ent	26/-	Adult Fe
		SW	Ent	24/-	Sub-adult Fe
		SW	Ent	20/-	Sub-adult Fe
		SW	Ent	20/-	Sub-adult Fe
		SW	Ent	15/-	Sub-adult Fe
		SW	Ent	20/-	Sub-adult Fe
		SW	Ent	18/-	Sub-adult Fe
		SW	Ent	18/-	Sub-adult Fe

4.6 CONCLUSIONS IN RELATION TO REPTILES

The survey has shown that slow-worms *Anguis fragilis* occurred widely across the outgrown lawns in the eastern part of the site and several refugia also revealed common frog *Rana temporaria* and common newt *Lissotriton (Triturus) vulgaris*.

The grassy margins to the access track leading to the bungalow did not record reptiles, but one refugia was supporting common frog *Rana temporaria*.

Two refugia in zone B supported possible common lizard *Zootoca (Lacerta) vivipara*, although the identification was not certain because they moved so quickly as not to be caught or positively identified. Lizard would be unusual in a garden such as this and they could alternatively have been common newts.

4.7 MITIGATION IN RESPECT OF SLOW-WORMS

Before development proceeds, the slow-worms should be collected up and transferred to a suitable location (translocation) where they will be safe. From the development site plan, there does not appear to be any location within the site to which they could be transferred and therefore a location will need to be found outside of the site.

The general procedure will be to:

- Select a receiving site,
- Enclosing the affected areas with reptile exclusion fencing,
- Removing brambles and shrubs from these areas (avoiding any trees/shrubs that may support nesting birds),
- Collecting and recording reptiles using a high density of artificial refugia, followed by
- a destructive search.

4.8 METHODOLOGY

The **receiving site** should be chosen to support suitable habitat and which does not already contain a large population of slow-worms and in which the habitat will be maintained as suitable. Such land will ideally be maintained as long grassland with suitable hibernation habitat.

Reptile exclusion fencing should be provided so as to prevent reptiles crossing the fence and there are a number of specialist products available. Typical types may include polythene sheeting stretched between posts and turned over at the top to prevent climbing over, or more rigid longer lasting fencing constructed from HDPE recycled membrane. Whichever material is used it should be constructed by competent installers, be buried 150mm into the ground and provided with an overhang.

Brambles and shrubs should be removed carefully from within the fenced area to enable laying of refugia. It may also be necessary to trim down the longer grass areas.

Artificial refugia should be laid across the grassland area at a close density approximating to a minimum of 100 refugia / ha. This will create a typical spacing of 7-10m initially; the spacing and positioning of the refugia being adjusted from time to time allowing placement in those areas with highest concentrations of reptiles and so increase the chance of collecting reptiles. The refugia are constructed variously from mineral roofing felt, old corrugated iron and various composition materials that will warm in the sun and attract reptiles and other fauna. Refugia to be numbered and their locations plotted onto a plan.

Reptile collection should be by visiting the refugia during warm times when reptiles are most active and at the time of day when most activity is anticipated (such as morning or evening if hot weather is anticipated or after light rain).

Refugia to be approached carefully so as not to disturb reptiles and amphibians and which are captured by carefully lifting refugia and removing the reptiles taking care not to damage them.

Captured reptiles and amphibians are then placed in secure plastic boxes with grass litter, kept in the shade, and transferred to the receptor area as soon as possible during the day in which they were caught.

While current guidance is for 90 days of collecting effort, a much higher density of refugia is proposed so as to improve the efficiency of the collecting effort. The period of collection should be continued until the numbers of reptiles caught has markedly reduced and at least 5 visits in good weather conditions have indicated that the site has been cleared of reptiles as far as the use of artificial refugia permits.

An ecologist **destructive search** should be undertaken as soon as the collection of reptiles from refugia has been completed.

The destructive search is undertaken using a 10-13 tonne tracked excavator with a variety of buckets including a smooth edged grading bucket and several different sized toothed buckets to allow for different ground conditions and the presence of thick turf.

The excavator is used to carefully remove the turf and the upper 30cm of the soil. Half a bucket full is taken up and carefully shaken out on to the ground. The supervising ecologist watches carefully for any reptiles and amphibians that might be so revealed and collects them up for transfer to the receptor area.

At all times, the excavator stands on previously dug land and so never tracks onto land yet to be searched.

The topsoil is retained in piles for future removal or use elsewhere on the site (such as for garden restoration).

Each reptile or amphibian captured to be **recorded** (as far as possible without harming them) as to their location, species, sex, size, and growth stage. This is to gain an understanding of the reptile population.

5.0 BAT SURVEY

5.1 INTRODUCTION

The HBIC biodiversity search revealed that bats are present in the area and the original site visit identified the building as having potential to support bats (European Protected Species). Further investigation of the building was proposed with the following objectives:

- Inspect the property internally and externally for evidence of bats or bats themselves
- Identify any external features that may be utilised by bats
- Classify the building's roost potential
- Carry out Phase II survey work to adhere to guidelines.

On further assessment of the building, when it was found that much of the ceiling structure had collapsed, the building was classified as holding 'Low' potential to support roosting bats. To further establish any use of the building by bats, a Phase II Activity survey was recommended to determine whether a roost was likely to be present and if it was, to identify:

- The species of bat roosting
- The size of the roost(s)
- Assess the status of roost(s) e.g. maternity, hibernation, transitional summer, mating
- An assessment of the relative value of the roost.

The property itself is located within an overgrown garden and contained within an extensive area of urban development (**Figure 10**).



Fig. 10 Location of proposal site

The HBIC Biodiversity search revealed the recorded presence of *Eptesicus serotinus* Serotine bat, *Nyctalus noctula* Noctule bat, *Pipistrellus pipistrelle* bat species, *Pipistrellus pipistrellus* Common Pipistrelle bat and *Pipistrellus pygmaeus* Soprano Pipistrelle bat within the 1km search area.

5.2 RELEVANT LEGISLATION AND POLICY

5.2.1 Legislation

5.2.1.1 The Conservation of Habitats and Species Regulations (2010)

This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

5.2.1.2 The Wildlife and Countryside Act (1981) (as amended)

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

5.2.1.3 The Countryside and Rights of Way Act (2000)

This Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

5.2.1.4 Natural Environment and Rural Communities Act (2006) Section 41

This places a duty on authorities to have due regard for biodiversity and nature conservation during the course of a development.

5.2.2 Policy

The development should seek to comply with relevant Planning Policy at a local, regional and national level.

5.2.2.1 National Planning Policy and Framework (2012)

This sets out the Government's vision for biodiversity in England. It states that the planning system should maintain, enhance, restore or add to biodiversity and geological conservation interests. Key principles of the framework include:

- the protection of veteran trees
- the creation, protection, enhancement and management of networks of biodiversity and green infrastructure
- the preservation, restoration and recreation of priority habitats and ecological networks
- the recovery of priority species populations.

5.2.2.2 Havant Borough Council

The Havant Borough Core Strategy states that the council seeks to ensure that new development protects environmental assets and uses them to bring environmental enhancement benefits. A primary objective of both the Sustainable Community Strategy Forward Together and the Core Strategy is the preservation and enhancement of the borough's natural landscape and biodiversity.

5.3 Methodology

5.3.1 Phase I Survey

The Phase I Bat Survey was carried out on the 9th September 2013 by Dean Swensson (Natural England licensed bat surveyor) and in accordance with *Bat surveys: Good practice guidelines 2nd edition* published by the Bat Conservation Trust (2012).

An assessment of the dwelling and outbuildings to be demolished was made to determine the likelihood of supporting bats and provide information as to whether additional surveys would be required.

The exterior of the buildings was examined using 8 x 42 Avian Trekker binoculars for suitable features which bats may use to enter the loft space or a roost.

The interior of the outbuildings was assessed by gaining access and investigating all surfaces for evidence of bats and evaluating the suitability of the structures to support bats. The interior of the Bungalow was assessed by entering the loft space and using a high powered torch to examine whether it was suitable for roosting bats and to search for signs of (i.e. droppings, feeding remains) and/or bats themselves.

5.3.2 Phase II Bat Emergence Survey

The emergence survey was carried out on 16 September 2013 by Tristanna Cornwell and Joe Carter using both heterodyne (Bat Box Duet) and frequency division (Anabat SD1/2) detectors. The survey began approximately 20 minutes prior to sunset and continued until approximately an hour and 20 minutes after sunset. Survey sheets were used to record the following information:

- Time of call registration
- Species (if possible to identify using heterodyne detector)
- Location / activity
- Direction of flight (if seen)

The surveyors covered all identified features during the survey.

5.4 RESULTS

5.4.1 Phase I Survey

5.4.1.1 External Survey

The bungalow is in a derelict state (**Figures 1, 11, 12 and 13**) and has suffered past vandal damage, many of the windows being broken and the front door secured with corrugated iron. The bungalow is brick built with machine cut roofing tiles, and a single chimney is centrally positioned with most of the lead flashing missing.

The external assessment of the bungalow identified three features that may be utilised by bats. These features were gaps between the roofing tiles, gaps between the remaining flashing around the chimney and gaps between associated roofing tiles.

No signs of bats were noted during the external investigation.

5.4.1.2 Internal Survey and recommendation

The internal inspection of the loft space identified a bitumen felt underlining beneath the roofing tiles and a relatively unhindered space for potential flying (**Figure 12**), however, some of the ceilings were down and coupled with broken windows made part of the lofts light and airy. No droppings or other evidence of bats were identified that would suggest the bungalow is being used as a roost.

The features noted led to the classification of the building as '**Low Potential**' in accordance with BCT guidelines (2012) (see **Table 5**). As a result, one emergence survey was recommended.



Fig. 11 Front elevation



Fig. 12 loft space



Fig. 13 One of the outbuildings

Table 5. Table 1 from BCT Guidelines

Table 1. Roost potential and required survey effort (Recreated Table 8.5 from BCT (2012)).

High roost potential	Low to Moderate roost potential	Low roost potential
3 Dusk emergence and/or pre-dawn re-entry surveys during May – September. Optimum period May – August.	2 Dusk emergence and/or predawn re- entry surveys during May – September. Optimum period May – August.	1 dusk emergence and/or pre-dawn re-entry surveys during May – September. Optimum period May – August.
If bats are discovered emerging from any of the buildings during surveys, the survey schedule should be appropriately adjusted to increase the survey effort so that sufficient information can be collected.		
Two surveys carried out within the same 24 hour period constitute one survey.		

The outbuildings were all considered to be of negligible potential for bats being constructed of timber and corrugated metal (**Figure 13**), structures that do not possess the required thermal conditions and light levels to support the appropriate roosting environment of bats.

5.4.1.3 Phase II Survey

The Phase II emergence survey was conducted on 16th September 2013. The weather conditions consisted of no cloud cover, temperatures of 12°C and no wind. Insects were seen on the wing and thus conditions were considered suitable for bat activity. The survey started

at 19:10 and continued until 20:30. Surveyor One was positioned on the front elevation with Surveyor Two at the rear.

The first registration came from a Common Pipistrelle (*Pipistrellus pipistrellus*) at 19:44. This registration was faint and the location of the individual was not known and therefore not recorded. At 19:47 another Common Pipistrelle was noted flying in an easterly direction towards Hart Plain Avenue. The final registration occurred at 19:52 as a bat was noted commuting in a southerly direction within the garden to the rear of the property. This individual did not echolocate and therefore the species was not identified.

5.5 EVALUATION OF RESULTS

Although the initial external inspection highlighted potential features suitable for bats, internal investigation found no evidence of bats. During the emergence survey, no bats were seen to emerge from the property. There was also limited bat activity surrounding the site, owing to the lack of suitable habitat in the direct vicinity.

5.6 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENTS

In line with National and Local policy (**Section 5.2**) it is recommended that the new development incorporates at least one bat roosting feature such as the Bat Box C design or similar (**Figure 14**) into each of the proposed properties on site. These bat boxes should be built into the brickwork and located at the greatest height possible and against the eaves (ensuring a minimum of a 4 metre clearance to the floor).

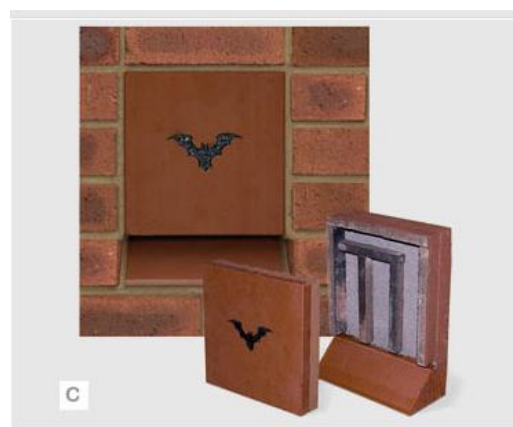


Fig. 14 Bat Box C, Ibstock Brick Company

5.7 CONCLUSIONS

The site possesses negligible conservation value for bats. By introducing new potential bat roost features on site the development will contribute towards local biodiversity rather than negatively impact upon it.

5.8 REFERENCES

Bat Conservation Trust (BCT) Bat surveys: Good practice guidelines, 2nd edition
IEEM (2010) Wray, S., Wells, D., Long, E., & Mitchell-Jones, T., Valuing Bats in Ecological Impact Assessment, IEEM in Practice.
Havant Borough Council 'Havant Borough Core Strategy' Available online:
<http://www.havant.gov.uk/sites/default/files/documents/ADOPTED%20CORE%20STRATEGY%20FINAL%20VERSION.pdf>

6.0 OTHER SPECIES AND NESTING BIRDS

6.1 MAMMALS

A spread of feathers on the former lawn was indicative of fox.

There was no evidence of badger or deer.

Hedgehog is report as occurring in the adjacent gardens by a neighbour.

6.2 NESTING BIRDS

The tree and shrub vegetation in the gardens is ideally suited to the common garden nesting birds and the derelict state of the building means that this too has potential to support nesting birds.

It is recommended that all trees and shrubs should be cut back to their stems outside of the nesting season, March to August inclusive (ie. tree works should be undertaken between October and mid-February), to prevent birds nesting. All cut arisings should be removed from the site to prevent nesting.

The building should be removed during the late autumn or winter to prevent birds nesting in the structure.

Note that: care should be taken when removing vegetation not to disturb those areas supporting reptiles and amphibians.

7.0 ZONE OF INFLUENCE, VALUE, AND POTENTIAL IMPACTS WITHOUT MITIGATION

7.1 ZONE OF INFLUENCE

Baseline information has been provided in the descriptive sections above and from this it can be seen that the potential **Zone of Influence** is limited to the proposal site itself. This is because of the urban setting.

All other significant habitats are at a distance of 500m or greater (greater if travelling by road) and adverse effects on these arising from additional visitors will be insignificant.

7.2 POTENTIAL FOR SIGNIFICANT NEGATIVE IMPACT

On the basis of the zone of influence and the information presented above, the potential for significant negative impact relates to:

1. The presence of reptiles and common amphibians in the grassland
2. Potential for nesting birds to occur during the spring and summer in the trees and scrub on the site and possibly in the building.

7.3 DETERMINATION OF VALUE

Guidance on determining value is given in the IEEM guidelines², Oxford 2000³, and Byron 2000⁴

Byron (quoted in Oxford 2000) sets out a five point evaluation scheme with:

Category A	including international and European sites;
Category B	including UK designated sites and sites with protected species;
Category C	including sites of local importance or supporting priority habitats or species;
Category D	including sites not in the above categories but with some biodiversity or earth heritage interest; and
Category E	including sites with little or no biodiversity or earth heritage value.

On this basis:

The open grassland would fall into **Category C** on the basis that it supports grassland holding populations of slow-worms, frogs and common newts.

7.4 POTENTIAL NEGATIVE IMPACTS WITHOUT MITIGATION

Assuming that there was no mitigation or compensation, the significant adverse effects site's species and habitat biodiversity and populations would be very local and as follows:

Killing and injuring of protected reptiles (slow-worms) and of the common amphibians (frog and common newt).

Loss of bird nesting habitat and potential damage to nesting birds if works are undertaken during the nesting season.

² Guidelines for Ecological Impact Assessment in the United Kingdom IEEM 2006

³ M J Oxford 2000 Developing Naturally – A handbook for incorporating the natural environment into planning and development

⁴ H Byron 2000 Biodiversity and Environmental Impact Assessment: A good practice guide for Road Schemes. The RSPB, WWF-UK, English Nature and the Wildlife Trusts, Sandy

8.0 MITIGATING, COMPENSATION AND ENHANCEMENT

8.1 MITIGATION

In order to mitigate the potential adverse effects of the proposals it is recommended that following actions should be taken.

Nesting birds

The building and trees and scrub to be removed to enable the development should be removed outside of the bird nesting season and ideally between October and early February to prevent birds nesting. Works to scrub, shrubs and trees should be avoided during the period March to August when birds may be nesting.

The grassland area supporting reptiles should be securely fenced off during the tree and shrub clearing works to prevent disturbance to this habitat and protected species.

Reptiles and amphibians

Reptiles and amphibians should be removed during the spring and early summer when they are most active and transferred to a safe location. Collection should be using refugia followed by a destructive search using an excavator. The cleared site should be left in a compacted state to prevent recolonisation or should be enclosed by reptile exclusion fencing.

8.2 COMPENSATION AND ENHANCEMENT

It is recommended that the following matters be attended to.

- Single wall-insert bat boxes should be provided to each of the four proposed buildings to enhance the site's potential for bats.
- Open fronted and circular hole fronted bird nest boxes should be provided on the trees to be retained.
- Depending on the reptile translocation site, the site should be enhanced to improve its ability to support reptiles (such as by clearing scrub and providing hibernation locations (hibernacula).
- Any landscape planting scheme for the development should incorporate native species wherever possible. Potential locations are boundary hedges where native trees and shrubs can be established and any internal plantings where insect attracting herbs can be provided.
- Major works to trees to be supervised, at least initially, by a licensed bat ecologist.

9.0 ECOLOGICAL IMPACT ASSESSMENT

Given the recommendations with respect to reptiles, nesting birds and bats, the impact of the proposals would be: **Minor positive**. This is because:

- Reptiles and amphibians can be translocated to a new safe location and the habitat of that site improved by management.
- Damage to nesting birds can be prevented by removing potential nesting sites outside of the nesting season.
- Bird nesting boxes can be provided within the trees to be retained.
- Bat roosting boxes can be incorporate into the new buildings.

The minor positive rating is given because of the provision of new bat habitats on the buildings.

This document has been prepared by Ron Allen BSc Hons (Lond), ARSM, CSci, CEnv, CBiol, EurProBiol, MIEEM, MSB, MEnvSc, Environmental Consultant and Applied Ecologist

Ron Allen can be contacted at:
The Environmental Project Consulting Group
44A Winchester Road, Petersfield, Hampshire GU32 3PG
Tel. 01730 231019
Email. ra@epcg.co.uk
Web. www.epcg.co.uk, www.soilandwater.co.uk, www.hydro-ecology.co.uk

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