

HATFIELD LONDON
COUNTRY CLUB

BIODIVERSITY
REPORT
& PHASE 1
HABITAT SURVEY

Prepared by
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for

EADES HOTWANI
PARTNERSHIP

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BIODIVERSITY REPORT AND EXTENDED PHASE 1 HABITAT SURVEY FOR PROPOSED DEVELOPMENT AT THE HATFIELD LONDON COUNTRY CLUB, HERTFORDSHIRE

1.0 EXECUTIVE SUMMARY

1.1 ACD Landscape Architects were commissioned by the Eades Hotwani Partnership in August 2009, to carry out an extended Phase 1 Habitat Survey for the proposed development site at the Hatfield London Country Club and to prepare a Biodiversity Report.

1.2 This followed an earlier tree survey and production of a BS 5837:2005 Tree Report in February 2009.

1.3 The main objective of the ecological survey work was to identify any actual or potential ecological constraints with respect to the proposed development site and to identify the habitat types to inform this Biodiversity Report.

1.4 Eight habitat types were identified in the survey and no recommendations were made for further survey work, although precautions were required for felling trees, observing nesting seasons and removal of the spoil within the site.

1.5 Three R category trees, and one C category tree are to be removed as a direct result of the current design.

1.6 The juxtaposition between the buildings and retained trees is sustainable and does not result in any situations which may result in unreasonable pressure to prune requests from future occupants.

1.7 The proposed development retains the principal features on the site and allows full scope to reinforce those with supplementary landscape and the creation of new habitat types.

2.0 BACKGROUND

2.1 The site comprises land adjacent to part of the golf course at the Hatfield London Country Club, in Essendon, Hertfordshire. The site is used as a storage tipping area for golf course maintenance arisings and currently contains an asbestos roofed open building, and a mound of earth and waste. The proposed development is the demolition of the outbuilding, and the building of a single detached house, and double garage.

2.2 ACD Landscape Architects were commissioned by the Eades Hotwani Partnership in August 2009, to carry out an extended Phase 1 habitat survey for the proposed development site at the Hatfield London Country Club and to prepare a Biodiversity Report.

2.3 This followed an earlier tree survey and production of a BS 5837:2005 Tree Report in February 2009.

2.4 This Biodiversity Report has been prepared taking account of the current condition and proposed landscape potential.

2.5 No detailed landscape proposals have been prepared for the site as yet, but the site could potentially improve the habitat range, whilst retaining the majority of the existing features of the site.

3.0 IMPACT OF THE PROPOSED DEVELOPMENT

Trees proposed for removal

3.1 The constraints posed by the trees on the site identified in the tree survey have been taken into consideration with the design layout, and the proposed development layout is in accordance with the recommendations given in BS5837:2005 'Trees in relation to construction – Recommendations'. Those trees of higher value, e.g. T7, T9 and T11 have been allowed ample room both in terms of their RPAs, and in terms of canopy proximity. Also, the C category trees which have landscape value as screening are to be retained.

3.2 Three R category trees are to be removed as a result of the proposed layout. These are T1, T5, and T6, three English Oak trees. T5 and T6 are dead standing, and due to the presence of poorly attached deadwood, and stem decay pose a Health and Safety hazard. T1 is in poor condition throughout with numerous structural faults, and overall poor vigour (see Tree Report for further details). One C category tree – an Acacia Tree – part of G14.

3.3 All the trees above are of low quality and should not present any constraint to development of the site: as per recommendations in BS5837:2005:

3.4 Section 4.3.4 states that: 'Category R trees are those which would be lost in the short term for reasons connected with their physiological or structural condition. For this reason, they should not be a consideration in the planning process'.

3.5 Table 1- Cascade Chart for tree quality assessment states that: 'C category trees will usually not be retained where they would pose a significant constraint on development.'

3.6 It is therefore deemed acceptable to remove the listed trees and, as part of the detailed landscape design for the scheme, include suitable and sustainable replacements as and where appropriate.

3.7 All tree removals have been noted and the landscape scheme will take full use of the opportunities presented by the scheme. The landscape design will enhance the character of the area, mitigate for the tree removals, and produce a good diverse mix of tree stock, ensuring the long-term sustainability of the site landscape.

Habitat Loss

3.8 Eight habitat types were identified on the site and the proposed development will result in the loss of the storage building, topsoil/materials store, hard standing, some tall ruderal vegetation, scattered scrub and the trees noted above.

3.9 The protection of the natural features of the site will be ensured with the erection of the tree protective fencing and the proposed development will retain hedgerows, trees and boundary scrub associated with the hedgerows.

4.0 RECOMMENDATIONS FOR MITIGATION

Retention of existing habitats

4.1 Based upon the Site Layout plan, it is evident that the layout of the new development has been designed with a view to retaining existing habitats, where possible, particularly existing trees and the majority of hedgerows. Appropriate measures should also be employed to protect the habitats that are proposed to be retained. Such measures will include the protective fencing of trees (as well as hedgerows) in accordance with BS5837 2005 "Trees in relation to construction".

4.2 The landscape proposals could incorporate a nectar border to attract insects (including butterflies) and birds. Suggestions as to the nature of possible ecological features / habitats are given in the Opportunities for Ecological Enhancement section below.

Breeding bird habitat

4.3 The proposed site re-development will necessarily involve the clearance of some of the on-site nesting bird habitat such as the pockets of dense scrub and tall ruderal

vegetation. It is therefore recommended that clearance of nesting bird habitat should be undertaken in the period August to February inclusive.

4.4 Should it prove necessary to clear any breeding bird habitat during the breeding season, these works should be carried out under the supervision of an ecologist, and the area checked in advance for the presence/absence of any remaining birds' nests. If any active nests are found in this area then clearance activities must cease and an appropriate buffer zone should be established. This buffer must be left intact until it has been confirmed that the young have fledged and the nest is not longer in use.

Wild Mammals

4.5 Wild mammals which are known to use the site include fox and hedgehog, whilst in it conceivable that badgers may frequent the site too, at least on occasion.

4.6 It is therefore recommended that good building practices are adopted during the construction phase to safeguard any individual animals which venture onto the site. Such practices would include covering of all deep holes and trenches overnight and / or the provision of planked escape routes for any trapped wildlife. In addition, any liquids held on-site should be stored in a secure lock-up.

4.7 Hedgehogs can be particularly vulnerable during site clearance works and therefore a precautionary approach should be adopted. Specifically, any necessary clearance of scattered scrub and / or hedging and / or dismantling of the sheds, brush and log piles and compost heaps should be carried out sensitively (i.e. destructive search) such that should any hedgehogs be identified they can be removed from the affected development area. Hedgehogs would be most vulnerable both during hibernation (i.e. in winter months) and during the breeding season (i.e. April to September) when they would have dependent young in the nest.

4.8 It is recommended that to mitigate for any loss of suitable habitats features and/or to enhance the site for hedgehogs, purpose-made hedgehog boxes are positioned at appropriate locations around the new development site. In particular, boxes could be sited at the base of the retained trees, for example. Use of slug pellets should be dissuaded and also use of environmentally safe wood preservatives (for sheds and fences etc) should be promoted.

External lighting

4.9 It is recommended that external lighting for the new house is minimised, especially in the vicinity of the hedgerow along the golf course. The justification for minimisation of the external lighting is that these features may be used by roosting, foraging and / or commuting bats, which are believed to be dissuaded for using lit areas.

Several means by which external lighting can be minimised are suggested by the Bat Conservation Trust, tabulated as follows:

BCT Recommended External Light Minimisation Guidelines

The use of low pressure sodium lamps instead of high pressure sodium or mercury lamps

Mercury lamps used should be fitted with UV filters

The brightness should be as low as legally possible

The times during which the lighting can be used should be limited to provide some dark periods

The lighting should be directed to where it is needed to avoid light spillage

Any upward lighting should be minimal to avoid light pollution

Light can be restricted to selected areas by fitting hoods which direct the light below the horizontal plane, at preferably an angle less than 70 degrees.

Limiting the height of lighting columns and directing light at a low level reduces the ecological impact of the light.

Road or trackways in areas important for foraging bats should contain stretches left unlit to avoid isolation of bat colonies.

No bat roost (including access points) should be directly illuminated (i.e. replacement roosts should not be illuminated).

5.0 OPPORTUNITIES FOR ENHANCEMENT

5.1 The soft landscaping plan, likely to be Conditioned if consent is granted, is considered to represent an opportunity to both mitigate for any unavoidable habitat losses and to create and improve habitats and features of nature conservation interest. The ecological value of the new development could be maximised by way of designing a planting schedule which is dominated by native tree and shrub species and non-native species of known benefit to wildlife.

5.2 Specifically, native trees species (including fruit trees), a native species-rich hedgerow and native species shrub borders could be planted and in all instances species of local provenance should be obtained, if practicable. Native hedgerow and shrubs should include blackthorn, honeysuckle and bramble and raspberry to encourage butterflies such as brown hairstreak, grizzled skipper and white admiral.

5.3 The suite of plants chosen for the nectar border should be devised to ensure that there are flowers available right through the butterfly season, but particularly in spring (i.e. when butterflies are emerging from hibernation and need to build up their reserves) and autumn (in preparation for the winter hibernation). Suggested plant species are given at the end of Appendix 4 and many of these have been chosen for their attractiveness to butterflies. As far as practicable, the wild form of the plant will be chosen, as these are preferred by butterflies as they typically provide more nectar. By way of example, French Marigolds come in both single and double-flowered forms, though in this instance the cultivar closer to the original wild plant (i.e. usually a single-flowered variety) should be chosen.

5.4 Ornamental shrub borders are also expected to form part of the soft landscaping scheme. Such shrub planting should seek to include appropriate native species (e.g. box and holly), where possible, as well as non-native species which are of known

benefit to wildlife. An exhaustive list is not provided here, but by way of example such species could include: juneberry, barberry, californian lilac, cotoneaster, escallonia, firethorn, lavender, lilac, shrubby cinquefoil, spotted laurel and viburnum.

5.5 For information, a useful reference database is the online version of Gardening with Wildlife in Mind from English Nature (now Natural England) which aims to assist people to choose plants likely to attract wildlife.

An example:

NECTAR BORDER

Common Name	Spring or late Summer/Autumn Nectar
Butterfly-bush	Late summer / autumn
Aubretia	Spring
Lilac	Late summer / autumn
Mexican orange blossom	Spring
Californian lilac	Spring
Hardy plumbago	Late summer / autumn
Hedge veronica (Hebe)	Late summer / autumn
Lavender	Late summer / autumn
Ice plant	Late summer / autumn
Verbena	Late summer / autumn
Red Valerian	Late summer / autumn
Sweet Rocket	Spring
Field Scabious	Late summer / autumn
French Marigolds	Late summer / autumn
Wall flower	Spring
Honesty	Spring
Garlic Mustard	Spring
Ivy	Late summer / autumn
Pansy	Spring
Bluebells	Spring
Primrose	Spring
Sweet William	Spring
Sweet Rocket	Spring
Violas	Spring
Michaelmas daisy	Late summer / autumn
Thistles (e.g. globe)	Late summer / autumn
Escallonia	Late summer / autumn
Chrysanthemum	Late summer / autumn

5.6 Further potential measures to enhance the ecological value of the new development include the following:

- Creation of log pile , using on-site wood (dead wood from the existing log pile would be preferred). These could be positioned in shady locations at the base of the retained trees. Loggeries would be used by invertebrates, potentially including stag beetle which is a UKBAP and Local BAP species.
- Incorporation of bird and bat boxes into at least some of the retained scattered trees;
- Provision of a bird bath and bird feeders within the garden;
- Minimal use of non-residual pesticides, such as glyphosate and use of peat-free mulch, growing media and soil conditioners;
- Provision of an insect house which could be positioned in flower bed, to provide over-wintering sites for beneficial insects, such as ladybirds and lacewings, which prey on garden pest species;
- Provision of hedgehog boxes;

ARTIFICIAL HABITATS

BAT BOX DESIGNS

Bat brick (Schwegler N27)

Stockist – Jacobi Jayne, Alana Ecology, Wildlife & Countryside Services



PHOTO: Pearce Environmental Ltd web-site

Woodcrete- constructed brick with an entrance hole of c. 55 x 26 mm.
Dimensions: 29cm h x 18cm w x 23.5cm d, weight 4kg.

This box can be incorporated into a wall during building work and should be sited where conditions are relatively humid. It is therefore particularly useful for incorporating into new buildings to attract bats. This box contains a single internal wooden panel to simulate a crevice where bats can roost. The front panel is removeable to allow for easy cleaning.

No painting is required, but if necessary, a natural breathable paint should be used.

Bat box (Schwegler 1FQ)

Stockist - Alana Ecology, Wildlife & Countryside Services



PHOTO: Alana Ecology web-site

This is the latest model from Schwegler and is designed specifically to be fitted on the external wall of a building, including any house or barn. It is designed to be used both as a non-hibernation roost and as a nursery roost and

encompasses a special porous coating to help maintain the ideal temperature inside alongside a roughened front panel to allow bats to land securely. Access into the box is via a step-like recess.

Inside the box, rough pieces of wood incorporated into the back are good insulators and are used by the bats as perches. The internal layout offers three different areas with varying degrees of brightness and temperature.

This durable box is easy to attach to most walls, requires no maintenance or cleaning and will last for decades.

Dimensions 56.5cm h x 35cm w x 8.5cm d. It should be noted that this box is designed to be fitted to a wall and would be unsuitable for fences or sheds on account of its weight (15kg).

Bat roost unit

Stockist – Wildlife & Countryside Services, Marshalls Clay Products



PHOTO: Wildlife & Countryside Services web-site

This unit is designed to be used in conjunction with the Bat Access Brick (see below) and would be built into the wall behind the access brick, within which it would provide a suitable roosting area for bats, without permitting the bats access to the roof void or cavity.

Bat Access Brick

Stockist – Wildlife & Countryside Services, Marshalls Clay Products



PHOTO: Wildlife & Countryside Services web-site

This brick is designed to afford access to bats into roof voids and cavities, and can be used in conjunction with the Bat Roost Unit (see above) to create an enclosed bat roosting area or independently to permit access to an existing roof.

Dimensions: 61mm high x 211mm wide x 103mm deep

Bat Hibernation Box 1FW (Summer- & Winterquarter for Bat colonies)



This box has the same internal design as the 1FS but its special multi-layered cavity wall provides excellent insulation while also allowing the air to permeate. This makes it ideal both for hibernation in winter and for encouraging large colonies in summer. 180 hibernating individuals have been recorded and this is not at all uncommon. Interior design: There are three internal, grooved, wooden panels which can be easily lifted out for inspection and cleaning, and the same roof panel as the 1FS.

It should be noted that this bat box is heavy and so if mounted above ground should be firmly secured and also sited away from public areas.

Colour: Black, grey front panel

Material: SCHWEGLER wood-concrete, galvanised steel hanger

Siting & Fixing: Ideal for use on trees.

Mounting blocks, Aluminium Nails and fixing instructions are supplied.

External dimensions: Ø 38cm, height: 50 cm

Internal dimensions: Ø 20cm, height: 38 cm

Weight: approx. 28 kg

General Purpose Bat Box 2F with Double Front Panel



This box has the same shape as the 2F but the front panel has a second inner wooden panel fitted to it to create a cavity wall. This provides ideal quarters for

bats that inhabit crevices, such as Nathusius' Pipistrelle (*Pipistrellus nathusii*), Daubenton's Bat (*Myotis daubentonii*) and the Common Pipistrelle (*Pipistrellus pipistrellus*). Note that this box can be converted at a later to a 2F or 2M Bird Box simply by replacing the front panel.

Material: SCHWEGLER wood-concrete
Colour: Black, grey front panel
Dimensions: Ø 16 cm
Height: 33 cm
Weight: 4.1 kg

1FF Bat Box



The rectangular shape makes the 1FF suitable for attaching to the sides of buildings or in sites such as bridges, though it may also be used on trees. It has a narrow crevice-like internal space to attract Pipistrelle and Noctule bats.

Woodcrete (75% wood sawdust, concrete and clay mixture)
Width: 27cm
Height: 43cm
Weight: 8.3kg

Bat Box 2FN (special)



This model has two entrances, one at the rear against the tree trunk and one at the front. Bats often creep into the rear entrance but leave by the front. It has a domed roof to form clusters and an increased internal height. It is very suitable for woodland species like the Noctule (*Nyctalus noctula*) and has proven highly successful. In one instance 28 Great Bats with nine young was recorded in a 2FN, and this is not uncommon. It is effective against small predators and excludes draughts and light. This model is particularly suitable for use in parks and forests.

Material: SCHWEGLER wood-concrete, galvanised steel hanger
Colour: Black, grey front panel
Dimensions: Ø 16 cm
Height: 36 cm
Weight: 4.3 kg

Large Colony Bat Box 1FS (Summer quarter)



This model is very popular for accommodating large colonies in summer, especially of Noctule (*Nyctalus noctula*), Nathusius` Pipistrelle (*Pipistrellus nathusii*) and Common Long-eared Bat (*Plecotus auritus*). It provides plenty of space for a large number of individuals to congregate. Bats are highly sociable creatures, so this box provides many places from which they can hang and which they can also use as a nursing area to rear their young. The front panel consists of three grooved wooden panels, and a special roof panel with an insulated grill is ideal for bats to cling to.

Colour: Black, grey front panel
Material: SCHWEGLER wood-concrete, galvanised steel hanger
External dimensions: Ø 28 cm
Height: 44 cm
Weight: 10 kg

Oak/Larch Double Chambered Bat Box



This wooden box with two internal chambers and access ladder is made from natural sustainable materials and will provide a habitat for many bat species. The heavy construction provides good insulation and longevity, as well as preventing predators from chewing the entrance slot. The front door is hinged for inspection and cleaning.

Wooden boxes should not be painted or treated with any type of preservative, as these can harm the bats. This box can be expected to last 15-20 years.

Dimensions: 300mm h x 135mm w x 135mm d

BIRD BOX DESIGNS

Starling Box

Stockist – Jacobi Jayne, Pearce Environmental Ltd



PHOTO: Jacobi Jayne web-site

This Woodcrete model is ideal for starlings, given its larger size. It can be erected against walls, fences or larger trees.

Multi-species Bird Box (known as Redstart Box)



PHOTO: Jacobi Jayne web-site

Stockist – Jacobi Jayne, Pearce Environmental Ltd

This doom-shaped box should be hung by its stainless-steel loop to ensure its occupants are safe from predators. Its 32mm hole is suitable for species such as great tit, nuthatch, flycatcher, tree sparrow and redstart.

Nuthatch Box (5KL)

Stockist - Jacobi Jayne



PHOTO: Jacobi Jayne web-site

This Schwegler woodcrete box is specifically designed for nuthatches with an entrance hole of 32 mm in diameter. The box should preferably be hung reasonably high and close to the trunk of ideally a mature oak or beech.

Wren Roundhouse

Stockist - Jacobi Jayne



PHOTO: Ernest Charles web-site

This spherical woodcrete nest box is specifically designed to appeal to wrens. Erection of at least 2 or 3 such roundhouses should increase the chance of their occupation by this species. The roundhouse should be positioned near the ground, tucked away in thick undergrowth or partly hidden in ivy, or higher up under the eaves of the garden shed.

Sparrow Terraces

Stockist – Jacobi Jayne, Pearce Environmental Ltd



PHOTO: Pearce Environmental Ltd web-site

This terrace is made from woodcrete and weighs 13kgs and so is not suitable for fences and sheds. Its dimensions are 245 x 430 x 200mm.

Swift box Model 1

Stockist - Jacobi Jayne, Pearce Environmental Ltd

This highly successful model is used extensively throughout Europe. Made from a special mixture of compressed plant fibres and concrete, it provides good insulation and extremely long life. The bracket allows the box to be fixed from above or behind, and the entrance hole can be easily removed for inspection and cleaning.

Dimensions: 152H x 340W x 150D mm.



PHOTO: Pearce Environmental Ltd web-site

INSECT HOUSE DESIGNS

Ladybird House

Stockist – Green Gardener



PHOTO: Green Gardener web-site

The ladybird house has a central chamber filled with natural material. There are many holes drilled in an upwards angle for the insects to reach the insulated and safe inner chamber. If necessary the roof panel may be removed for inspection or cleaning. Simply site in a sheltered, warm spot away from prevailing wind in flower beds, wooded glades or even in a planter.

Hand-crafted wooden construction. Should be positioned next to aphid infected plants with ladybirds introduced from May onwards. Dimensions 30 cm high x 15 cm x 15 cm.

Ladybird Mansion

Stockist – Green Gardener



PHOTO: Green Gardener web-site

A wall mounted ladybird mansion provides year round shelter for ladybirds and other beneficial insects and can be positioned under the eaves of a house or shed. It is constructed from FSC timber. Dimensions 30 cm high x 14 cm x 17 cm.

LOGGERY

Loggeries should ideally be created using dead, preferably at least partially rotted logs (beech, ash, elm and oak are best). These logs should be positioned upright in a shallow hole (c. 0.5 m) deep by c. 1.0 m square, which is lined with tree bark mulch so to create a damp microclimate at the base of the logs. Logs (c. 1.5 m in length – slightly different lengths will make the pile more aesthetically pleasing) could be used so that the logs protrude above ground level by approximately 0.5 m.

The log piles should be positioned in a damp and shady location and could, if wished, be planted up with a few native ferns to add interest.

HEDGEHOG HOUSE DESIGNS

Hedgehog House

Stockist – Alana Ecology



PHOTO: Alana Ecology web-site

This special box provides a secure habitat for hedgehogs all the year round, for hibernation, nesting and protection from predators. Made from durable oak, reclaimed oak and larch timbers. The box has a double-skinned roof for insulation and weather protection, a raised timber floor to keep out the damp and is very solidly constructed to withstand crushing or strimming.

Main chamber 40w x 35d x 19h cm
Weight 16.7kg

NB: Do not use hay or straw in the box as it can tangle in the hedgehogs' feet and cut off blood supply! Use dry leaves if you wish to provide nesting material.

Hedgehog Box

Stockist – Pearce Environment



PHOTO: Pearce Environment web-site

This nestbox has been designed and ultimately tested extensively with great success over a period of 12 months by the Hedgehog Preservation Society and their hedgehog "carers", whose help is much appreciated. The final nest design has also been approved by Dr. Pat Morris of London University who has contributed to its development.

Size: Height 22cm x Width 38cms x Length 47cm
Tunnel size: Length 30cm x Width 14.5cm x Height 14.5cm

Made from certified FSC sustainable wood

APPENDIX 1

PHASE 1 HABITAT SURVEY

PHASE 1 HABITAT SURVEY AND ECOLOGICAL REPORT FOR HATFIELD LONDON COUNTRY CLUB, HERTFORDSHIRE

1.0 EXECUTIVE SUMMARY

1.1 ACD Landscape Architects were commissioned by the Eades Hotwani Partnership in August 2009, to carry out an extended Phase 1 habitat survey for the proposed development site at the Hatfield London Country Club and to prepare a Biodiversity Report.

1.2 This followed an earlier tree survey and production of a BS 5837:2005 Tree Report in February 2009.

1.3 The main objective of the ecological survey work was to identify any actual or potential ecological constraints with respect to the proposed development site and to identify the habitat types to inform the Biodiversity Report which accompanies it.

1.4 Eight different habitat types were identified within, or on the boundary of, the proposed development site, all of which are considered common and widespread and no notable plant species were recorded.

1.5 Specific protected species considered are Great Crested Newts, Dormouse, Bats, Water Voles and Badgers.

Badgers (*Meles meles*) - There were no signs of Badger setts on the site although mammal activity for foraging was noted.

Water Voles (*Arvicola terrestris*) – No suitable habitat exists for water voles.

Bats - There are trees proposed for removal that have potential to provide roosting sites for bats, although no signs of presence or activity were noted. The storage building proposed for demolition has no bat roost potential.

Great Crested Newts (*Triturus cristatus*) – There is no suitable habitat on site for great crested newts.

Dormouse – There was no sign of dormouse on the site, nor is the habitat considered suitable for this species.

Due to the relative paucity of habitat variety and species diversity on the site, I consider that this site has a low to medium ecological value.

2.0 BACKGROUND

2.1 ACD Landscape Architects were commissioned by the Eades Hotwani Partnership in August 2009, to carry out an extended Phase 1 habitat survey for the proposed development site at the Hatfield London Country Club and to prepare a Biodiversity Report.

2.2 This followed an earlier tree survey and production of a BS 5837:2005 Tree Report in February 2009.

2.3 The proposals for the site are to demolish the existing redundant building within the site and build a detached house with associated garage and driveway.

2.4 The objectives of the extended Phase 1 habitat survey and limited desk study were collectively to:

- produce a map of the main ecological features within the site;
- make an initial assessment of the presence or likely absence of species of conservation concern;
- identify any legal and planning policy constraints relevant to nature conservation which may affect the development;
- determine any potential further ecological issues; and,
- determine the need for further surveys and mitigation.



Existing store building



Scattered Scrub Vegetation



Tall Ruderal and maintenance arisings



Dead Oak trees

3.0 METHODOLOGY

Phase 1 Habitat Survey

3.1 A Phase 1 survey (JNCC, 1993; IEA, 1995) of the proposed development site was undertaken. This is a standard technique for obtaining baseline ecological information for areas of land, including proposed development sites.

3.2 Incidental records of fauna were also made during the survey and the habitats identified were evaluated for their potential to support legally protected species and other species of conservation concern, including Biodiversity Action Plan Priority species.

Survey Date and Limitations

3.3 The Phase 1 Habitat Survey was carried out during September 2009 by suitably qualified and experienced surveyors and access was available to the entire site.

3.4 The field survey was conducted at an optimal time of year for botanical recording.

4.0 RESULTS

Phase 1 Habitat Survey

4.1 A map showing the habitats present within the proposed development site is given at the end of this Report.

4.2 The proposed development site lies within the Hatfield London Country Club, at the edge of the existing golf course and abutting the new housing development associated with the Club.

4.3 Eight habitat types were identified within, or on the boundary of, the proposed development site, as follows:

- Scattered scrub
- Scattered trees
- Tall ruderal
- Hedgerow
- Bare ground
- Buildings
- Hard standing
- Compost heap and log/rubble piles

These habitats are described below and their distribution is shown in the Habitat Map.

Scattered scrub

The site contains areas of developing scrub vegetation, mainly bramble (*Rubus fruticosus*), which have extended from the hedgerows and around the area used for storage of soil and arisings.

Scattered trees

Scattered broad-leaved occur throughout the site, particularly on or immediately adjacent to the site boundary. These trees are dealt with in detail in the Tree Report and it must be noted that two dead oak are included as Category R trees and have health and safety issues associated with them, whilst they do have considerable value as standing deadwood.

When felled, consideration should be given to leaving them on the golf course boundary as they would still have considerable habitat value.

Tall ruderal

One major pocket and a number of small groups of tall ruderal vegetation occur on-site, where heavy shading is cast by the boundary trees. In this area cow parsley is abundant and common nettle is frequent whilst Lord-and-Ladies is occasional.

Hedgerow

Species-poor hedgerows occur on its boundaries, comprising holly and hawthorn, with some elder.

Bare ground

Pockets of bare ground occur beneath the canopy of several trees at the south-eastern corner of the site, where heavy shading precludes the growth of ground flora and at the site entrance where machine wear has caused the loss of vegetation.

Buildings

One building occurs on-site, which is steel framed, corrugated asbestos roofed open fronted.

Hard standing

Areas of hard standing on-site comprise the building base and access drive.

Compost heap and log / brick pile

A soil heap lies adjacent to the storage building, which includes a brash pile and a pile of rubble and vegetation cuttings.

4.4 Fauna

The following species were incidentally recorded during the course of the survey:

Blackbird
Song Thrush
Wood pigeon
Wren
Chaffinch
House sparrow
Hedge Sparrow
Green Woodpecker
Jackdaw

4.5 Limited Desk Top Study

Designated Sites

One statutorily protected site has been identified in the proximity of the site, namely Colney Heath Local Nature Reserve (LNR).

According to the interactive proposals map for Welwyn Hatfield District Plan, the two closest non-statutory Wildlife Sites are Chantry Lane Wood and Dene Hole (WS93).

The closest area of ancient and semi-natural woodland to the site is Hazel Grove.

Species of Conservation Concern

Based upon the limited desk study (i.e. interrogation of the NBN Gateway for bat, reptile and amphibian records) which has been undertaken, some records for species of conservation concern which may be relevant to the site re-development have been identified from the same 10 km grid square as the site (i.e. TL20). All specific records for amphibians and reptiles occur in excess of 500 m of the site's boundary with the majority being in excess of 2 km and recorded prior to 1985. Bat records for TL20 are listed below:

Brown long-eared bat (TL2001), site name protected, c. 5 km south south-west, most recently in 1998.

Daubenton's bat (TL2403) Brookman's Park, site name protected, c. 3.5 km south-east, most recently in 1994

Myotis species (TL2001) as above, most recently in 1998,

Natterers bat: (TL2403) , Brookman's Park, as above , most recently in 1994

Whiskered/Brandt's bat: (TL2403) Brookman's Park, as above, most recently in 1994.

5.0 ACTUAL AND POTENTIAL ECOLOGICAL CONSTRAINTS

Local Nature Conservation Planning Policy

5.1 Planning policies which may affect the development (i.e. R11, R15, R17, RA11 and OS1).

Designated Sites

The closest statutory designated site (Colney Heath Local Nature Reserve (LNR)).

According to the interactive proposals map for Welwyn Hatfield District Plan, the two closest non-statutory Wildlife Sites are Chantry Lane Wood and Dene Hole (WS93).

Given the nature of the proposed site development (i.e. that impacts are expected to be limited to the site and its immediate environs) and the spatial separation of the closest nature conservation designated site and ancient woodland and the site, no direct or indirect impacts are expected.

It will be necessary to ensure that the development proposals accord with policy OS1 which states that:

'Planning permission for development within these areas will not be granted unless it would:

- (i) Assist in the maintenance or reinforcement of their function as essential open areas;
- (ii) Be of a scale which did not compromise the value of the Urban Open Land or use of the open space as defined in terms of its criteria; and

Further, it will be prudent to ensure that the site's proposals are sympathetic to the objectives of the Forest Plan (RA11).

UK and Local BAP Habitats

5.2 Two UKBAP habitats are relevant to site, hedgerow and lowland mixed deciduous woodland.

Following the revision of the UK's list of BAP habitats and species, the definition of hedgerows which qualify as UKBAP habitats has been expanded to include those which comprise 80% or more cover of any native tree/shrub species, excluding archaeophytes and sycamore. This expansion in scope was (in part) made in recognition of the functional importance of hedgerows.

The wooded belt along the edge of the site, is considered to fall under the UK HAP for lowland mixed deciduous woodland.

The Hertfordshire Biodiversity Action Plan includes two HAPs which are considered relevant to the site, namely 'Woodland' and 'Urban' (which includes managed greenspaces, urban wetlands [including garden ponds] and built structures [i.e. residential properties] themselves).

Species of Conservation Concern

5.3 Plants

All plant species recorded during the survey are common and widespread

5.4 Breeding birds

Suitable bird nesting habitat occurs on-site in the form of scattered trees, hedgerows, dense scrub.

All birds, their eggs and active nests are protected under the Wildlife and Countryside Act 1981, as amended, with the exception of a number of species considered as pests. This protection includes the birds themselves. Their nests are also protected from damage or destruction both whilst the birds are constructing and using them.

Potential Further Ecological Issues

5.5 Bats

As part of the Phase 1 habitat survey an external and internal examination of the on-site building was undertaken to look for evidence of roosting bats. No evidence was identified (i.e. no staining or droppings etc) and the on-site buildings possess no features (roosting sites) which could be exploited by bats.

There are bat potential roost trees on-site, although these pose health and safety fears and are likely to have failed very quickly as a result of the dumped material adjacent to them. The site's trees as well as hedgerows, may be used by foraging and commuting bats.

All bat species are fully protected under the Wildlife & Countryside Act 1981, as amended, Countryside and Rights of Way Act 2000 and Conservation (Natural Habitats etc) Regulations 1994. Taken together, this makes it an offence to intentionally or deliberately capture, kill or injure or disturb bats (whether in a roost or not), and intentionally or recklessly damage, destroy or obstruct access to their roosts. In addition, existing legislation (subsequent to the amendment of the Conservation Regulations) and planning policy is currently being re-interpreted and emerging thinking is that there is legal basis for the protection of important bat

foraging and commuting habitats or else for mitigation and/or compensation for its loss.

5.6 Reptiles

The site has limited potential to support common reptile species, although the scrub development has limited this. Reptile species are typically associated with relatively unmanaged and undisturbed habitats, though the slow worm can also often be found in gardens.

All British reptiles are protected under the Wildlife & Countryside Act 1981, as amended, from killing and injury. In addition, following the revision of the UKBAP priority species list in 2007, all native reptile species are now listed as UK priority species and following the consultation period which runs through to February 2008, priority actions for each species will be refined.

Given that low potential reptile habitat has been identified within the site, it would be necessary to avoid intentionally harming or injuring reptiles during any development works.

5.7 Wild Mammals

The site, together with adjoining gardens and wider environs, would be expected to afford suitable habitat for the hedgehog, particularly the topsoil and piles of arisings. These areas may provide suitable areas for hibernation as hedgehogs usually hibernate beneath piles of wood, under hedges, sheds and / or brambles. In addition, suburban and urban habitats, including private gardens, have in fact become important habitats for this species with the losses of woodland and grassland habitat over the last 100 years.

The hedgehog, as of 2007, has been added to the UK BAP priority species list, on account of its rapid decline. This species of wild mammal, along with all others, is also currently given some protection under the Wild Mammals (Protection) Act 1996. This makes it an offence to intentionally cause this species unnecessary suffering by certain methods, including crushing and asphyxiation.

6.0 SITE EVALUATION RECOMMENDATIONS FOR FURTHER SURVEY

6.1 All semi-natural habitats identified on-site are considered to possess at least some, though modest, ecological value.

6.2 Based upon the proposed layout plan, we do not consider that further Phase 2 survey work is required.

7.0 RECOMMENDATIONS FOR MITIGATION

7.1 Habitat retention

Based upon the proposed layout plan, it is evident that the layout of the new development has been designed with a view to retaining the site's key ecological features

Suggestions for habitat creation are given in the Opportunities for Ecological Enhancement section below.

7.2 Breeding bird habitat

As aforementioned, the site's scattered, hedgerows, dense shrub borders, the stable block and also areas of tall grassland offer suitable nesting sites for birds. It is recommended that as far as practicable, breeding bird habitat (particularly the mature scattered trees and hedgerows, where practicable) is designed-in to the development.

As mentioned above, based upon the proposed layout plan, it is evident that the layout of the new development has been designed with a view to retaining the site's key ecological features, i.e. trees, scrub and peripheral scrub.

Any such breeding bird habitat clearance that does prove unavoidable, therefore, should be undertaken outside the breeding bird season, i.e. vegetation clearance / stable demolition should be undertaken in the period August to February inclusive (though please note that depending upon weather nesting may continue into August). Should it prove necessary to clear breeding bird habitat (including demolishing buildings) during the breeding season, then the area to be cleared should be checked in advance for the presence/absence of any remaining birds' nests, ideally by a supervising ecologist. If any active nests are found in this area then clearance / demolition activities should cease and an appropriate buffer zone should be established. This buffer zone should be left intact until it has been confirmed that the young have fledged and the nest is no longer in use.

7.3 Wild Mammals

As aforementioned, parts of the site are considered to provide suitable habitat (particularly refugia) features for hedgehog. Given the limited legal protection afforded to wild mammals, clearance works in these areas of suitable habitat should adopt a precautionary approach should be adopted. Specifically, any necessary clearance of scattered scrub and / or hedging and / or dismantling of rubble and log piles and compost heaps should be carried out sensitively such that, should any hedgehogs be identified they can be removed from the affected development area. Hedgehogs would be most vulnerable both during hibernation (i.e. in winter months) and during the breeding season (i.e. April to September) when they would have dependent young in the nest.

It is recommended that to mitigate for any loss of suitable habitats features and/or to enhance the site for hedgehogs, purpose-made hedgehog boxes are positioned at appropriate locations around the new development site. Use of slug pellets should

be dissuaded and also use of environmentally safe wood preservatives (for sheds and fences etc) should be promoted.

7.4 External lighting

It is recommended that external lighting within the new development is minimised, especially in the vicinity of the retained scattered trees and hedgerows and any newly created habitats (such as any planted hedgerows and/or trees) since these areas are likely to be used both by foraging and commuting bats. This is because bats are believed to be dissuaded from using areas that are artificially lit.

Several means by which external lighting can be minimised are suggested by the Bat Conservation Trust, tabulated as follows:

BCT Recommended External Light Minimisation Guidelines
The use of low pressure sodium lamps instead of high pressure sodium or mercury lamps
Mercury lamps used should be fitted with UV filters
The brightness should be as low as legally possible
The times during which the lighting can be used should be limited to provide some dark periods
The lighting should be directed to where it is needed to avoid light spillage
Any upward lighting should be minimal to avoid light pollution
Light can be restricted to selected areas by fitting hoods which direct the light below the horizontal plane, at preferably an angle less than 70 degrees.
Limiting the height of lighting columns and directing light at a low level reduces the ecological impact of the light.
Road or trackways in areas important for foraging bats should contain stretches left unlit to avoid isolation of bat colonies.
No bat roost (including access points) should be directly illuminated (i.e. replacement roosts should not be illuminated).

8.0 OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

8.1 The new development is expected to include a soft landscaping plan for the new development's grounds and this plan is considered to represent an opportunity to both mitigate for any unavoidable habitat losses and to create and improve habitats and features of nature conservation interest. The ecological value of the new development could be maximised by way of designing a planting schedule which is dominated by native tree and shrub species and non-native species of known benefit to wildlife.

8.2 Specifically, native trees species, native species-rich hedgerows and pockets of native shrub species could be planted and in all instances, species of local provenance should be obtained, if practicable. In particular, a continuous native species-rich hedgerow could be planted around the site boundary hedgerow to re-inforce it, which would (in the medium term) act as a wildlife corridor.

8.3 Ornamental shrub borders are also expected to form part of the soft landscaping scheme. Such shrub planting should seek to include appropriate native species (e.g. box and holly), where possible, as well as non-native species which are of known benefit to wildlife. An exhaustive list is not provided here, but by way of example such species could include: juneberry, barberry, californian lilac, cotoneaster, escallonia, firethorn, lavender, lilac, shrubby cinquefoil, spotted laurel and viburnum.

8.4 For information, a useful reference database is the online version of Gardening with Wildlife in Mind from English Nature (now Natural England) which aims to assist people to choose plants likely to attract wildlife.

8.5 Further measures to enhance the ecological value of the new development include the following:

Provision of a log pile or loggery, using timber created from any necessary tree felling;

Incorporation of bird and bat boxes into the new building and / or erection of such on suitably-sized retained trees;

Provision of bird feeders and baths around the garden;

Provision of hedgehog boxes, as discussed under paragraph;

Minimal use of non-residual pesticides, such as glyphosate and use of peat-free mulch, growing media and soil conditioners;

Provision of insect houses which could be positioned in flower beds (in sheltered, warm locations) to provide over-wintering sites for beneficial insects, such as ladybirds and lacewings, which prey on garden pest species;

